



# **Bidding Documents**

**Engineering, Procurement, Construction and  
Commissioning (EPCC) Contract  
for the Subic-Clark Railway Project  
for the  
Department of Transportation**

**Public Bidding No. 19-341-7**

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## ***Section I. Invitation to Bid***



**Invitation to Bid**  
**for the**  
**Subic-Clark Railway Project**  
**Public Bidding No. 19-341-7**

1. The Government of the Philippines (GoP) intends to apply for a Loan from the People's Republic of China toward the cost of the Subic-Clark Railway Project (SCRP), and it intends to apply part of the proceeds of this loan to payments under the Contract for the following:

| <b>Qty</b>       | <b>Item / Description</b>   | <b>Approved Budget<br/>for the Contract<br/>(ABC)</b> | <b>Delivery Period</b>   |
|------------------|---|---|--|
| <b>1<br/>Lot</b> | <b>Engineering, Procurement,<br/>Construction and<br/>Commissioning (EPCC)<br/>Contract for the Subic-<br/>Clark Railway Project.</b> | <b>₱ 45,361,366,040.29</b>                            | <b>The Intended<br/>Completion of the<br/>Works is required<br/>to be within forty-<br/>two (42) months<br/>calculated from<br/>the<br/>Commencement<br/>Date of the<br/>Contract.</b> |

Bids received in excess of the ABC shall be automatically rejected at bid opening.

2. The Department of Transportation through the Procurement Service – DBM (PS-DBM) now invites bids for the design, construction, and procurement under a EPCC Contract for an approximate seventy-one (71) km rail freight connection between Subic Bay Freeport Zone and Clark Freeport Zone, with three (3) numbers of freight terminals for containers handling and one (1) number of depot at Clark Freeport Zone for maintenance and stabling of rolling stocks.

Bidders should have completed, within last ten (10) years, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Sub-section 5, Section II (Instructions to Bidders) and the corresponding Bid Data Sheet.

3. Bidding will be conducted in accordance with relevant procedures under the loan agreement for limited competitive bidding. The contract shall be awarded to the Lowest Calculated and Responsive Bidder (LCRB) who was determined as such during post-qualification in accordance with 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184 otherwise known as the “Government Procurement Reform Act”.

For the detailed evaluation of the proposals, a two-step procedure shall be adopted by the Special Bids and Awards Committee (SBAC) for SCRP. Only those bids that passed the technical proposals criteria shall be subjected to the second step of evaluation or the opening of financial proposals.

Bidders shortlisted by the Government of the People's Republic of China may obtain further information from the SBAC, and inspect the Bidding Documents at the address given below from 8:00 AM to 5:00 PM.

4. A complete set of Bidding Documents may be acquired by the shortlisted bidders from the address below and upon payment of the applicable fee for the bidding documents, pursuant to the latest Guidelines issued by the GPPB as follows:

| <b>Qty</b> | <b>Item / Description</b>   | <b>Amount of Bid Documents</b> |
|------------|---|--------------------------------|
| 1 Lot      | Engineering, Procurement, Construction and Commissioning (EPCC) Contract for the Subic-Clark Railway Project. | Php 75,000.00                  |

It may also be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) provided that bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids.

5. The schedule of bidding activities is as follows:

| <b>ACTIVITIES</b>                                     | <b>SCHEDULE</b>  | <b>VENUE</b>  |
|---|--|---|
| Advertisement/Posting of Invitation to Bid            | December 20, 2019                                      | PhilGEPS website, PS and DOTr website, and at any conspicuous place reserved for this purpose in the premises of PS       |
| Issuance and Availability of Bid Documents            | December 21, 2019                                      | PS Cashier and PhilGEPS website   |
| Pre-Bid Conference                                    | January 10, 2020, 10:00 AM                             | PS Conference Room, Cristobal St., Paco, Manila   |
| Last day of Submission of Written Clarifications      | January 27, 2020                                       | PS Main Office Cristobal St., Paco, Manila or email at <a href="mailto:pd1@ps-philgeps.gov.ph">pd1@ps-philgeps.gov.ph</a> |
| Last day of Issuance of Supplemental Bid Bulletin     | January 30, 2020                                       | PhilGEPS website, PS website, PS bulletin board   |
| Deadline of Submission and Receipt of Bids            | February 6, 2020 10:00 AM                              | PS Conference Room, Cristobal St., Paco, Manila   |
| Opening of Bids (Eligibility and Technical Documents) | Immediately after the deadline for submission of Bids. | PS Conference Room, Cristobal St., Paco, Manila   |

6. Bids must be duly received by the Secretariat SBAC for SCRP Secretariat at the address below on or before ***February 6, 2020 at 10:00 A.M.***. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 18.

Bids will be opened in the presence of the bidders' representatives who choose to attend at the address below. Late bids shall not be accepted.

7. The Department of Transportation through the Procurement Service reserves the right to accept or reject any bid, to annul the bidding process, and to reject all bids at any time prior to contract award, in accordance with Section 41 of RA No. 9184 and its IRR, without thereby incurring any liability to the affected bidder or bidders.
8. For further information, please refer to:

*SPECIAL BIDS AND AWARDS COMMITTEE FOR SCRP*  
*Procurement Service-DBM*  
*RR Road, Cristobal St., Paco, Manila*  
*8-290-6300 / 8-290-400*  
*pdl@ps-philgeps.gov.ph*

(SGD.)  
ENGR. ROSANA D. YAMBAO  
*Chairperson, SBAC for SCRP*

## ***Section II. Instructions to Bidders***



## A. GENERAL

### 1. SCOPE OF BID

- 1.1. The Procuring Entity named in the Bid Data Sheet (**BDS**), invites bids for the construction of Works, as described in *Section VI. Employer's Requirements*.
- 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 Instructions to Bidders (**ITB**) Clause 27.
- 1.3. The successful Bidder will be expected to complete the Works by the intended completion date specified in General Conditions of Contract Sub-Clause 1.1.76.

### 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, COERCIVE, AND OBSTRUCTIVE 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 (RA) No. 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;
- (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
  - (v.1) 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
  - (v.2) 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 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 Particular Conditions (**PC**) Sub-Clause 4.9.

## 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 IRR of RA No. 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 Special Bids and Awards Committee (SBAC), members of the Technical Working Group (TWG), members of the SBAC 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 this Bidding:
- (a) Duly licensed Filipino citizens/sole proprietorships;
  - (b) Partnerships duly organized under the laws of the Philippines and of which at least sixty percent (60%) of the interest belongs to citizens of the Philippines;
  - (c) Corporations duly organized under the laws of the Philippines and of which at least sixty percent (60%) of the outstanding capital stock belongs to citizens of the Philippines;
  - (d) Cooperatives duly organized under the laws of the Philippines; and
  - (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 Executive Order No. 65 (EO 65), s. 2018, Filipino ownership or interest of the JV concerned shall be at least sixty percent (60%): Provided, further, that JVs in which Filipino ownership or interest is less than sixty percent (60%) 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 sixty percent (60%) Filipino ownership requirement: Provided, finally, that in the latter case, Filipino ownership or interest shall not be less than forty percent (40%). For this purpose, Filipino ownership or interest shall be based on the contributions of each of the members of the JV as specified in their joint venture agreement (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 Philippine Contractors Accreditation Board (PCAB).

- (b) For Foreign-Funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the **BDS**. 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:

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 Bureau of Internal Revenue (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 VII. 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;
  - (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 Government of the Philippines (GoP) or any of its agencies, offices, corporations, or local government units (LGUs), including foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board (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 the 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 No. 9184 and its IRR in relation to other provisions of RA No. 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 Department of Labor and Employment (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 RA 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 work, 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 Procuring Entity;

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, 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;
  - (d) 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
  - (e) 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.
- (b) 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 Philippine Government Electronic Procurement System (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.
- 9.3. Decisions of the SBAC 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 receipt of bids.

### **10. CLARIFICATIONS AND AMENDMENTS TO 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 SBAC 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 also 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 SBAC shall also be posted in 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 SBAC. 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 SBAC must be in English. If the eligibility requirements or statements, the bids, and all other documents submitted to the SBAC 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 or 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; and
- (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 JVs, 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” Documents

- (v) If applicable, Joint Venture Agreement (JVA) in accordance with RA 4566.

(b) Technical Documents

- (i) Bid security in accordance with **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 the Insurance Commission that the surety or insurance company is authorized to issue such instruments.
- (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 major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, 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 No. 9184 and using the form prescribed in *Section VII. 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 [price schedule], 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 otherwise stated 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 the 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 procured.
  - (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 [price schedule] submitted by the Bidder.
- 15.2. The Bidder shall fill in rates and prices for all items of the Works described in the [price schedule]. Bids not addressing or providing all of the required items in the Bidding Documents including, where applicable, [price schedule], 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 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 **PCSub-Clause 13.7**. 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 (NEDA) 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<br>(not less than the<br>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.   | 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 violates 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 request 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 (LCRB) 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 requirements 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 a period of seven (7) calendar days from 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 JV partners to enter into the JV 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; or
  - (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 VII. 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 [price schedule], under Section VII 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 the 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 SBAC in accordance with **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 SBAC 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 SBAC 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 SBAC 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 and properly identified in accordance with Clause 20, linked to its original bid marked as "TECHNICAL MODIFICATION" or "FINANCIAL MODIFICATION" and stamped "received" by the SBAC. 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 SBAC 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 No. 9184 and its IRR.

## 24. OPENING AND PRELIMINARY EXAMINATION OF BIDS

- 24.1. The SBAC 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 SBAC shall take custody of the Bids submitted and reschedule the opening of Bids on the next working day or at 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 SBAC 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 SBAC 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 SBAC 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 SBAC 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 SBAC 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 following 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 Cooperative Development Authority (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 BIR

or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two years from the date of bid submission.

- 24.7. Each partner of a JVA shall likewise submit the document required in **ITB** Clause 12.1(a)(i). Submission of documents required under **ITB** Clauses 12.1(a)(ii) to 12.1(a)(iv) by any of the JV 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 SBAC members shall sign the abstract of bids as read.
- 24.9. The Bidders or their duly authorized representatives may attend the opening of bids. The SBAC 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.
- 24.10. To ensure transparency and accurate representation of the bid submission, the SBAC 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 SBAC, 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 case of **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 SBAC shall immediately conduct a detailed evaluation of all bids rated "passed," using non-discretionary "pass/fail" criterion. The SBAC 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 of the required items in the Schedule of Requirements including, where applicable, [price schedule], 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 and 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 [price schedule].
- 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 evaluated 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 of the requirements specified for each lot. Bid Security as required by **ITB** Clause 18 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 SBAC shall determine to its satisfaction whether the Bidder that is evaluated as having submitted the Lowest Calculated Bid 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 SBAC 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 No. 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 SBAC 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 SBAC 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 No. 9184, the HoPE shall notify the SBAC and the Bidder in writing of such decision and the grounds for it. When applicable, the SBAC shall conduct a post-qualification of the Bidder with the next 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 No. 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 SBAC 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 SBAC 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, 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 No. 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 representative personally or by registered mail or electronically, receipt of which must be confirmed in writing within two (2) days by the Bidder with 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 No.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 clarifications 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<br>(not less than the Percentage of<br>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; and/or |   |
| 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 LCRB is identified and selected for recommendation of contract award. However, if no Bidder passed post-qualification, the SBAC shall declare the bidding a failure and conduct a re-bidding with re-advertisement, if necessary.

### **33. NOTICE TO PROCEED**

Within seven (7) calendar days from the date of approval of the Contract by the appropriate government approving authority, the Procuring Entity shall issue the Notice to Proceed (NTP) together with a copy or copies of the approved contract to the 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 No. 9184.

## ***Section III. Bid Data Sheet***



## Bid Data Sheet

| ITB Clause |   |
|------------|---|
| 1.1        | “Procuring Entity” refers to the Department of Transportation (DOTr).   |
| 1.2        | <p>Not applicable. The name of the Contract is Engineering, Procurement, Construction and Commissioning (EPCC) Contract for the Subic – Clark Railway Project for the Department of Transportation (DOTr)</p> <p>The Reference number of the Contract is<br/> <b><i>Public Bidding No. PB 19-341-7</i></b></p> <p><i>N.B. The Works shall include the design, construction, manufacture, supply, installation, and testing and commissioning of the Civil Works, Structures, Buildings, Trackworks, Railway Systems, and Rolling Stock for the delivery of a fully functional and integrated, safe, secure, efficient, and reliable single track freight railway with passing loops from SBFZ to CFZ, including the Freight Terminals and Depot Complex</i></p> |
| 2          | The Funding Source is the Official Development Assistance (ODA) from the People’s Republic of China and the General Appropriations Act (GAA) in the amount of Forty Five Billion Three Hundred Sixty One Million Three Hundred Sixty Six Thousand Forty and 29/100 Pesos (₱45,361,366,040.29), inclusive of applicable tax.   |
| 3.1        | No further instructions.  |
| 5.1        | Not applicable  |
| 5.2        | <p>Pursuant to the applicable executive agreements between the Government of the Philippines and the Government of the People’s Republic of China (GPH-GPRC Executive Agreements), the Embassy of the People’s Republic of China to the Philippines provided a shortlist of three (3) qualified, legitimate, and in good standing Chinese contractors to participate. These three (3) shortlisted Chinese contractors are:</p> <ol style="list-style-type: none"> <li>1. China Harbour Engineering Co. Ltd.,</li> <li>2. China Railway International Group Co. Ltd., and</li> <li>3. China State Construction Engineering Corporation Limited</li> </ol>  |
| 5.4(b)     | In view of the determination by the Procuring Entity that imposition of the provisions of Section 23.4.2.4 of the IRR of RA 9184 will likely result to failure of bidding, the Bidder should comply with the following requirements:  |

|      |  |
|------|--|
|      | <p>The Bidder must have an experience of having Five Largest Completed Contracts (FLCC) of similar nature completed within the last ten (10) years. These contracts, which may have been carried out under various contract formats, shall together be of aggregate value of at least two hundred percent (200%) of the Approved Budget for the Contract (ABC) adjusted and one of these contracts that is similar to this Project, shall be 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. Where a bidder is a wholly-owned subsidiary of a State-Owned Group, the experience record of the Group shall be considered provided the ultimate parent company of the Group commits the availability of appropriate skills and resources through a letter of commitment addressed to the Procuring Entity.</p> |
| 8.1  | Subcontracting is allowed, but the total amount of subcontracts should not be more than fifty percent (50%) of the contract amount.  |
| 8.2  | <p>Subcontractors (if any) shall have at least five (5) years experience in similar contracts to the works to be subcontracted and must submit the documentary requirements under ITB Clause 12 and detailed particulars indicating their technical competence, availability of resources, and financial capability for the works to be subcontracted, subject to the approval of the Procuring Entity.</p> <p>Any subcontractor proposed by the bidder must not be, at the time of bid opening of bids, have been debarred or blacklisted by any International Financial Organization.</p>  |
| 9.1  | <p>The Procuring Entity will hold a Pre-Bid Conference for this Project on:</p> <p style="text-align: center;">January 10, 2020 at 10:00 A.M.</p> <p>at</p> <p style="text-align: center;">Procurement Service Conference Room, 2<sup>nd</sup> Floor PS Complex,<br/>Cristobal Street, Paco, Manila.</p>   |
| 10.1 | <p>The Procuring Entity's address is:</p> <p style="text-align: center;">Department of Transportation (DOTr)</p> <p style="text-align: center;">Apo Court along Sergio Osmeña Sr. St., Clark Freeport<br/>Zone, Mabalacat, Pampanga</p> <p>Contact person:</p> <p style="text-align: center;"><i>[Name of Contact Person, contact number and e-mail]</i></p>   |
| 12.1 | In addition to the eligibility and technical documents listed in <b>ITB</b> Clause   |

|                   |  |
|-------------------|--|
|                   | <p>12.1, the eligibility requirement shall be evaluated following provisions of Section 11 of Annex “G” of the 2016 Revised IRR of RA 9184.</p> <p>The first envelope shall contain the Technical Proposal Forms (TPF) listed in <i>Section VII. Bidding Forms</i>.</p>  |
| 12.1(a)(iii)      | Not applicable.  |
| 12.1(b)(ii)(ii.2) | <p>Minimum requirements of the key personnel are as follows:</p> <ul style="list-style-type: none"> <li>a. Project Manager or Contractor’s Representative shall have not less than twenty (20) years’ working experience for the relevant railway projects, and with a minimum of ten (10) years cumulative experience as Project Manager with experience in a similar railway project outside of the People’s Republic of China and must have proficiency in English.</li> <li>b. Design Manager shall have not less than twenty (20) years’ working experience for the relevant railway projects and must have proficiency in English.</li> <li>c. Construction Manager shall have not less than twenty (20) years’ working experience for the relevant railway projects and must have proficiency in English.</li> <li>d. Interface/coordination Manager shall have not less than fifteen (15) years’ working experience for coordination of external stakeholders, interfacing projects, utilities undertakers, railway system; etc., and must have proficiency in English.</li> </ul> |
| 12.1(b)(ii)(ii.3) | The Bidder shall provide the information and documents required under TPF 5 ( <i>Contractor’s Equipment</i> ) in <i>Section VII. Bidding Forms</i> , including a list of Contractor’s Equipment and the Bidder’s strategy for acquiring and maintaining such equipment.  |
| 13.1              | No additional requirements.  |
| 13.1(b)           | To include Excel Worksheet of the Financial Proposal. The original hard copy submission shall still prevail.   |
| 13.2              | The ABC is <b><u>Forty Five Billion Three Hundred Sixty One Million Three Hundred Sixty Six Thousand Forty and 29/100 Pesos (P45,361,366,040.29)</u></b> , inclusive of applicable tax. Any bid with a financial component exceeding this amount shall not be accepted.  |
| 14.2              | 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>[insert date]</i> .   |
| 18.1 | <p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <ol style="list-style-type: none"> <li>1. The amount of not less than <b><u>Nine Hundred Seven Million Two Hundred Twenty Seven Thousand Three Hundred Twenty and 81/100 Pesos (₱907,227,320.81)</u></b> if bid security is in cash, cashier's/manager's check, bank draft/guarantee, or irrevocable letter of credit; or</li> <li>2. The amount of not less than <b><u>Two Billion Two Hundred Sixty Eight Million Sixty Eight Thousand Three Hundred Two and 01/100 Pesos (₱2,268,068,302.01)</u></b> if bid security is in Surety Bond.</li> </ol>   |
| 18.2 | The bid security shall be valid for one hundred twenty (120) calendar days from the date of the opening of bids.  |
| 20.3 | Each Bidder shall submit one (1) original copy, four (4) photocopies and one (1) electronic copy in PDF format in USB.  |
| 21   | <p>The address for submission of Bids is:</p> <p style="text-align: center;">PS Conference Room, 2<sup>nd</sup> Floor<br/>Procurement Service-DBM, Cristobal St., Paco Manila</p> <p>The deadline for submission of Bids is:</p> <p style="text-align: center;">February 6, 2020 at 10:00 A.M.</p>  |
| 24.1 | <p>The address for opening of Bids is:</p> <p style="text-align: center;">PS Conference Room, 2<sup>nd</sup> Floor<br/>Procurement Service-DBM, Cristobal St., Paco Manila</p> <p>The date and time for opening of Bids is:</p> <p style="text-align: center;">February 6, 2020 at 10:00 A.M.</p>   |
| 24.2 | <p>All bids received shall follow a two-step procedure pursuant to 2016 Revised IRR of RA No. 9184, Annex "G" Section 11.1 and 11.2.</p> <p>The SBAC shall open the first bid envelopes of Bidders in public and determine each Bidder's compliance with the documents prescribed in <b>ITB</b> Clause 12 as follows:</p> <p>First, the SBAC shall check the submitted documents of each Bidder against a checklist of required documents to ascertain if they are all present, using a non-discretionary "pass/fail" criterion. If a Bidder submits the required document, it shall be rated "passed" for that particular requirement. First bid envelopes that fail to include any requirement or are incomplete or patently insufficient shall be considered as "failed."</p> <p>Second, within seven (7) calendar days, all the first bid envelopes</p> |



|         |  |
|---------|--|
|         | <p>that are rated “passed” shall be subjected to detailed evaluation using the non-discretionary evaluation criteria in:</p> <ul style="list-style-type: none"> <li>(i) Table A (Threshold Technical Requirements), Technical Proposal Forms, <i>Section VII Bidding Forms</i>, where a first bid envelope must meet all threshold technical requirements; and</li> <li>(ii) Table B (Technical Score Evaluation Table), Technical Proposal Forms, <i>Section VII Bidding Forms</i>, where a first bid envelope must obtain a total score of at least 75 points (equivalent to 75% rating).</li> </ul> <p>The first bid envelope must meet all threshold technical requirements and must obtain a total score of at least 75 points (equivalent to 75% rating) in order to be rated “passed.” A first bid envelope that fails to meet all threshold technical requirements or fails to must obtain a total score of at least 75 points (equivalent to 75% rating) shall be considered as “failed.”</p> |
| 24.3    | <p>Pursuant to 2016 Revised IRR of RA No. 9184, Annex “G” Section 11.2, the SBAC shall notify in writing the bidders whose technical proposals were rated passed.</p> <p>The SBAC shall then invite the bidders whose technical proposals were rated passed for the opening of their financial envelopes five (5) calendar days after issuance of the notice.</p>  |
| 27.3    | Partial bid is not allowed.  |
| 27.4    | No further instructions.   |
| 27.7    | Not applicable.  |
| 28.2    | No further instructions  |
| 31.4(f) | No further instructions.   |

## ***Section IV. General Conditions of Contract***

The General Conditions of Contract comprise the “General Conditions”(including its Clauses 1 through 21, Appendix, and Annex) that form part of the “Conditions of Contract for EPC Projects” (Second Edition 2017), published by the *Fédération Internationale des Ingénieurs-Conseils* (FIDIC). Copies of the FIDIC document may be obtained through [www.fidic.org](http://www.fidic.org).

The provisions of *Section V (Particular Conditions)* contain the amendments and additions to the General Conditions of Contract, and take precedence over the equivalent provisions found under the same Sub-Clause number in the General Conditions of Contract.

## ***Section V. Particular Conditions***

The provisions of *Particular Conditions (Part A: Contract Data)* take precedence over the equivalent provisions found under the same Sub-Clause number in *Particular Conditions (Part B: Special Provisions)*.



## Section V. Particular Conditions

### (Part A: Contract Data)

| Data to be given   | Sub-Clause | Data  |
|--|------------|---|
| <b>Defects Notification Period</b>                       | 1.1.24     | 730 days [IRR§62.2]   |
| <b>Employer's Name</b>                                   | 1.1.27     | Department of Transportation (DOTr)   |
| <b>The Employer's Representative</b>                     | 1.1.30     | <i>[Name of Employer's Representative]</i>  |
| <b>Time for Completion</b>                               | 1.1.76     | 42 months calculated from Commencement Date   |
| <b>Agreed methods of electronic transmission</b>         | 1.3(a)(ii) | Letters or Electronic mails(E-mail)   |
| <b>Address of Employer</b>                               | 1.3(d)     | Department of Transportation<br><br>Apo Court along Sergio Osmeña Sr. St.,<br>Clark Freeport Zone, Mabalacat,<br>Pampanga |
| <b>Address of Employer's Representative</b>              | 1.3(d)     | <i>[Address of Employer's Representative]</i>   |
| <b>Address of Contractor</b>                             | 1.3(d)     | <i>[Address of Contractor]</i>  |
| <b>Governing Law</b>                                     | 1.4        | The laws of the Republic of Philippines   |
| <b>Ruling language</b>                                   | 1.4        | English   |
| <b>Language for communications</b>                       | 1.4        | English   |
| <b>Time for Parties to Enter into Contract Agreement</b> | 1.6        | Within 10 days from the Contractor's receipt of the Employer's Notice of Award  |

| Data to be given   | Sub-Clause   | Data  |                              |  |
|--|--|---|------------------------------|--|
| Number of additional paper copies of Contractor’s Documents  | 1.8  | 8 additional paper copies   |                              |  |
| Maximum total liability of the Contractor to the Employer under or in connection with the Contract | 1.14   | Amount of Contract Price  |                              |  |
| Time for access to the Site  | 2.1  | <p>[<i>IRR §17.6</i>. In case of projects with pending acquisition of right-of-way site or location, the procurement process may commence, but no award of contract shall be made until an authority or permit to enter is issued by the property owner; or a notarized deed of sale or deed of donation is executed in favor of the government; or a writ of possession is issued by a court of competent jurisdiction, as the case may be.]</p> <p>In accordance with the schedule agreed between the Contractor and the consultant of the Advance Contract, under the instruction and/or direction of the Employer</p> |                              |  |
| Employer’s Financial Arrangements  | 2.4  | not applicable  |                              |  |
| Performance Security   | 4.2  | <p>The Performance Security shall be denominated in Philippine Pesos [<i>IRR §39.3</i>]. The amount of the Performance Security shall not be less than the amount corresponding to the percentage of the Accepted Contract Amount stated in the following schedule [<i>IRR §39.2</i>]:</p> <table><tr><td>Form of Performance Security</td><td>Amount of Performance Security shall not be less than the amount corresponding to the following percentage of the Accepted Contract Amount</td></tr></table>   | Form of Performance Security | Amount of Performance Security shall not be less than the amount corresponding to the following percentage of the Accepted Contract Amount |
| Form of Performance Security   | Amount of Performance Security shall not be less than the amount corresponding to the following percentage of the Accepted Contract Amount |   |                              |  |

| Data to be given  | Sub-Clause | Data   |     |
|---|------------|--|-----|
|   |            | Cash or cashier's/<br>manager's check<br>issued by a Universal<br>or Commercial Bank   | 10% |
|   |            | Bank draft/guarantee<br>or irrevocable letter<br>of credit issued by a<br>Universal or<br>Commercial Bank:<br>Provided, however,<br>That it shall be<br>confirmed or<br>authenticated by a<br>Universal or<br>Commercial Bank, if<br>issued by a foreign<br>bank | 10% |
|   |            | Surety bond callable<br>upon demand issued<br>by a surety or<br>insurance company<br>duly certified by the<br>Insurance<br>Commission as<br>authorized to issue<br>such security   | 30% |
| <b>Contractor's<br/>Representative's Name</b>                               | 4.3        | <i>[Name of Contractor's Representative]</i>   |     |
| <b>Maximum allowable<br/>accumulated value of work<br/>subcontracted</b>    | 4.4(a)     | 50 % of the Contract Price   |     |
| <b>Parts of the Works for<br/>which subcontracting is<br/>not permitted</b> | 4.4(b)     | not applicable   |     |
| <b>Subcontractors for which<br/>the Contractor shall give<br/>Notice</b>    | 4.4        | (i) before appointment:<br><br>(ii) before commencement of work:   |     |

| <b>Data to be given</b>                                      | <b>Sub-Clause</b> | <b>Data</b>   |
|--|-------------------|---|
|  |                   | (iii) before commencement of work on the Site:  |
| <b>Period of payment for temporary utilities</b>             | 4.19              | not applicable  |
| <b>Number of additional paper copies of progress reports</b> | 4.20              | 8 additional paper copies   |
| <b>Normal working hours on the Site</b>                      | 6.5               | 24 hours a day, as permissible under the Laws of the Country  |
| <b>Key Personnel</b>   | 6.12              | <ul style="list-style-type: none"> <li>a. Project Manager or Contractor's Representative shall have not less than twenty (20) years' working experience for the relevant railway projects, and with a minimum of ten (10) years cumulative experience as Project Manager with experience in a similar railway project outside of the People's Republic of China and must have proficiency in English.</li> <li>b. Design Manager shall have not less than twenty (20) years' working experience for the relevant railway projects and must have proficiency in English.</li> <li>c. Construction Manager shall have not less than twenty (20) years' working experience for the relevant railway projects and must have proficiency in English.</li> <li>d. Interface/coordination Manager shall have not less than fifteen (15) years' working experience for coordination of external stakeholders, interfacing projects, utilities undertakers, railway system; etc., and must have proficiency in English.</li> </ul> |
| <b>Number of additional paper copies of programmes</b>       | 8.3               | 8 additional paper copies   |
| <b>Period for submitting updated programme</b>               | 8.3               | 30 days   |



| Data to be given  | Sub-Clause   | Data   |
|---|--------------|--|
| <b>Amount to be withheld if Contractor fails to submit an updated programme on time</b> | 8.3          | 0.1% of the Contract Price   |
| <b>Delay Damages for each day of delay</b>  | 8.8          | 0.1% of the cost of the unperformed portion of the Works [ <i>IRR Annex E, §8.1</i> ]  |
| <b>Provisional Sums</b>   | 13.4.(b)(ii) | 10% of actual amount paid  |
| <b>Total amount of Advance Payment</b>  | 14.2         | 15% of the Contract Price [ <i>IRR Annex E, §4.1</i> ]   |
| <b>Currency for Advance Payment</b>   | 14.2         | Philippine Pesos   |
| <b>Percentage deductions for repayment of Advance Payment</b>                           | 14.2.3       | 100%   |
| <b>Total amount of Interim Payment</b>  | 14.3         | 40% of the Contract Price (from which amount shall be deducted 100% of the Advance Payment amount)   |
| <b>Period of payment</b>  | 14.3         | <p>Upon the completion of all civil and structural works (including buildings) for the following sections:</p> <ol style="list-style-type: none"> <li>1. Tunnel section;</li> <li>2. All elevation sections and river crossing bridges;</li> <li>3. 50% of at-grade sections;</li> <li>4. The following terminals: <ol style="list-style-type: none"> <li>i. Subic Logistic Terminal</li> <li>ii. Clark Logistic Terminal</li> </ol> </li> <li>5. Clark Depot Complex</li> </ol> |
| <b>Number of additional</b>   | 14.3(b)      | 8 additional paper copies  |

| <b>Data to be given</b>   | <b>Sub-Clause</b> | <b>Data</b>   |
|---|-------------------|---|
| <b>paper copies of Statements</b>   |                   |   |
| <b>Percentage of Retention</b>  | 14.3(iii)         | 10% of the amount due to the Contractor under his Statement prior to any deduction under Sub-Clause 14.3 [ <i>Application for Interim Payment Certificates</i> ] [ <i>IRR Annex E, §6.1</i> ] [ <i>PBD Infra GCC §42.2</i> ]  |
| <b>Limit of Retention Money</b>   | 14.3(iii)         | Until the Employer determines that 50% of the value of the Works is complete; provided, retention amounts shall continue if the Works are not satisfactorily done or if the execution of the Works is not on schedule [ <i>IRR Annex E, §6.1</i> ] [ <i>PBD Infra GCC §42.2</i> ] |
| <b>Payments for Plant and Materials Intended for the Works</b>              | 14.5              | Not applicable  |
| <b>Minimum amount of interim payment</b>                                    | 14.6.2            | 25% of the Contract Price   |
| <b>Period to make interim payment</b>                                       | 14.7(b)(i)        | No further instructions.  |
| <b>Period to make final payment</b>   | 14.7(c)           | No further instructions.  |
| <b>Financing Charges for Delayed Payments</b>                               | 14.8              | Not applicable  |
| <b>Number of additional paper copies of draft Final Statement</b>           | 14.11.1(b)        | 8 additional paper copies   |
| <b>Currency of Payment</b>  | 14.15             | Philippine Pesos  |
| <b>Forces of nature, the risks of which are allocated to the Contractor</b> | 17.2(g)           | Ordinary unfavorable weather conditions or any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor   |
| <b>Maximum Permitted Deductible Limits Allowed</b>                          | 19.1              | 10% of insured amount   |

| <b>Data to be given</b>   | <b>Sub-Clause</b> | <b>Data</b>  |
|---|-------------------|--|
| <b>in Any Insurance Policy</b>  |                   |  |
| <b>Permitted deductible limits for insurance required for certain items</b>                     | 19.1              | (1) the Works<br>(2) Goods<br>(3) Liability for breach of professional duty<br>(4) Against liability for fitness for purpose (if any)<br>(5) Injury to persons and damage to property<br>(6) Injury to employees<br>(7) Others |
| <b>Additional amount to be insured</b>  | 19.2(1)(b)        | No further instructions.   |
| <b>List of Exceptional Risks which shall not be excluded from insurance cover for the Works</b> | 19.2(1)(iv)       | No further instructions.   |
| <b>Amount of Insurance Required for Goods</b>   | 19.2.2            | Full replacement value, including delivery to Site   |
| <b>Period of Insurance for Liability for Breach of Professional Duty</b>                        | 19.2.3            | 12 years from issuance of Taking-Over Certificate or as required under applicable law, whichever period is longer  |
| <b>Amount of Insurance Required for Liability for Breach of Professional Duty</b>               | 19.2.3(a)         | ₱5 billion or the amount as required by applicable law, whichever is greater   |
| <b>Insurance against Liability for Fitness for Purpose</b>                                      | 19.2.3(b)         | Required   |
| <b>Amount of Insurance Required for Injury to Persons and Damage to Property</b>                | 19.2.4            | 30% of Contract Price  |

| <b>Data to be given</b>                            | <b>Sub-Clause</b> | <b>Data</b>  |
|--|-------------------|--|
| <b>Other Insurances Required by Local Practice</b> | 19.2.6            | None   |
| <b>Time for appointment of DAAB</b>                | 21.1              | Within 56 days after the Commencement Date   |
| <b>DAAB shall comprise</b>                         | 21.1              | Three members  |
| <b>List of potential DAAB chairman and members</b> | 21.1              | Individuals whose names appear on the FIDIC President's List of Approved Dispute Adjudicators that is on the FIDIC website as of the Commencement Date |
| <b>Appointing official</b>                         | 21.2              | National President of the Integrated Bar of the Philippines [ <i>RA9285, Philippine ADR Act</i> ]  |
| <b>Rules of Arbitration</b>                        | 21.6              | Rules of procedure of the Construction Industry Arbitration Commission of the Philippines  |
| <b>Place of Arbitration</b>                        | 21.6              | Philippines  |

# Section V. Particular Conditions

## (Part B: Special Provisions)

### 1. General Provisions

#### Sub-Clause 1.1. Definitions

Amend the following Sub-Clauses as follows:

- 1.1.2. Amend to read: *“‘Base Date’ means the deadline provided under the Bidding Documents for the submission of the Bid.”*
- 1.1.7. Amend to read: *“‘Contract’ means the agreement between the Employer and the Contractor to design, execute, and complete the Works and remedy any defects in the Works, comprising the documents listed under Section 37.2.3 of the Implementing Rules of Republic Act No. 9184.”[IRR §37.2.3,PBD Infra ITB §31.4, PBD Infra Contract Agreement §2, PBD Infra GCC §1.4]*
- 1.1.10. Amend to read: *“‘Contract Price’ means the agreed amount stated in the Contract Agreement for the execution of the Works.”*
- 1.1.11. Amend the definition of “Contractor” by deleting the phrase *“and the legal successors in title to this person(s)”*.
- 1.1.16. Amend the definition of “Cost” by replacing the phrase *“but does not include profit”* with *“and is deemed to include profit”*.
- 1.1.17. Amend to read: *“‘Cost Plus Profit’ shall have the same meaning as ‘Cost.’”*
- 1.1.24. Amend to read: *“‘Defects Notification Period’ shall have the same meaning as ‘Defects Liability Period’, which means the period between contract completion and the date of issuance of the Performance Certificate, within which period the Contractor assumes the responsibility to undertake the repair of any damage to the Works at his own expense [PBD Infra GCC §1.14], with the duration of such period as stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period]),*

*calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [Taking Over the Works and Sections].”*

- 1.1.25. Amend the definition of “Delay Damages” by inserting at the end *“and is synonymous with ‘Liquidated Damages’”*.
- 1.1.27. Amend the definition of “Employer” by deleting the phrase *“and the legal successors in title to this person”* and by adding the sentence *“The words ‘Employer’ and ‘Procuring Entity’ are used interchangeably.”*
- 1.1.31. Amend to read: *“‘Employer’s Requirements’ means the document denominated as such in Section VI of the Bidding Documents and which contains the performance specifications and parameters for the Works, as the said document (i) was amended or supplemented by supplemental bid bulletins issued by the Employer; and (ii) shall be amended or supplemented in accordance with the Contract.”*
- 1.1.52. Amend the definition of “Performance Certificate” by inserting at the end *“and is synonymous with ‘Certificate of Final Acceptance’”*.
- 1.1.53. Delete the definition of “Performance Damages”.
- 1.1.62. Amend to read: *“‘Schedules’ means (i) the documents entitled schedules, which were completed and submitted by the Contractor in response to and in consonance with the requirements of the Bidding Documents; and (ii) the schedules completed by the Employer and incorporated into the Contract.”*
- 1.1.64. Amend the definition of “Schedule of Performance Guarantees” by deleting the phrase *“, and stating the applicable Performance Damages payable in the event of failure to attain any of the guaranteed performance(s)”*.
- 1.1.70. Amend the definition of “Subcontractor” by deleting the phrase *“and the legal successors in title to each of these persons”*.
- 1.1.71. Amend the definition of “Taking-Over Certificate” by inserting at the end *“and is synonymous with ‘Certificate of Completion’”*.
- 1.1.73. Amend to read: *“‘Tender’ is synonymous with ‘Bid’,*

*which means the signed offer to undertake the Contract submitted by the Contractor in response to and in consonance with the requirements of the Bidding Documents.” [IRR §5.c]*

Insert the following Sub-Clauses:

- 1.1.73-A. *“‘Bidding Documents’ means the documents issued by the Employer, including any addenda or supplemental bid bulletins, as the basis for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Contract.”[IRR §5.e]*
- 1.1.73-B. *“‘Invitation to Bid’ means the document denominated as such in Section I of the Bidding Documents.”*
- 1.1.73-C. *“‘Instructions to Bidders’ (also referred to as ‘ITB’) means the document denominated as such in Section II of the Bidding Documents.”*
- 1.1.73-D. *“‘Bid Data Sheet’ (also referred to as ‘BDS’) means the document denominated as such in Section III of the Bidding Documents.”*
- 1.1.81. *“‘Advance Contract’ is the contract of the Consulting Services for the Advance Preliminary Works of the Subic-Clark Railway Project between Bases Conversion and Development Authority (BCDA) and the consultant procured, who is responsible for the preparation of the land acquisition and resettlement action plan, environmental impact assessment, parcellary survey and land appraisal, alignment study, and surveys required by the Project on behalf of the Employer.”*
- 1.1.82. *“‘Notice of Award’ means a written notice issued by the Employer to the successful bidder notifying the award of the Contract, including stating the amount of the Contract Price and the award date.”*
- 1.1.83. *“‘Notice to Proceed’ means a written notice issued by the Employer under Sub-Clause 8.1 [Commencement of Works] to the Contractor requiring the latter to commence the design and execution of the Works not later than the date specified in, or determinable according to, such written notice.”*

**Sub-Clause 1.5**  
**Priority of Documents**

Amend the enumeration in Sub-Clause 1.5 to read as follows:

- “(a) the Contract Agreement;
  - “(b) the Bid Data Sheet;
  - “(c) the Instructions to Bidders;
  - “(d) the Particular Conditions (Part A: Contract Data);
  - “(e) the Particular Conditions (Part B: Special Provisions);
  - “(f) the General Conditions of Contract;
  - “(g) the Employer’s Requirements;
  - “(h) the Schedules;
  - “(i) the Tender;
  - “(j) the JV Undertaking (if the Contractor is a JV); and
  - “(k) any other documents forming part of the Contract.”
- [PBD *Infra GCC* §2.3]

**Sub-Clause 1.6**  
**Contract Agreement**

Replace the text of Sub-Clause 1.6 with this:

“The Parties shall enter into a Contract Agreement within 10 days from receipt of the Notice of Award by the Contractor. [IRR §37.2.1] The Contract Agreement shall be in the same form as the document denominated “*Form of Contract Agreement*” in Section VII [Bidding Forms] of the Bidding Documents. The costs of notarial fees and documentary stamp tax and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Contractor. The Contract shall come into full force and effect on the date of Loan Agreement effectivity.”

**Sub-Clause 1.7**  
**Assignment**

Amend paragraph (a) of Sub-Clause 1.7 by inserting the following phrase as the end:

“, subject to applicable government auditing regulations”.

**Sub-Clause 1.9**  
**Employer’s Use of**  
**Contractor’s Documents**

Replace the first paragraph of Sub-Clause 1.9 with this:

“The Contractor’s Documents, including all plans, drawings, specifications, designs, reports, other documents and software prepared by the Contractor for the Employer under the Contract, shall become and remain the property of the Employer. The Contractor shall, prior to termination or expiration of the Contract, deliver all such documents to the Employer, together with a detailed inventory thereof. The Contractor may retain a copy of such documents and software. However, the Contractor shall not reproduce or disclose such documents to a third party.”  
[PBD *Consulting GCC* §35.1]

Replace the chapeau of the second paragraph of Sub-Clause 1.9 with this:

“The Contractor shall be deemed (by signing the Contract) to transfer to the Employer the copyright to the Contractor’s Documents. This copyright shall:”



Replace the third paragraph of Sub-Clause 1.9 with this:

“The Contractor’s Documents and other design documents made by (or on behalf of) the Contractor may, without the Contractor’s consent, be used, copied, or communicated to a third party by (or on behalf of) the Employer for any purpose.”

**Sub-Clause 1.11  
Confidentiality**

Replace the third paragraph of Sub-Clause 1.11 with this:

“Except with the prior written consent of the Employer, the Contractor and the Contractor’s Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Contract, nor shall the Contractor and the Contractor’s Personnel make public the recommendations formulated in the course of, or as a result of, the Contract. For purposes of this clause, “confidential information” means any information or knowledge acquired by the Contractor and/or the Contractor’s Personnel arising out of, or in connection with, the performance of the Contract that is not otherwise available to the public.” [*PBD Consulting GCC §17*]

**Sub-Clause 1.12  
Compliance with Laws**

Insert as sub-paragraph (e) and (f) of the first paragraph of Sub-Clause 1.12:

“(e) the Contractor shall provide the Employer with details of the Goods to allow the Employer sufficient time to exert reasonable efforts to assist the Contractor in obtaining the import permits or licenses for these Goods; and

“(f) unless otherwise stipulated in the Contract, the Contractor shall obtain all permits and licenses for its execution, completion, and testing and commissioning for the Works and to facilitate the taking over of the Works by the Employer.”

Amend the second paragraph of Sub-Clause 1.12 by deleting the phrase “Plus Profit.”

**Sub-Clause 1.14  
Limitation of Liability**

Amend the third paragraph of Sub-Clause 17.6 to read:

“This Sub-Clause shall not limit the liability of the Contractor in case of fraud, deliberate default or reckless misconduct by the Contractor. Subject to additional provisions, if any, set forth in the Particular Conditions, the Contractor’s liability under this Contract shall be as provided by the Laws of the Country.”

## **2. The Employer**

### **Sub-Clause 2.1 Right of Access to the Site**

Replace the first sentence of the first paragraph of Sub-Clause 2.1 with the following sentences:

“The Contractor shall coordinate with the consultant of the Advance Contract or Bases Conversion and Development Authority (BCDA), under the instruction and/or direction of the Employer, for the schedule of right of access to the Site or part thereof. Upon the finalization of the schedule of the right of access jointly by the Contractor and the consultant of the Advance Contract or BCDA, the Employer shall give the Contractor right of access to and possession of all or parts of the Site within the time (or times) in accordance with such schedule of right of access, to enable the Contractor to proceed with the execution of the Works.”

Amend the second paragraph of Sub-Clause 2.1 to read as follows:

“If no such time is stated in the Contract Data, the Contractor shall coordinate with the consultant of the Advance Contract or BCDA, under the instruction or direction by the Employer, for the schedule of right of access to and the possession of the Site or part thereof. The Contractor shall not: (i) occupy land belonging to or in the possession of the Employer without the permission of the Employer; or (ii) use, or allow the use of, the Site or part thereof for any purposes other than that of executing the Works. The Employer may allow a third party to use the Employer’s premises upon such terms as the Employer may decide, including the payment of charges for maintenance of the said premises.”

Amend the third paragraph of Sub-Clause 2.1 to read as follows:

“If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give Notice to the Employer within seven (7) days of the expiration of the time stated in the schedule of right of access produced under the Advance Contract or by BCDA for giving such right or possession. Notwithstanding other terms in this Contract, in the event of any failure or delay by the Employer to hand over the Contractor possession of the lands necessary for the execution of the Works or to give the necessary notice to commence the Works or to provide the necessary drawings or instructions or any other delay caused by the consultant of the Advance Contract or BCDA or the Employer due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the Contract or alter the character thereof or entitle the Contractor to damages or compensation therefor, but in any such case, the Employer

may grant such extension or extensions of the completion date in accordance with Clause 20 [*Employer's and Contractor's Claims*] as may be considered reasonable.”

Delete the phrase “Plus Profit” at the end of the fourth paragraph of Sub-Clause 2.1.

**Sub-Clause 2.2  
Assistance**

Insert as the second paragraph of Sub-Clause 2.2:

“The Contractor shall not be entitled to EOT or additional payment under Sub-Clause 20.1 [*Claims*] for the Employer's failure to provide assistance under this Sub-Clause 2.2.

**Sub-Clause 2.4  
Employer's Financial  
Arrangements**

Delete the text of this Sub-Clause 2.4.

**Sub-Clause 2.5  
Site Data and Items of  
Reference**

Replace the first and second paragraphs of Sub-Clause 2.5 with the following sentence.

“The Contractor shall coordinate with the consultant of the Advance Contract or BCDA, under the instruction and/or direction of the Employer, for relevant data on the topography of the Site and on sub-surface, hydrological, climatic and environmental conditions at the Site, and also the original survey control points, lines and levels of reference (the “items of reference” in these Conditions).”

**Sub-Clause 2.6  
Employer-Supplied  
Materials and  
Employer's Equipment**

Delete the text of this sub-Clause 2.6

**3. The Employer's Administration**

**Sub-Clause 3.1  
The Employer's  
Representative**

Amend the second paragraph of Sub-Clause 3.1 by adding this at the end:

“and except in respect of actions under the following Sub-Clauses of these Conditions:

“(a) Sub-Clauses 2.1 and 3.5: agreeing or determining EOT and/or payment of Cost; and

“(b) Sub-Clauses 13.1, 13.2, and 13.3: (i) instructing a Variation [*IRR Annex E, §1.5.d*], except in an emergency situation as determined by the Employer's Representative [*IRR Annex E, §3.2.i*]; or (ii) approving a proposal for Variation submitted by

the Contractor.” [IRR Annex E, §1.5.d]

**Sub-Clause 3.4  
Instructions**

Insert the following phrase at the end of sub-paragraph (b) of the fifth paragraph of Sub-Clause 3.4:

“or will adversely affect the health and safety of the Contractor’s personnel”

**Sub-Clause 3.5  
Agreement or  
Determination**

For Sub-Clause 3.5.2 [Employer’s Representative’s determination]:

Insert the following phrase at the end of the first paragraph

“and after obtaining the Employer’s approval”

**4. The Contractor**

**Sub-Clause 4.1  
Contractor’s General  
Obligations**

Replace the first sentence of the first paragraph of Sub-Clause 4.1 with this:

“The Contractor shall design, execute and complete the Works properly and in accordance with the Contract, and shall remedy any defects in the Works, exercising the due care and diligence expected of an experienced contractor.” [PBD Infra GCC §6.1]

Amend the second paragraph of Sub-Clause 4.1 by inserting the following text after the term “Goods”:

“Materials, Contractor’s Equipment, supervision,” [PBD Infra GCC §6.1]

**Sub-Clause 4.2  
Performance Security**

For Sub-Clause 4.2.1 [Contractor’s obligations]:

Replace the first paragraph with this:

“Within ten (10) calendar days from receipt of the Notice of Award from the Employer but in no case later than prior to the signing of the Contract Agreement, the Contractor shall furnish the Performance Security in any of the forms prescribed in this Sub-Clause 4.2.[IRR §37.2.1, §39.1][PBD Infra ITB §32.1, GCC §7.1]

Replace the third paragraph with this:

“The Contractor shall post an additional performance security following the amount and form specified in this Sub-Clause 4.2 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. [IRR §39.6][PBD Infra GCC §7.5] In case of a reduction in the contract value or for partially completed Works under the contract which are usable and accepted by the Employer

the use of which, in the judgment of the implementing agency or the Employer, will not affect the structural integrity of the entire project, the Employer 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. [IRR §39.7][PBD *Infra GCC §7.6*]

Insert this as the fourth paragraph:

“The Performance Security posted in favor of the Employer shall be forfeited in the event it is established that the Contractor is in default in any of its obligations under the Contract.[IRR §39.3][PBD *Infra GCC §7.6 and §19.2 (last para.)*]

For Sub-Clause 4.2.2 [Claims under the Performance Security]:

Insert this as sub-paragraph (f) of the first paragraph:

“(f) during the Defects Liability Period, failure by the Contractor to undertake, within 90 days from the Employer’s issuance of an order, repair works for any damage to the Works on account of the Contractor’s use of inferior material. [IRR §62.2.2.1]

Delete the second paragraph.

Delete sub-paragraph (i) of the third paragraph.

For Sub-Clause 4.2.3 [Return of the Performance Security]:

Insert at the end of sub-paragraph (a):

“subject to the following conditions:

- (i) There are no pending claims against the Contractor or the surety company filed by the Employer;
- (ii) The Contractor has no pending claims for labor and materials filed against it; and
- (iii) The other terms of the Contract.” [IRR §39.5][PBD *Infra GCC §7.4*]

**Sub-Clause 4.3  
Contractor’s  
Representative**

Delete the first and third sentences of the third paragraph of Sub-Clause 4.3.

Retain the portion of the fourth paragraph of Sub-Clause 4.3 stating that “The Contractor shall not, without the Employer’s prior consent, revoke the appointment of the Contractor’s Representative or appoint a replacement”, and delete the rest of its provisions.

Add as the second sentence of the fourth paragraph of Sub-Clause 4.3:

“The Employer will approve a proposed replacement of the Contractor’s Representative only if his or her relevant qualifications and abilities are equal to or better than those of the Contractor’s Representative listed in the Technical Proposal.” [*PBD Infra GCC §6.5*]

**Sub-Clause 4.4  
Subcontractors**

Amend the second paragraph of Sub-Clause 4.4 by inserting this as the second sentence:

“The Contractor acknowledges the right of the Employer to institute action pursuant to Act No. 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 the Contract.” [*PBD Infra GCC §7.7*]

Insert as the first and second sentences of the third paragraph of Sub-Clause 4.4:

“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 Employer to be ineligible, the subcontracting of such portion of the Works shall be disallowed.” [*PBD Infra GCC §8.3*]

**Sub-Clause 4.5  
Nominated  
Subcontractors**

Delete the entire text of Sub-Clause 4.5.

**Sub-Clause 4.6  
Co-operation**

Delete the third paragraph of Sub-Clause 4.6.

**Sub-Clause 4.7  
Setting Out**

Amend the first paragraph of Sub-Clause 4.7 to read as follows:

“The Contractor shall liaise with the consultant of the Advance Contract or BCDA, under the instruction or direction of the Employer, for the setting out information to set out the Works in relation to the items of reference under Sub-Clause 2.5 [*Site Data and Items of Reference*].”

**Sub-Clause 4.8  
Health and Safety  
Obligations**

Amend item (d) of Sub-Clause 4.8 by adding the following text at the end:

“and be responsible for the safety of all activities on the Site” [*PBD Infra GCC §6.3*]

**Sub-Clause 4.9  
Quality Management  
and Compliance  
Verification Systems**

For Sub-Clause 4.9.1 [Quality Management System]:

Insert as the first sentence of the second paragraph:

“The details of any QM System required of the Contractor shall be defined by the Employer in accordance the Employer’s guidelines, and shall be stated in the Employer’s Requirements.” [IRR Annex G, §13.8]

For Sub-Clause 4.9.4 [Inspections and Audits]:

Add a new Sub-Clause 4.9.4 with the following text:

**4.9.4. Inspections and Audits**

“The Employer’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.

“The Contractor shall permit the Employer (or the Funding Source named in the Contract Data if there are any) 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 Employer (or the Funding Source, if so required by the Funding Source).” [PBD *Infra ITB* §3.3]

**Sub-Clause 4.15  
Access Route**

Amend the first sentence of the first paragraph of Sub-Clause 4.15 to read as follows:

“Subject to Sub-Clause 4.12 [*Unforeseeable Difficulties*], the Contractor shall be deemed to have been satisfied at the Base Date or at the time the information about the Site or part thereof is available from the consultant of the Advance Contract, as to the suitability and availability of the routes for accessing to the Site.”

**Sub-Clause 4.18  
Protection of the  
Environment**

Insert this at the end of sub-paragraph (a) of the first paragraph of Sub-Clause 4.18:

“and comply with the environmental Laws of the Country;”

Add as the third, fourth, and fifth paragraphs of Sub-Clause 4.18:

“The Contractor shall be responsible for ensuring that all Subcontractor’s and Contractor’s Personnel understand and operate in accordance with the principles and requirements of the environmental and social impacts provisions of this Sub-Clause.

“The Contractor’s program shall demonstrate clearly the procedures and methods of working that the Contractor and its Subcontractors will adopt to comply with the environmental and social impacts

requirements of this Sub-Clause.

“The Contractor shall ensure the adequate disposal of construction and excavation wastes. The Contractor shall restore the Site to original conditions or to a state as set out in the Employer’s Requirements after the completion of the Works.”

**Sub-Clause 4.20  
Progress Reports**

Amend the first paragraph of Sub-Clause 4.20 by adding the following text as the last sentence:

“The Contractor shall also prepare and submit progress reports covering such other periods as may be requested by the Employer, such as the quarter period, annual period, or a period beginning from the Commencement Date.”

Amend the second paragraph of Sub-Clause 4.20 by adding the following text at the end of the enumeration:

“(i) other information as may be reasonably required by the Employer.”

**Sub-Clause 4.21  
Security of the Site**

Insert as the second paragraph of Sub-Clause 4.21:

“The Contractor shall be responsible to coordinate with the interfacing party and implement the security measures at the Site and part thereof or premises of others when co-location of the works of the Contractor and the others is required.”

**Sub-Clause 4.23  
Archaeological and  
Geological Findings**

Amend the first paragraph of Sub-Clause 4.24 by adding the following text as the last sentence:

“The ownership and care of such items of geological or archeological interest shall be governed by the Laws of the Country.”

**5. Design**

**Sub-Clause 5.1  
General Design  
Obligations**

Amend the fifth paragraph of Sub-Clause 5.1 to read as follows:

“Notwithstanding the provisions of Sub-Clauses 2.1 [*Right of Access to the Site*], 4.7 [*Setting Out*], and 4.15 [*Access Route*], the Contractor shall be responsible in coordinating with the consultant of the Advance Contract to finalize the schedule of land to be acquired for the completion and commissioning of the Works (or part thereof in phase as agreed between the Employer and the Contractor). The Contractor shall be responsible for correctness of the following portions of the Employer’s Requirements and the following data and information provided by or on behalf of the Employer:



- (a) portions, data, and information which are stated in the Contract as being immutable or the responsibility of the Contractor to investigate, review, propose, supply, design, execute, or construct;
- (b) definitions of intended purpose of the Works or any parts thereof, save insofar to the extent specified in the Employer's Requirements; or
- (c) criteria for the Testing and Programme of the completed Works, save insofar to the extent specified in the Employer's Requirements."

Insert as the sixth and seventh paragraphs of Sub-Clause 5.1:

"The Contractor shall be responsible for any discrepancies, errors, or omissions in the specifications, drawings, and other technical documents that it has prepared, whether such specifications, drawings, and other documents have been approved by the Employer or not."

"Wherever references are made in the Contract to codes and standards in accordance with which the Contract shall be executed, the edition or the revised version of such codes and standards current at the date twenty-eight (28) days prior to date of bid submission shall apply unless otherwise specified. During Contract execution, any changes in such codes and standards shall be applied subject to approval by the Employer and shall be treated in accordance with Clause 13 [*Variations and Adjustments*]."

#### **Sub-Clause 5.2 Contractor's Documents**

For Sub-Clause 5.2.1 [*Preparation by Contractor*]:

Add the following sentence at the end of the second paragraph:

"The Contractor shall be responsible for the submission of all necessary detailed engineering investigations, surveys and designs in accordance with the provisions of Annex 'A' of the Implementing Rules and Regulations of Republic Act No. 9184." [*IRR Annex G, §8.1*]

For Sub-Clause 5.2.2 [*Review by Employer*]:

Amend the definition of "Review Period" by adding the following sentence at the end:

"; provided, that the Employer may extend such period by not more than 7 days"

Delete the fourth paragraph providing that the Employer is deemed to have given a Notice of No-objection if the Employer fails to give

a Notice within the Review Period.

For Sub-Clause 5.2.3 [Construction]:

Delete the parenthetical phrase “(or is deemed to have been given)” in sub-paragraph (a) of the first paragraph.

Insert as the second paragraph:

“The Contractor shall be solely responsible for the integrity of the detailed engineering design and the performance of the structure notwithstanding any approval or confirmation for the detailed engineering design given by the Employer.” [IRR Annex G, §8.3]

**Sub-Clause 5.8  
Design Error**

Delete the parenthetical phrase “(or deemed to be given)” in the first paragraph of Sub-Clause 5.8.

**6. Staff and Labor**

**Sub-Clause 6.1  
Engagement of Staff  
and Labour**

Insert this as the second paragraph of Sub-Clause 6.1:

“The Contractor shall comply with the provisions of the Laws of the Country regarding the employment of skilled and unskilled labour.” [RA 6685 requires 30% and 50%, respectively, from unemployed actual residents of LGU]

**Sub-Clause 6.4  
Labour Laws**

Amend the first paragraph of Sub-Clause 6.4 by inserting this as the last sentence:

“The Contractor shall ensure that each Subcontractor shall comply with such labour Laws and allow the personnel of each Subcontractor all their legal rights. [PBD Infra GCC §6.7]

Amend the second paragraph of Sub-Clause 6.4 by inserting this as the last sentence:

“The Contractor shall ensure that each Subcontractor shall require their respective employees to obey all such Laws.”

Insert this as the third paragraph of Sub-Clause 6.4:

“The Contractor shall comply, and ensure that each Subcontractor shall comply, with all the relevant Laws of the Country regarding public holidays.”

**Sub-Clause 6.5  
Working Hours**

Amend the chapeau of the first paragraph of Sub-Clause 6.5 to read as follows:

“The Contractor shall be allowed to work twenty four (24) hours at the Site(s) subject to local regulation and local approvals which

shall be obtained by the Contractor, unless:”

Insert as the second paragraph of Sub-Clause 6.5:

“The Contractor shall ensure that each Subcontractor shall comply with all the relevant Laws of the Country.”

**Sub-Clause 6.7  
Health and Safety of  
Personnel**

Amend the first paragraph of Sub-Clause 6.7 by inserting the following sentence at the start:

“The Contractor shall be fully responsible for the safety, protection, security, and convenience of the Contractor’s Personnel.” [*PBD Infra GCC §12.1*]

**Sub-Clause 6.9  
Contractor’s  
Personnel**

Insert this as the third paragraph of Sub-Clause 6.9:

“If the Employer 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 7 days and has no further connection with the activities in this Contract. [*PBD Infra GCC §6.6*] In removing (or causing the removal) of such person, the Contractor shall comply (or ensure compliance) with the relevant labour Laws of the Country.”

Renumber the third paragraph of Sub-Clause 6.9 as its fourth paragraph.

**Sub-Clause 6.12  
Key Personnel**

Delete the first paragraph of Sub-Clause 6.12.

Amend the second sentence of the second paragraph of Sub-Clause 6.12 by deleting the phrase “If not named or.”

Delete the third paragraph of Sub-Clause 6.12.

Retain the portion of the fourth paragraph of Sub-Clause 6.12 stating that “The Contractor shall not, without the Employer’s prior consent, revoke the appointment of any of the Key Personnel or appoint a replacement”, and delete the rest of its provisions.

Add as the second sentence of the fourth paragraph of Sub-Clause 6.12:

“The Employer will approve any proposed replacement of Key Personnel only if their relevant qualifications and abilities are equal to or better than those of the Key Personnel listed in the Technical Proposal.” [*PBD Infra GCC §6.5*]

**Sub-Clause 6.13  
Contractor’s Foreign  
Personnel**

A new Sub-Clause 6.13 is added with the following text:

“The Contractor may bring into the Country any foreign personnel

who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel possess the required visas and works permits.”

“The Contractor shall be responsible for (i) the removal of these personnel from the Country to their place of recruitment or domicile or to another place as provided in their employment contract; and (ii) in the event of the death in the Country of any of these personnel or members of their families, making arrangements for the removal of their remains from the Country or burial.”

## **7. Plant, Materials and Workmanship**

### **Sub-Clause 7.2 Samples**

Delete item (b) of the first paragraph of Sub-Clause 7.2.

### **Sub-Clause 7.3 Inspection**

Insert as item (iii) of sub-paragraph (b) of the first paragraph of Sub-Clause 7.3:

“(iii) attend any Factory Acceptance Test for any material provided by the Contractor; provided, that

(x) the Contractor shall provide a schedule of all proposed Factory Acceptance Tests to the Employer two months before the first Factory Acceptance Test to be undertaken, and the Employer may refuse to accept the Factory Acceptance Test and require the Contractor to repeat the Factory Acceptance Test if the Contractor fails to meet the deadline for providing the schedule; and

(y) the Contractor shall bear all reasonable costs and expenses for the Employer’s Personnel to attend Factory Acceptance Tests, subject to the audit by the Employer.”

### **Sub-Clause 7.4 Testing by the Contractor**

Delete the phrase “Plus Profit” at the end of the fifth paragraph of Sub-Clause 7.4.

### **Sub-Clause 7.5 Defects and Rejection**

Delete the last sentence of the second paragraph of Sub-Clause 7.5 providing that the Employer is deemed to have given a Notice of No-objection if the Employer fails to give a Notice within a prescribed period.

### **Sub-Clause 7.6 Remedial Work**

Delete the phrase “Plus Profit” at the end of item (i) of the third of Sub-Clause 7.6.

Delete the last paragraph of Sub-Clause 7.6 which refers to the failure of the Contractor to comply with the instruction of the Employer.

**Sub-Clause 7.7  
Ownership of Plant  
and Materials**

Amend Sub-Clause 7.7 by deleting the phrase “at whichever is the earlier of the following times” and by deleting items (b) and (c). [PBD *Infra GCC §6.1*]

**Sub-Clause 7.8  
Royalties**

Add the following as the second paragraph of Sub-Clause 7.8:

“If the material referred to in item (b) is owned by an agency of the national or local government of the Country, then the disposal of such material shall comply with applicable Laws of the Country.”

**8. Commencement, Delays and Suspension****Sub-Clause 8.1  
Commencement of  
Works**

Replace the text of Sub-Clause 8.1 to read as follows:

“Within 7 days from the date of approval of the Contract by the appropriate government approving authority, the Employer shall issue the Notice to Proceed to the Contractor and give the Contractor a copy of the approved Contract. [PBD *Infra ITB §33*] The Notice to Proceed shall state the Commencement Date.

“The Contractor shall commence the design of the Works not later than the Commencement Date. The Contractor shall commence the execution of the Works after the receipt by the Contractor of all approvals of the Contractor’s Documents in accordance with Sub-Clause 5.2 [Contractor’s Documents].”

**Sub-Clause 8.3  
Programme**

Amend the first paragraph of Sub-Clause 8.3 to read as follows:

“The Contractor shall submit for the Employer’s approval:

- (1) a detailed time program within 14 days from the issuance of the Notice to Proceed under Sub-Clause 8.1 [Commencement of Works]; [IRR Annex G, §13.3]
- (2) an updated programme at intervals no longer than the period stated in the Contract Data [PBD *Infra GCC §31.3*], where, in addition to the items listed below, such updated programme 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; [PBD *Infra GCC §31.2*] provided, that if the Contractor does not submit an updated programme within the required period, the Employer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue programme has been submitted; [PBD *Infra GCC §31.3*] and
- (3) a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor’s obligations, where, in addition to the items listed below,

such revised programme shall show the effect of any approved Variations. [PBD *Infra GCC §31.4*]

Delete the second paragraph of Sub-Clause 8.3.

Delete the following sentence in the fourth paragraph, now renumbered as the third paragraph:

*“If the Employer gives no such Notice:*

- *within 21 days after receiving the initial programme; or*
- *within 14 days after receiving a revised programme*

*the Employer shall be deemed to have given a Notice of No-objection and the initial programme or revised programme (as the case may be) shall be the Programme.”*

**Sub-Clause 8.5  
Extension of Time for  
Completion**

Amend the first paragraph of Sub-Clause 8.5 by adding the following items:

- “(d) total suspension of progress of the Works or suspension of activities along the critical path that is not due to any fault of the Contractor; provided, that the extension of time shall only cover the time between the order suspending operations and the order to resume work; [IRR *Annex E, §9.3*]
- “(e) the affected activities fall within the critical path of the PERT/CPM network; [IRR *Annex E, §10.3*]
- “(f) 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 stated in the Contract Data;
- “(g) major calamities such as exceptionally destructive typhoons, floods and earthquakes, and epidemics;
- “(h) non-delivery on time of materials, working drawings, or written information to be furnished by the Employer;
- “(i) non-acquisition of permit to enter private properties within the right-of-way resulting in complete paralyzation of construction activities;
- “(j) other meritorious causes as determined by the Employer’s Representative and approved by the Employer;
- “(k) shortage of construction materials, general labor strikes, and peace and order problems that disrupt construction operations through no fault of the Contractor; provided, that such events are publicly felt and certified by the appropriate government agency, such as DTI, DOLE, DILG, and DND. [IRR *Annex E, §10.5*]

Amend the second paragraph of Sub-Clause 8.5 by adding the following at the end:

“The Employer’s Representative 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 30 days after such work has been commenced or after the circumstances leading to such claim have arisen, delivered such notice to the Employer's Representative in order that the Employer's Representative 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 Employer's Representative shall examine the facts and extent of the delay and shall extend the contract time completing the contract work when, in the Employer's Representative's opinion, the findings of facts justify an extension." [IRR Annex E, §10.1]

Insert these as the fourth and fifth paragraphs of Sub-Clause 8.5:

"No extension of contract time shall be granted the Contractor (a) due to ordinary unfavorable weather conditions; (b) due to inexcusable failure or negligence of the Contractor to provide the required equipment, supplies or materials; [IRR Annex E, §10.2] or (c) when the reason given to support the request for extension was already considered in the determination of the original Contract time." [IRR Annex E, §10.4]

"The written consent of bondsmen must be attached to any request of the Contractor for extension of contract time and submitted to the Employer for consideration and the validity of the performance security shall be correspondingly extended." [IRR Annex E, §10.5] [PBD Infra GCC §47.5]

#### **Sub-Clause 8.8 Delay Damages**

Amend the first paragraph of Sub-Clause 8.8 by deleting the third sentence [PBD Infra GC §9.1 (as amended by GPPB Resolution 7-2019)] and adding these after the second sentence:

"Once the cumulative amount of Delay Damages reaches ten percent (10%) of the Contract Price, the Employer may terminate the Contract, without prejudice to the Employer's other remedies. [IRR Annex E, §8.5; PBD Infra GC §9.1] The Employer does not need to prove that it incurred actual damages in order to be entitled to Delay Damages. The Employer may, at its option, deduct Delay Damages from payments due to the Contractor or collect such Delay Damages from the Retention Money or other securities posted by the Contractor." [IRR Annex E, §8.3]

Insert this as the fourth paragraph of Sub-Clause 8.8:

"If the Intended Completion Date is extended after Delay Damages have been paid, the Employer shall correct any overpayment of Delay Damages by the Contractor by adjusting the next payment certificate."

#### **Sub-Clause 8.9 Employer's Suspension**

Amend the first paragraph of Sub-Clause 8.9 by adding these at the end:

“Such causes include:

- (a) force majeure;
- (b) any fortuitous events; or
- (c) failure on the part of the Contractor to (i) correct bad conditions which are unsafe for workers or for the general public; (ii) carry out valid orders given by the Employer; or (iii) perform any provisions of the Contract; or
- (d) due to adjustment of plans to suit field conditions as found necessary during construction.” [IRR Annex E, §9.1]

**Sub-Clause 8.10  
Consequences of  
Employer’s Suspension**

Amend the first paragraph of Sub-Clause 8.10 by deleting the phrase “and/or payment of such Cost Plus Profit”.

**Sub-Clause 8.11  
Payment for Plant and  
Materials in Event of  
Suspension**

Delete the text of Sub-Clause 8.11.

**Sub-Clause 8.12  
Prolonged Suspension**

Delete the phrase “Plus Profit” in sub-paragraph (a) of the first paragraph of Sub-Clause 8.12.

**Sub-Clause 8.13  
Resumption of Work**

Insert the phrase “, for the Contractor’s account,” between the phrase “The Contractor shall promptly make good” and the phrase “all such deterioration” in the last sentence of the second paragraph of Sub-Clause 8.13.

**9. Tests on Completion**

**Sub-Clause 9.1  
Contractor’s  
Obligations**

Insert this as the last paragraph of Sub-Clause 9.1:

“Once the project reaches an accomplishment of 95% of the total contract amount, the Employer may create an inspectorate team to make a preliminary inspection and submit to the Contractor, in preparation for the final turnover of the project, a punch-list containing, among others, (i) the remaining works, (ii) work deficiencies for necessary corrections, and (iii) the specific duration/time to fully complete the project considering the approved remaining contract time. The submission of the punch-list shall not preclude the Employer from claiming for liquidated damages.” [IRR Annex E, §7]

**Sub-Clause 9.2  
Delayed Test**

Delete the first paragraph of Sub-Clause 9.2.

**Sub-Clause 9.4  
Failure to Pass Tests  
on Completion**

Delete items (b), (c) and (d) of the first paragraph of Sub-Clause 9.4.



Delete the second paragraph of Sub-Clause 9.4.

## 10. Employer's Taking Over

### Sub-Clause 10.1 Taking Over the Works and Sections

Amend item (i) of the fourth paragraph of Sub-Clause 10.1 to read as follows:

“(i) issue the Taking-Over Certificate to the Contractor, stating the date on which the Works or Section were completed in accordance with the Contract;”

Delete the fifth paragraph of Sub-Clause 10.1, which refers to the Employer's failure to either issue the Taking-Over Certificate or reject the Contractor's application.

### Sub-Clause 10.2 Taking Over of Parts of the Works

Delete the text of Sub-Clause 10.2.

### Sub-Clause 10.3 Interference with Tests on Completion

Delete the text of Sub-Clause 10.3.

## 11. Defects after Taking Over

### Sub-Clause 11.1 Completion of Outstanding Work and Remedying Defects

Amend the chapeau of the first paragraph of Sub-Clause 11.1 by adding the following text after the phrase “the Contractor shall”:

“, within 90 days from the time the Employer issued an order to remedy” [IRR §62.2.2.1]

### Sub-Clause 11.2 Cost of Remedying Defects

Amend item (a) of Sub-Clause 11.2 to read as follows:

“(a) the design of the Works;”

### Sub-Clause 11.4 Failure to Remedy Defects

Amend sub-paragraph (b) of Sub-Clause 11.4 to read:

“(b) forfeit the Performance Security, subject the Contractor's properties to attachment or garnishment proceedings, perpetually disqualify the Contractor from participating in any competitive bidding conducted by the Employer, and offset all amounts payables to the Contractor against the costs incurred by the Employer for remedying the defect or damage,” [IRR §62.2.2.2]

Delete sub-paragraph (c) of Sub-Clause 11.4.

Re-number sub-paragraph (d) of Sub-Clause 11.4 as sub-paragraph (c).

Amend the third paragraph of Sub-Clause 11.4 by replacing the phrase “sub-paragraph (c) or (d)” with the phrase “sub-paragraph (c)”.

**Sub-Clause 11.5  
Remedying of  
Defective off Site**

Replace the word “may” with “shall” in order that the relevant phrase in the last sentence of the third paragraph of Sub-Clause 11.5 shall read “the Employer shall require the Contractor”.

**Sub-Clause 11.6  
Further Tests after  
Remedying Defects**

Replace the word “Party” with “Contractor” in the third paragraph of Sub-Clause 11.6.

**Sub-Clause 11.8  
Contractor to Search**

Delete the phrase “Plus Profit” in the second paragraph of Sub-Clause 11.8.

**Sub-Clause 11.10  
Unfulfilled Obligations**

Delete the second paragraph of Sub-Clause 11.10.

Insert these as the additional paragraphs of Sub-Clause 11.10:

“After the issuance of the Performance Certificate, the following shall be held liable for (i) ‘Structural Defects’, *i.e.*, major faults, flaws or deficiencies in one or more key structural elements of the project which may lead to structural failure of the completed elements or structure; or (ii) ‘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) The Contractor shall be liable if the Structural Defects or the Structural Failures are due to improper construction, use of inferior quality/substandard materials, or any violation of the contract plans and specifications;
- (b) The Consultants or Designers who prepared the design or undertook construction supervision for the project shall be liable if the Structural Defects or Structural Failures are due to faulty or inadequate design and specifications or construction supervision;
- (c) The Employer’s Representative and its Project Manager, Construction Managers, and Supervisors shall be liable if the Structural Defects or the Structural Failures are due to 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 shall be liable if the Structural Defects or the Structural 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) The users of the constructed facility shall be liable if the Structural Defects or the Structural 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. [IRR §62.2.3.1]

“The warranty against Structural Defects or Structural Failures, except those occasioned on force majeure, shall cover the periods specified in Section 62.2.3.2 of the Implementing Rules and Regulations of Republic Act No. 9184, such periods to be reckoned from the date of issuance of the Performance Certificate.[IRR §62.2.3.2]

“The Contractor shall 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 Section 62.2.3.3 of the Implementing Rules and Regulations of Republic Act No. 9184.[IRR §62.2.3.3]

“The warranty security shall be stated in Philippine Pesos and shall remain effective for the periods stated in the Contract Data, and shall be returned only after the lapse of said periods.[IRR §62.2.3.4]

“In case of structural defects/failure occurring during the applicable warranty period, the Employer 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 Employer.” [IRR §62.2.4]

**Sub-Clause 11.11  
Clearance of Site**

Amend the first paragraph of Sub-Clause 11.11 by replacing the phrase “Promptly after” with the phrase “As a requirement for”.

Amend the second paragraph of Sub-Clause 11.11 by deleting the phrase “within 28 days after the issue of the Performance Certificate”.

**12. Test After Completion**

**Sub-Clause 12.2  
Delayed Test**

Delete the phrase “Plus Profit” in sub-paragraph (b) of the first paragraph of Sub-Clause 12.2.

**Sub-Clause 12.4  
Failure to Pass Tests  
after Completion**

Delete the first paragraph of Sub-Clause 12.4.

Delete sub-paragraph (iii) of Sub-Clause 12.4, which refers to the Contractor not receiving a Notice during the relevant DNP.

Delete the phrase “Plus Profit” in the last paragraph of Sub-Clause 12.4.

**13. Variations and Adjustments**

**Sub-Clause 13.2  
Value Engineering**

Insert as the third sentence of the third paragraph of Sub-Clause 13.2:

“The Employer’s consent to the Contractor’s proposal under this Sub-Clause shall not result in any additional Cost or any increase in the Contract Price.”

**Sub-Clause 13.3  
Variation Procedure**

For Sub-Clause 13.3.1 [*Variation by Instruction*]:

Amend the first paragraph by adding the following sentences at the end:

“The Employer shall not instruct a Variation (i) involving changes in design and construction requirements unless such changes could not have been anticipated prior to the signing and approval of the Contract [*IRR Annex G, §13.5*]; or (ii) if such instruction will cause the cumulative amount of Variations to exceed 10% of the Contract Price. [*PBD Infra GCC §27.1*] The Employer shall observe the following procedure: [*IRR Annex E, §1.5*.]

“(a) The Employer’s Representative shall submit to the Employer:

- (i) the draft instruction for a proposed Variation;
- (ii) any notices submitted by the Contractor;
- (iii) the plans for the proposed Variation;
- (iv) the computations as to quantities of additional works involved per item and information on the specific stations where such works are needed;
- (v) the date of inspections and investigations by the Employer’s Representative regarding the proposed Variation, and the log book thereof;
- (vi) a detailed estimate of the Cost of the proposed Variation; and
- (vii) the Employer’s Representative justifications for such Variation; [*IRR Annex E, §1.5.a*]

“(b) Upon the submission by of all the documents listed in item (a) above by the Employer’s Representative, the Employer shall immediately instruct the Employer’s Personnel to (i) conduct an on-the-spot investigation to verify the need for the work to be prosecuted; and (ii) review the proposed plan and Cost; [*IRR Annex E, §1.5.b*]

- “(c) The Employer’s Personnel shall submit to the Employer (i) a report of their findings and recommendations, and (ii) the supporting documents; [IRR Annex E, §1.5.c]
- “(d) Upon receipt of the report and the supporting documents, the Employer may approve the draft instruction after being satisfied that the same is justified, necessary, and in order.” [IRR Annex E, §1.5.d]

Insert the following as additional paragraphs at the end of Sub-Clause 13.3.1 [*Variation by Instruction*]:

“As an exception, the Employer’s Representative may instruct, and the Contractor may immediately execute, a Variation even without the prior written approval of the Employer when:

- “(a) there is an emergency requiring the urgent prosecution of the work to avoid detriment to public service, or damage to life and/or property; or
- “(b) time is of the essence; [IRR Annex E, §3.2, para. 1]

“Notwithstanding the presence of any of the circumstances described in the immediately preceding paragraph, all of the following conditions must be met in cases where the Employer’s Representative instructed a Variation without the prior written approval of the Employer:

- “(a) there are available funds and the Cost of the Variation is within the limits of the Employer’s Representative’s delegated authority; [IRR Annex E, §3.2, para. 1]
- “(b) the Employer’s Representative’s instruction shall be valid only for work the Cost of which does not exceed 5% of the Contract Price; [IRR Annex E, §3.2, para. 2]
- “(c) the Employer’s Representative shall, immediately after the start of work, submit its instruction to the Employer for approval; [IRR Annex E, §3.2, para. 3]
- “(d) the Cost of works satisfactorily accomplished may not be paid until the Employer has approved the Employer’s Representative’s instruction; [IRR Annex E, §3.2, para. 3]
- “(e) the Employer’s Representative shall not instruct, and the Contractor shall not execute, a Variation without the Employer’s prior written approval if the Employer’s Representative’s instruction involves work the cumulative Cost of which exceeds 5% of the original Contract Price; and [IRR Annex E, §3, para. 4]
- “(f) within 7 days after the work has commenced, the Contractor shall deliver a notice to the Employer’s Representative giving full and detailed particulars of the Cost of the Variation in order that it may be investigated at that time.” [IRR Annex E, §1.5]

For Sub-Clause 13.3.3 [Cost of Variation]:

Insert the following as Sub-Clause 13.3.3 [Cost of Variation]:

“13.3.3 Cost of Variation

“Notwithstanding any provision of the Contract to the contrary, the following provisions shall govern the determination of the payment of Cost for any Variation:

- “(a) Variations resulting from the Contractor’s design errors, omissions or non-conformance with the performance specifications and parameters and the contract documents shall be implemented by the Contractor at no additional Cost to the Employer. [IRR Annex G, §13.5]
- “(b) If the Contractor suffers delay and/or incurs Costs due to changes or errors in the Employer’s performance specifications and parameters, the Contractor shall be entitled to either one of the following:
  - “(i) an extension of time for any such delays in accordance with Section 10 of Annex ‘E’ of the Implementing Rules and Regulations of Republic Act No. 9184; or
  - “(ii) payment for such costs as specified in the contract documents, provided, that the cumulative amount of the Variation does not exceed 10% of the Approved Contract Amount. [IRR Annex G, §13.5]
- “(c) For work items that are exactly the same or similar to those in the Contract, the applicable unit prices of work items under the original Contract shall be used. [IRR Annex E, §2.1.a]
- “(d) For new work items that are not in the Contract, the unit prices of the new work items shall be based on the direct unit costs used in the original Contract (e.g., unit cost of cement, rebars, form lumber, labor rate, equipment rental, etc.). All new components of the new work item shall be fixed prices, provided the same is acceptable to both the Employer and the Contractor, and provided further that the direct unit costs of new components shall be based on the Contractor’s estimate as validated by the Employer via documented canvass in accordance with existing rules and regulations. The direct cost of the new work item shall then be combined with the mark-up factor (i.e., taxes and profit) used by the Contractor in the Bid to determine the unit price of the new work item. [IRR Annex E, §2.1.b]
- “(e) The Contractor’s request for payment for any Variation shall be accompanied by a statement, with the approved supporting forms, giving a detailed accounting and record of amount for which the Contractor claims payment. Said request for payment shall be included with the Contractor’s statement for interim or final payment as the case may be. [IRR Annex E, §2.2]

“(f) Within 28 days after occurrence of the circumstances or reasons justifying a claim for extra Cost, the Contractor shall deliver a notice to the Employer giving full and detailed particulars of any extra Cost in order that it may be investigated at that time. The Contractor’s failure to deliver the notices required under this paragraph within the period required shall constitute a waiver by the Contractor for any claim for Costs that should have been the subject of such notices.” [IRR Annex E, §1.5]

**Sub-Clause 13.4  
Provisional Sums**

Amend the first sentence of the first paragraph of Sub-Clause 13.4 by replacing the phrase “be adjusted accordingly” with the phrase “not be adjusted as each such sum is considered included in the Contract Price.”

Delete sub-paragraph (ii) of Sub-Clause 13.4.

**Sub-Clause 13.5  
Daywork**

Amend the first sentence of the fifth paragraph of Sub-Clause 13.5 to read as follows:

“One copy of each statement shall, if correct and recorded on forms approved by the Employer’s Representative, be verified and signed by the Employer’s Representative within two days of the work being done and returned to the Contractor and promptly returned to the Contractor.” [PBD *Infra* GCC §29.2]

**Sub-Clause 13.6  
Adjustments for  
Changes in Laws**

Delete the text of Sub-Clause 13.6 and replace with the following:

“In cases where the cost of the Contract is affected by any applicable new laws, ordinances, regulations, or other acts of the GoP, promulgated after the date of opening of bids for the Contract, a Contract Price adjustment shall be made or appropriate relief shall be applied on a no loss-no gain basis.” [IRR §61.2, PBD *Infra* ITB §15.4]

**Sub-Clause 13.7  
Adjustments for  
Changes in Cost**

Delete the text of Sub-Clause 13.7 and replace with the following:

“There shall be no adjustments in the Contract Price due to changes in Cost, unless all the following conditions are present: (i) the Employer shall recommend an adjustment; (ii) the National Economic and Development Authority shall determine that the changes in Cost result from the extraordinary circumstances described in the Civil Code of the Philippines, namely, extraordinary inflation or deflation of the Philippine currency; and (iii) the Government Procurement Policy Board shall approve the proposed adjustment.” [IRR §61; PBD *Infra* GCC §48].

**14. Contract Price and Payment**

**Sub-Clause 14.1  
The Contract Price** Delete the phrase “or Cost Plus Profit” in sub-paragraph (a) of Sub-Clause 14.1.

**Sub-Clause 14.2  
Advance Payment** Amend the first sentence of the second paragraph of Sub-Clause 14.2 by inserting the following at the end:

“, upon a written request of the Contractor,” [IRR Annex E, §4.1]  
[PBD Infra GCC §39.1]

For Sub-Clause 14.2.1 [Advance Payment Guarantee]:

Replace the second sentence of the first paragraph with the following:

“The advance payment guarantee shall be either (i) an irrevocable standby letter of credit or a bank guarantee issued by a bank acceptable to the Employer, or (ii) a surety bond callable upon demand, issued by a surety or insurance company duly licensed by the Insurance Commission and confirmed by the Employer; and in either case, in a form acceptable to the Employer.”

For Sub-Clause 14.2.3 [Repayment of Advance Payment]:

Replace the second sentence and sub-paragraphs (a) and (b) of the first paragraphs with the following:

“The advance payment shall be repaid by the Contractor through percentage deductions in Payment Certificates. The percentage deductions shall be equal to the percentage of the advance payment amount to the Contract Price (*i.e.*, a percentage up to 15%). [IRR Annex E, §4.3] [PBD Infra GCC §39.3]

**Sub-Clause 14.3  
Application for Interim  
Payment** Amend Sub-Clause 13.4 by inserting this as sub-paragraph (xi):  
“(xi) the deduction of amounts to cover any third party liabilities and uncorrected discovered defects in the Works.” [IRR Annex E, §5.3(d) and (e)]

**Sub-Clause 14.4  
Schedule of Payments** Delete the text of Sub-Clause 14.4.

**Sub-Clause 14.5  
Plants and Materials  
intended for the Works** Delete the text of Sub-Clause 14.5.

**Sub-Clause 14.7  
Payment** Amend the chapeau of the first paragraph of Sub-Clause 14.7 by inserting “or cause to be paid” after the phrase “shall pay”.

Amend sub-paragraph (b)(i) of Sub-Clause 14.7 by replacing the phrase “Employer receives” with the phrase “Employer’s



Representative has verified and certified”. [IRR Annex E, §5.2]

Amend sub-paragraph (b)(ii) of Sub-Clause 14.7 by replacing the phrase “Employer receives” with the phrase “Employer’s Representative has verified and certified”. [IRR Annex E, §5.2]

Amend sub-paragraph (c) of Sub-Clause 14.7 by replacing the term “Employer” with the phrase “Employer’s Representative”.

Amend sub-paragraph (c)(i) of Sub-Clause 14.7 by replacing the term “receives” with the phrase “has verified and certified”.

Amend the second paragraph of Sub-Clause 14.7 by inserting the following as the second sentence:

“The Contractor may nominate only commercial or universal banks authorized by the BangkoSentral ng Pilipinas.”

**Sub-Clause 14.8  
Delayed Payment**

Delete the text of Sub-Clause 14.8 and replace with the following:

“The Employer shall not pay any interest for delayed payments and adjustments.” [PBD *Infra GCC* §40.3]

**Sub-Clause 14.9  
Release of Retention  
Money**

Replace the text of Sub-Clause 14.9 with the following text:

“For each Statement, the Contractor may request the substitution of the amount to be retained as Retention Money with an irrevocable standby letter of credit from a commercial bank, a bank guarantee, or a surety bond callable on demand, in amounts equivalent to the amount of Retention Money to be substituted, and in a form acceptable to the Employer; provided, that the execution of the Works is on schedule and the Works are satisfactorily undertaken. [IRR Annex E, §6.2] [PBD *Infra GCC* §42.3]

“The irrevocable standby letters of credit, bank guarantees or surety bonds shall be valid for a duration to be determined by the Employer and will answer for uncorrected discovered defects and third party liabilities.” [IRR Annex E, §6.2] [PBD *Infra GCC* §42.3]

“Upon completion of the Works, the Contractor may substitute the amount retained as Retention Money with an ‘on demand’ bank guarantee in a form acceptable to the Employer.” [PBD *Infra GCC* §42.4]

“The total amount of the Retention Money shall be paid by the Employer upon issuance of the Performance Certificate.” [IRR Annex E, §6.2][PBD *Infra GCC* §42.3]

**Sub-Clause 14.13**

Delete the phrase “and after giving credit to the Contractor for all

**Final Payment** amounts (if any) previously paid by the Contractor and/or received by the Employer under the Performance Security,” in subparagraph (b) of the first paragraph of Sub-Clause 14.13.

**Sub-Clause 14.14** Delete the text of Sub-Clause 14.14.  
**Cessation of Employer’s Liability**

**Sub-Clause 14.15** Delete the second sentence of Sub-Clause 14.15 and its subparagraphs (a) through (g).  
**Currencies of Payment**

## **15. Termination by Employer**

**Sub-Clause 15.1-A** Insert as the new Sub-Clause 15.1-A:  
**Negative Slippage**

“In case of

“1. Negative slippage of five percent (5%), the Contractor shall, upon receipt of a Notice to Correct:

- a. Submit a detailed “catch-up” program every two weeks in order to eliminate the slippage and to restore the project to its original schedule;
- b. Accelerate work and identify specific physical targets to be accomplished over a definite period of time;
- c. Provide additional input resources such as money, manpower, materials, equipment, and management, which shall be mobilized for this action; and
- d. Allow the Employer to exercise closer supervision and meet the Contractor every other week to evaluate the progress of work and resolve any problems and bottlenecks.

“2. Negative slippage of ten percent (10%), the Employer shall, upon receipt of a final warning:

- a. Provide a revised detailed “catch-up” program with weekly physical targets together with the required additional input resources; and
- b. Allow the Employer to conduct on-site supervision and evaluation of the project performance at least once a week and to prepare contingency plans for a possible termination of the Contract.

“3. Negative slippage of fifteen percent (15%), the Employer shall initiate the termination of the Contract and take proper transitory measures to minimize work disruptions.” [*GPPB Resolution No. 5-2019*]

**Sub-Clause 15.2** Insert as the second paragraph of Sub-Clause 15.2:

**Termination by Employer**

“Within 7 days of receipt of a written report of possible grounds for termination of the Contract under this Clause 15, or upon its own initiative, the Employer shall verify the existence of such grounds and shall cause a verified report to be executed with all relevant evidence attached.” [IRR Annex I, §IV.1] [PBD Infra GCC §19.1(a)]

For Sub-Clause 15.2.1 [Notice]:

Amend the chapeau of the first paragraph by replacing the phrase “or, in the case of sub-paragraph (f), (g) or (h) below a Notice of termination, if the Contractor” with the word “if”.

Amend the first paragraph by replacing sub-paragraphs (a) through (h) with the following text:

- “(a) While the execution of the Works is on-going, the Contractor, due to its fault, has incurred negative slippage of 15% or more in accordance with Presidential Decree No. 1870, in the execution of the Works, regardless of whether or not previous warnings and notices have been issued for the Contractor to improve his performance; [IRR Annex I, §IV.A.2(a)] [PBD Infra GCC §16.1(i)]
- “(b) After the period for completion of the Works has expired, the Contractor, due to its fault, has incurred negative slippage of 10% or more in the completion of the Works [IRR Annex I, §IV.A.2(b)] [PBD Infra GCC §16.1(ii)]; or the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of delay damages can be paid [PBD Infra GCC §18.3(g)];
- “(c) The Contractor: [IRR Annex I, §IV.A.2(c)] [PBD Infra GCC §16.1(iii)]
  - “(i) abandons the Works, refuses or fails to comply with a valid instruction of the Employer or the Employer’s Representative, or fails to proceed expeditiously and without delay despite a written notice by the Employer or the Employer’s Representative; or stops work for 28 days when no stoppage of work is shown on the current Program of Work and the stoppage has not been authorized by the Engineer [PBD Infra GCC §18.3(a)]; or the Employer’s Representative gives notice to the Contractor that failure to correct a particular defect is a fundamental breach of the Contract and the Contractor fails to correct such defect within a reasonable period of time as determined by the Employer’s Representative [PBD Infra GCC §18.3(e)];

“(ii) does not actually have on the project Site the minimum essential equipment listed on the Bid as 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 the Contract or persistently or flagrantly neglects to carry out its obligations under the Contract;

“(iv) neglects or refuses to remove materials or to perform a new Work that has been rejected as defective or unsuitable; or

“(v) subcontracts any part of the Contract without approval by the Employer;

“provided, that all materials on the Site, Plant, Works, and Contractor’s Equipment purchased and funded under the Contract, shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor’s default under items (a) through (c). [*PBD Infra GCC §16.2*]

“(d) The Contractor is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction, in which case 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 Employer or the Contractor.” [*IRR Annex I, §IV.C*] [*PBD Infra GCC §18.3(c)*]

“(e) The Employer determines prima facie that the Contractor has engaged, before or during the implementation of the Contract, in unlawful deeds and behaviors relative to contract acquisition and implementation. Unlawful acts include, but are not limited to, the following:

“(i) Corrupt, fraudulent, collusive and coercive practices;

“(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. [*IRR Annex I, §IV.D*] [*PBD Infra GCC §18.3(h)*]

Insert as the second paragraph:

“The Notice to the Contractor shall (i) be accompanied by a copy of the verified report described in the second paragraph of Sub-Clause 15.2; and (ii) state the following:

- (a) that the Contract is being terminated for any of the grounds afore-mentioned, and a statement of the acts that constitute the grounds constituting the same;
- (b) the extent of termination, whether in whole or in part;
- (c) an instruction to the Contractor to show cause as to why the Contract should not be terminated; and
- (d) special instructions of the Employer, if any.” [IRR Annex I, §IV.2] [PBD Infra GCC §19.1(b)]

For Sub-Clause 15.2.2 [Termination]:

Replace the text with the following:

“1. The Contractor shall have 7 days from receipt of the notice to submit to the Employer a verified position paper stating why the Contract should not be terminated. If the Contractor fails, either by inaction or default, to submit the position paper within the required period or to show cause why the Contract should not be terminated, then the Employer may issue its decision to terminate the Contract. [IRR Annex I, §IV.3] [PBD Infra GCC §19.1(c)]

“2. At any time before receipt of the Contractor’s position paper, the Employer may withdraw the notice to terminate if the Employer determines that certain items or works subject of the notice had been completed, delivered, or performed before the Contractor’s receipt of the notice to terminate. [IRR Annex I, §IV.4] [PBD Infra GCC §19.1(d)]

“3. The Employer shall decide whether or not to terminate the Contract within a non-extendible period of 10 days from receipt of the Contractor’s position paper. [IRR Annex I, §IV.5] [PBD Infra GCC §19.1(e)]

“4. The Employer shall serve a notice to the Contractor of its decision and, unless otherwise provided in such notice, the Contract is deemed terminated from receipt of the Contractor of the notice of decision. The termination shall only be based on the grounds stated in the notice to terminate. [IRR Annex I, §IV.5] [PBD Infra GCC §19.1(e)]

“5. The Employer may, at its option, create a Contract Termination Review Committee to assist in deciding whether or not to terminate the Contract. All decisions recommended by such committee shall be subject to the approval of the Employer.” [IRR Annex I, §IV.6] [PBD Infra GCC §19.1(f)]

For Sub-Clause 15.2.3 [After termination]:

Insert the following as the second paragraph:

“Pursuant to Section 69 of Republic Act No. 9184, after the termination of the Contract, the Employer shall impose on the Contractor the penalty of suspension for one year for the first offense, and suspension for two years for the second offense, from participating in any public bidding process to be conducted by the Employer, for violations committed during the implementation of the Contract, which include but are not limited to the following violations:

- “(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;
- “(b) Failure by the Contractor to fully and faithfully comply with its obligations under the Contract without valid cause, or failure by the Contractor to comply with any written lawful instruction of the Employer or the Employer’s Representative pursuant to the implementation of the Contract. 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 provisions of the Contract;
  - “(iii) Stockpiling in proper places of all materials and removal from the Site of waste and excess materials, including broken pavement and excavated debris in accordance with approved plans and specifications and provisions of the Contract;
  - “(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 implementation of the Contract;
- “(c) Assignment and subcontracting of the Contract or any part thereof or substitution of Key Personnel without the prior written approval of the Employer;
- “(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 (or CPES) rating sheet. In the absence of the CPES rating sheet, the existing performance monitoring system of the Employer shall be applied. Any of the following acts by the Contractor 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 the Contract by the Contractor resulting to substantial breach thereof without lawful and/or just cause;

provided; that the penalty of suspension shall be without prejudice to the imposition of additional administrative sanctions as the internal rules of the Employer may provide or to criminal prosecution as provided by applicable laws.” [RA §69] [IRR §69.1] [PBD *Infra* GCC §19.2]

For Sub-Clause 15.2.4 [Completion of the Works]:

Delete the second paragraph.

**Sub-Clause 15.3  
Valuation after  
Termination for  
Contractor’s Default**

Insert the following as the fourth paragraph of Sub-Clause 15.3:

“Notwithstanding any provision in the Contract to the contrary, if the Contract is terminated under Sub-Clause 15.2 because of a fundamental breach of the Contract by the Contractor, the Employer’s Representative shall issue a certificate for the value of the Works done and the Materials ordered, less (i) any amount of advance payments received up to the date of the issue of the certificate, and (ii) the percentage indicated in the Contract Data to be applied to the value of the Works not completed. If the total amount due to the Employer exceeds any payment due to the Contractor, then the difference shall be a debt payable to the Employer.” [PBD *Infra* GCC §46.1]

**Sub-Clause 15.4  
Payment after  
Termination for  
Contractor’s Default**

Insert the following as the third paragraph of Sub-Clause 15.4:

“The relevant Party shall pay or repay the net balance due within 28 days from receipt of the notice or decision of termination.” [PBD *Infra* GCC §46.3]

**Sub-Clause 15.5  
Termination for  
Employer's  
Convenience**

Amend the first paragraph of Sub-Clause 15.5 by inserting:

the phrase “, in whole or in part,” after the term “the Contract”; and  
[*PBD Infra GCC §18.1*]

the phrase “if it has determined the existence of conditions that make the implementation of the Project economically, financially or technically impractical or unnecessary, such as, but not limited to, fortuitous events or changes in the Law of the Country or the policies of the Country’s national government,” after the term “Employer’s convenience”. [*IRR Annex I, §III.B*] [*PBD Infra GCC §18.1*]

Replace the third paragraph of Sub-Clause 15.5 with the following:

“Termination under this Sub-Clause shall take effect 28 days after the Contractor receives this Notice.”

**Sub-Clause 15.6  
Valuation after  
Termination for  
Employer's  
Convenience**

Delete sub-paragraph (b) in the first paragraph of Sub-Clause 15.6.

Delete the phrase “without the need for the Contractor to submit a Statement” in the third paragraph of Sub-Clause 15.6.

Insert the following as the fourth paragraph of Sub-Clause 15.6:

“Notwithstanding any provision in the Contract to the contrary, if the Contract is terminated for the Employer’s convenience under Sub-Clause 15.5, the Employer’s Representative shall issue a certificate for (i) the value of the Works done and the Materials ordered, (ii) the reasonable Cost of removal of Equipment and repatriation of the Contractor’s Personnel employed solely for the Works, and (iii) the Contractor’s Cost in protecting and securing the Works, less any amount of advance payments received up to the date of the certificate.” [*PBD Infra GCC §46.2*]

**Sub-Clause 15.7  
Payment after  
Termination for  
Employer's  
Convenience**

Replace “112 days after the Employer receives the Contractor’s submission under that Sub-Clause” with “28 days from the Contractor’s receipt of the Notice of termination”.

**16. Suspension and Termination by Contractor**

**Sub-Clause 16.1.  
Suspension by  
Contractor**

The first paragraph of Sub-Clause 16.1 is replaced with the following text:

“The Contractor shall, after 15 days from receipt of its notice to the Employer, have the right to suspend work operation on any or all activities along the critical path of activities due to any of the



following:

- “(a) There are right-of-way problems that prohibit the Contractor from performing work in accordance with the approved construction schedule.
- “(b) The Employer has not furnished to the Contractor construction plans that are to be furnished by the Employer under the Contract, thus precluding any work called for by such plans.
- “(c) Peace and order conditions make it extremely dangerous, if not impossible, to work; provided, that this condition must be (i) certified in writing by the Philippine National Police (PNP) station which has responsibility over the affected area and (ii) confirmed by the Department of Interior and Local Government (DILG) Regional Director.
- “(d) The Employer has not delivered the materials and equipment that are to be furnished by the Employer under the Contract.
- “(e) The Employer’s delay in making an Interim Payment beyond 45 days from the certification by the Employer’s Representative, unless there are justifiable reasons thereof which shall be communicated in writing to the Contractor.”  
[IRR Annex E, §9.2]

Amend the second paragraph of Sub-Clause 16.1 by removing the phrase “to financing charges under Sub-Clause 14.8 [*Delayed Payment*], and”.

**Sub-Clause 16.2.  
Termination by  
Contractor**

For Sub-Clause 16.2.1 [*Notice*]:

Amend the first paragraph by replacing the phrase “or, in the case of sub-paragraph (f)(ii), (g), (h) or (i) below a Notice of termination, if” and sub-paragraphs (a) through (i) with the following:

“The Contractor may terminate the Contract if the Works are completely stopped for a continuous period of at least 60 days through no fault of the Contractor, due to any of the following reasons:

- “(a) Failure of the Employer to deliver, within a reasonable time, supplies, materials, right-of-way, or other items that the Employer is obligated to furnish under the terms of the Contract; or
- “(b) The prosecution of the Works 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.” [IRR Annex I, §IV.E.1]

For Sub-Clause 16.2.2 [Termination]:

Replace the first paragraph with this:

“Notwithstanding any provision in the Contract to the contrary, the Contractor must serve a written notice to the Employer of its intention to terminate the Contract at least 30 days before its intended termination. The Contract is deemed terminated if it is not resumed in 30 days after the receipt of such notice by the Employer.” [IRR Annex I, §V.9]

Delete the second paragraph.

Amend the third paragraph, now renumbered as the second paragraph, by replacing “14 days” with “30 days”.

**Sub-Clause 16.3.  
Contractor’s  
Obligations After  
Termination**

Amend item (c) of Sub-Clause 16.3 to read:

“(c) remove wreckage, rubbish, and all other Goods from the Site, except as necessary for safety, and leave the Site; provided, that the Employer may sell or otherwise dispose of any remaining items if such items have not been removed as soon as reasonably possible.” [PBD *Infra* GCC §18.6]

**Sub-Clause 16.4.  
Payment after  
Termination by  
Contractor**

Amend Sub-Clause 16.4 by inserting the following as the first paragraph:

“Notwithstanding any provision in the Contract to the contrary, if the Contract is terminated because of a fundamental breach of the Contract by the Employer, the Employer’s Representative shall issue a certificate for (i) the value of the Works done and the Materials ordered, (ii) the reasonable Cost of removal of Equipment and repatriation of the Contractor’s Personnel employed solely for the Works, and (iii) the Contractor’s Cost in protecting and securing the Works, less any amount of advance payments received up to the date of the certificate.” [PBD *Infra* GCC §46.2]

Amend sub-paragraph (b) of Sub-Clause 16.4 by replacing the phrase “of any loss of profit or other losses and damages suffered by the Contractor as a result of this termination” with the phrase “certified by the Employer’s Representative under this Sub-Clause.”

**17. Care of the Works and Indemnities**

**Sub-Clause 17.1  
Responsibility for  
Care of the Works**

Amend the first sentence of the first paragraph of Sub-Clause 17.1 by inserting the phrase “, including responsibility for (i) any damage or destruction of the Works except those occasioned by force majeure; and (ii) 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,” after the term “Contractor’s Documents.” [IRR §62.2.1]

**Sub-Clause 17.3  
Intellectual and  
Industrial Property  
Rights**

Delete the third paragraph of Sub-Clause 17.3.

Amend the fifth paragraph (now re-numbered as the fourth paragraph) of Sub-Clause 17.4 by replacing the terms “a Party” and “the other Party” with the term “the Employer”, and by replacing the term “the indemnifying Party” with the term “the Contractor”.

**Sub-Clause 17.4  
Indemnities by  
Contractor**

Amend sub-paragraph (a) of Sub-Clause 17.4 by deleting the phrase “, unless attributable to any negligence, willful act or breach of the Contract by the Employer, the Employer’s Personnel, or any of their respective agents”.

Delete the second paragraph of Sub-Clause 17.4.

**Sub-Clause 17.5  
Indemnities by  
Employer**

Replace sub-paragraphs (a) and (b) of Sub-Clause 17.5 with the following text:

“(a) 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 relevant portion of the Site authorized by the Employer after the issuance of the Taking-Over Certificate; or

“(ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to the Employer except the Contractor.

“(b) damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer, or due to war or radioactive contamination directly affecting the Country. [PBD *Infra GCC §14*]

**Sub-Clause 17.7  
Use of Employer’s  
Accommodation/  
Facilities**

Add a new Sub-clause 17.7 with the following text:

“The Contractor shall take full responsibility for the care of the Employer provided accommodation and facilities, if any, as detailed in the Employer’s Requirements, from the respective dates of hand-over to the Contractor until cessation of occupation (where

hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

“If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Employer’s Representative.”

## **18. Exceptional Events**

### **Sub-Clause 18.1 Exceptional Events**

Amend the first paragraph of Sub-Clause 18.1 to read:

“In this Clause, ‘Exceptional Event’ shall have the same meaning as ‘Force Majeure’, which is an exceptional event that the Contractor could not have foreseen, or which though foreseen, was inevitable. For the avoidance of doubt, Force Majeure shall not include (i) ordinary unfavorable weather conditions and (ii) any other cause the effects of which could have been avoided with the exercise of reasonable diligence by the Contractor.” *[PBD Infra GCC §20.1]*

### **Sub-Clause 18.2 Notice of an Exceptional Event**

Amend Sub-Clause 18.2 by inserting the following text as the fifth and sixth paragraphs:

“For the avoidance of doubt, the Employer shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to an Exceptional Event. The Contractor shall immediately comply with such order to suspend the work wholly or partly. *[PBD Infra GCC §45.1]*

“For the avoidance of doubt, under Sub-Clause 16.1 [*Contractor’s Entitlement to Suspend Work*], the Contractor shall have the right to suspend work operation when peace and order conditions make it extremely dangerous, if not impossible, to work.” *[PBD Infra GCC §45.2]*

### **Sub-Clause 18.3 Duty to Minimise Delay**

Amend the first paragraph of Sub-Clause 18.3 by replacing the phrase “use all reasonable endeavors to minimise” with the phrase “exercise due diligence to prevent or minimise any damage it may suffer or”.

### **Sub-Clause 18.4 Consequences of an Exceptional Event**

Replace the character “:” in the chapeau of the first paragraph of Sub-Clause 18.4 with “EOT.”.

Delete sub-paragraphs (a) and (b) of Sub-Clause 18.4.

### **Sub-Clause 18.5 Optional Termination**

Amend the second paragraph of Sub-Clause 18.5 by replacing “7 days” with “28 days”. *[PBD Infra GCC §20.3]*

Amend sub-paragraph (c) of Sub-Clause 18.5 to read as follows:

“(c) the Cost of demobilization.” [*PBD Infra GCC §20.4(b)*]

Delete sub-paragraphs (d) and (e) of Sub-Clause 18.5.

Delete the phrase “without the need for the Contractor to submit a Statement” in the fifth paragraph of Sub-Clause 18.5.

## 19. Insurance

### Sub-Clause 19.1

#### General Requirements

The text of Sub-Clause 19.1 is replaced by the following text: [*PBD Infra GCC §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.

“(2) The Contractor shall (i) provide evidence to the Employer’s Representative that the insurances required under this Contract have been effected and (ii) within a reasonable time, provide copies of the insurance policies to the Employer’s Representative. The Employer’s Representative shall be responsible for providing such evidence and such copies of policies to the Employer.

“(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 Employer’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 Employer.

“(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 Employer 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 Employer 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 Employer exercising its right to impose other sanctions against the Contractor pursuant to the provisions of this Contract.

“(5) In the event the Contractor fails to observe the above safeguards, the Employer 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 Employer may refuse to make the payments under Sub-Clause 14.7 [*Payment*] until the Contractor complies with this Sub-Clause 19.1.

“(6) The Contractor shall immediately replace the insurance policy obtained as required in this Contract, without need of the Employer’s demand, with a new policy issued by a new insurance company acceptable to the Employer 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

“(b) Where reasonable grounds exist that the insurer may not be able, fully and promptly, to fulfill its obligation under the insurance policy.”

## **20. Employer’s and Contractor’s Claims**

### **Sub-Clause 20.2 Claims for Payment and/or EOT**

For Sub-Clause 20.2.1 [*Notice of Claim*]:

Amend the first paragraph and second paragraph by replacing “28 days” with “30 days”. [*IRR Annex E §10.1*]

For Sub-Clause 20.2.2 [*Initial response*]:

Amend the first paragraph by replacing “28 days” with “30 days”. [*IRR Annex E §10.1*]

## **21. Disputes and Arbitration**

**Sub-Clause 21.2  
Failure to Appoint  
DAAB Member(s)**

Delete the third paragraph of Sub-Clause 21.2, which refers to the payment of remuneration of the appointing entity or official.

**Sub-Clause 21.4  
Obtaining DAAB's  
Decision**

Replace the first paragraph of Sub-Clause 21.4 with the following:

“Pursuant to Section 59 of Republic Act No. 9184, authorizing the Parties to agree to alternative modes of dispute resolution, if a Dispute arises between the Parties, then either Party shall refer the Dispute to the DAAB for its decision (whether or not any informal discussions have been held under Sub-Clause 21.3 [*Avoidance of Disputes*]) before a Party may initiate arbitration proceedings with regard to the Dispute.” [RA9184 §59]

**Sub-Clause 21.5  
Amicable Settlement**

Amend the second sentence of Sub-Clause 21.5 by replacing the term “twenty-eighth (28th)” with “fourteenth (14th)” [PBD *Infra* GCC §21.2], and by replacing the phrase “even if no attempt at amicable settlement has been made” with the phrase “unless the Parties agree on a longer period”.

**Sub-Clause 21.6  
Arbitration**

Replace the text of Sub-Clause 21.6 with the following:

“Unless settled amicably, any Dispute between the Parties shall be finally settled by arbitration in the Country according to the arbitration rules of the Construction Industry Arbitration Commission of the Philippines [RA §59] [IRR §59.2] [PBD *Infra* GCC §21.3].

“No Party may initiate arbitration proceedings except in any of the conditions below:

“(a) the initiating Party has given a NOD with regard to such Dispute in accordance with the provisions of Sub-Clause 3.5.5 [*Dissatisfaction with Employer's Representative's determination*] or Sub-Clause 21.4.4 [*Dissatisfaction with DAAB's decision*];

“(b) the initiating Party is exercising its right under Sub-Clause 21.7 [*Failure to Comply with DAAB's Decision*] against the other Party that failed to comply with a DAAB decision;

“(c) Sub-Clause 21.8 [*No DAAB in place*] is applicable.”

“The arbitral award shall be appealable by way of a petition for review to the Court of Appeals. The petition shall raise pure questions of law and shall be governed by the Rules of Court.” [RA

## **Appendix – General Conditions of Dispute Avoidance/Adjudication Agreement**

Replace all references to “International Chamber of Commerce” and “ICC” with “Philippine Dispute Resolution Center Inc.”

### **Clause 9 Fees and Expenses**

Amend the second sentence of Sub-Clause 9.5 by replacing the term “Thereafter” with the phrase “After the DAAB has issued its decision”.

### **Clause 11 Challenge**

Delete “Objection Procedure and Rule 11” in Sub-Clause 11.1.

Replace “issued under Rule 11” with “on the challenge made under Rule 10” in Sub-Clause 11.2.

Delete “Rule 11 of” in in Sub-Clause 11.5(c)(i).

### **Clause 12 Disputes under the DAA Agreement**

Replace “International Chamber of Commerce 2017” with “Philippine Dispute Resolution Center Inc.”. Delete the phrase “, and Article 30 and the Expedited Procedure Rule at Appendix VI of these Rules of Arbitration shall apply.”

## **Annex – DAAB Procedural Rules**

### **Rule 10 Challenge Procedure**

Remove “in accordance with Rule 11 below” in Sub-Clause 10.1(c).



## ***Section VI. Employer's Requirements***



## 1 THE PROJECT

### 1.1 GENERAL DESCRIPTION OF THE PROJECT

- 1.1.1 The Subic-Clark Railway Project (SCRP) will provide a 71-km rail connection between Subic Bay Freeport Zone (SBFZ) and Clark Freeport Zone (CFZ), linking the Port of Subic Bay (PSB) with Clark International Airport (CRK). In due course, the railway will be extended to New Clark City (NCC), formerly called Clark Green City (CGC), a new metropolis currently being developed by the Bases Conversion and Development Authority (BCDA)(Figure 1).

FIGURE 1. PROPOSED SUBIC-CLARK RAILWAY PROJECT



MAP SOURCE: GOOGLE EARTH

- 1.1.2 The Subic-Clark Railway (SCR) is positioned as the initial step in developing the rail freight system throughout Luzon. From its terminal in CFZ, the railway line is envisioned to be extended to the Ilocos Region and Cagayan Valley in the north, and to Metro Manila and the Bicol Region in the south. The railway extensions will

probably involve the construction of new railway lines using the existing right-of-way (ROW) of Philippine National Railways (PNR). PNR has an extensive railway ROW all over Luzon, but its railway tracks are mostly unusable, especially north of Metro Manila and south of Calamba City (Laguna).

- 1.1.3 The Project will have provision for passenger service for SCR in the future. It will connect with Clark-Manila Railway Project (CMRP), a railway project that will connect CRK and NCC with Metro Manila and provide the much needed railway infrastructure for CRK. Both projects might probably be using a common railway alignment from CRK to NCC, so interoperability between SCR and CMRP might be a necessity. With both railway lines interoperable, each can provide seamless passenger services from Metro Manila to CRK, NCC, and SBFZ. Eventually, these interoperable railway lines will extend to the Ilocos Region and Cagayan Valley in the north, and to the Bicol Region in the south.
- 1.1.4 One feature of the Project will be the eventual development of a dry port in CFZ as the transshipment point for all international and domestic freight going to or coming from destinations in Luzon. This will serve as a one-stop terminal for cargo handling, including customs clearance services, domestic distribution, and facilities for storage and consolidation of goods. All the documentations for the freight are processed right at the dry port and the freight are transported to/from PSB via the railway link. Outbound freight are directly loaded from the trains into the ships going overseas, while inbound freight are directly loaded from the ships into the trains going to the dry port.
- 1.1.5 The whole alignment of the Project is approximately 71 kilometers long and is located in the western section of Central Luzon running on an exclusive ROW parallel to Subic-Clark-Tarlac Expressway (SCTEX) with some sections adjacent to it (Figure 1). It is divided into two (2) major sections:
  - (a) Mainline – This is an approximately 64-km railway connecting SBFZ and CFZ.
  - (b) Spur Line – This is an approximately 7-km railway connecting the PSB New Container Terminals (NCTs) to the Mainline.
- 1.1.6 There are three (3) main railway configuration along the alignment:
  - (a) At-grade – approximately 50 kilometers,
  - (b) Elevated – approximately 12 kilometers, and
  - (c) Tunnel – approximately 9 kilometers.
- 1.1.7 The Contractor shall provide a fully functional and integrated, safe, secure, efficient, and reliable single-track freight railway with passing loops, with the objective of the freight line to load and unload and transport freight in compliance with the requirements specified in this document. The passing loops shall be adequate to meet the bi-directional operation requirements of the railway.

- 1.1.8 The specified Operation and Maintenance (O&M) Facilities shall be fully commissioned and functional to support the freight rolling stock fleet and railway systems and infrastructure, with space provisions, expansion capability, and where practicable, capability for facilitation to migrate to next generation systems.
- 1.1.9 The operational requirements of SCRP shall include, amongst other requirements, the following:
- (a) Operation with diesel power, but with structure gauge and other provisions to enable future installation and electrification, especially ensuring that reinforcing bars in concrete have electrical continuity and are connected to dedicated earthing terminals;
  - (b) Operating a train service for both freight and future passengers, with the Project designed for a maximum of 25 tons/axle load;
  - (c) The Project shall be designed for the following maximum train design speeds:
    - i. Mainline – 80kph for freight trains and 160kph for passenger trains (future provision), and
    - ii. Spur Line – 80 kph, except on low radius curves on the chosen horizontal alignment which may restrict speed locally; and
  - (d) Refueling, maintenance, cleaning, and repairs of Rolling Stock.
- 1.1.10 The SCRP shall require the design, procurement, fabrication, construction, assembly, installation, and commissioning of Materials Handling Systems for loading and unloading trains for containers.
- 1.1.11 Train operations shall be controlled using a fully commissioned and operational European Train Control System (ETCS) Level 0 train control system or equivalent.
- 1.1.12 The Works shall have minimum years of design life as specified in the Chinese Standards and Codes, allowing for continued levels of routine maintenance and repair as established by the Contractor.

## **1.2 RAILWAY SYSTEMS**

- 1.2.1 The Project includes the detailed design, procurement, delivery, implementation, and testing and commissioning of the Railway Systems for a fully functional and integrated, safe, secure, efficient, and reliable freight railway. The Railway Systems shall include, but not limited to, the following systems:
- (a) Signalling and Train Control System where an ETCS Level 0 Signalling System (or equivalent) shall be adopted,
  - (b) Communications System where Terrestrial Trunked Radio (TETRA) digital communications shall be adopted, and

- (c) Power Supply and Distribution System for the railway network, facilities, and all railway systems, including the design and construction of electricity substations as necessary and obtaining their associated planning consents.
- (d) Asset Protection Systems.
- (e) Maintenance Management Information System (MMIS).

### 1.3 ROLLING STOCK

- 1.3.1 Since the initial rail service is for freight only between SBFZ and CFZ, the SCR shall use diesel-electric locomotives. When the passenger rail service is added in the future, the railway will be upgraded to accommodate electric traction for the rolling stock for the passenger rail service.
- 1.3.2 The proposed Rolling Stock for the SCR shall be composed of diesel-electric locomotives and trailer cars for containerized cargo.
- 1.3.3 The Project includes the detailed design, procurement, delivery, installation, and testing and commissioning of the Rolling Stock for a fully functional and integrated, safe, secure, efficient, and reliable freight railway. The fleet size of the Rolling Stock to be delivered shall be sufficient to handle the Year 2021 traffic forecast in Table 1.

**TABLE1. FREIGHT TRAFFIC FORECASTS**

| Type                                       | 2021           |                  | 2030           |                  | 2040           |                  |
|--|----------------|------------------|----------------|------------------|----------------|------------------|
|  | Head Direction | Return Direction | Head Direction | Return Direction | Head Direction | Return Direction |
| Daily Containerized Freight Flow (TEU)     | 200            | 200              | 540            | 540              | 1,010          | 1,010            |
| Daily Non-Containerized Freight Flow (ton) | 7,800          | 1,500            | 13,100         | 2,500            | 22,900         | 4,300            |

### 1.4 FREIGHT TERMINALS

- 1.4.1 The Project includes the detailed design, procurement, construction, installation, and testing and commissioning of all elements of the Freight Terminals at the following locations:
  - (a) Subic NCT Terminal inside SBFZ,
  - (b) Subic Logistics Terminal inside Binictican Heights in SBFZ, and
  - (c) Clark Logistics Terminal near SCTEX Clark North Interchange inside CFZ.

## **1.5 OPERATION AND MAINTENANCE FACILITIES**

- 1.5.1 The Project includes the detailed design, procurement, construction, installation, and testing and commissioning of all elements for the O&M Facilities at the Clark Depot Complex near SCTEX Clark North Interchange inside CFZ.

## **1.6 PASSENGER STATIONS**

- 1.6.1 The Project includes provision for the future construction for the following future passenger stations:
- (a) Subic Station,
  - (b) Dinalupihan Station,
  - (c) Floridablanca Station,
  - (d) Porac Station, and
  - (e) Clark Station.
- 1.6.2 The tentative location of the Stations can be referenced in Appendix D of the SCRP Feasibility Study Report attached to this Bidding Documents. The Contractor shall assist the Employer in the concept design development of alternate schemes for the locations of the Subic Station and Clark Station.

## **1.7 LOCATION OF THE WORKS**

- 1.7.1 The Works are located as indicated in Figure 1 above.

## **2 SCOPE OF WORKS**

### **2.1 GENERAL**

- 2.1.1 The Works shall include the design, construction, manufacture, supply, installation, and testing and commissioning of the Civil Works, Structures, Buildings, Trackworks, Railway Systems, and Rolling Stock for the delivery of a fully functional and integrated, safe, secure, efficient, and reliable single track freight railway with passing loops from SBFZ to CFZ, including the Freight Terminals and Depot Complex as mentioned in Section 1.
- 2.1.2 The Works shall include works required to remedy damages or defects of all defective elements of the Works including Civil Works, Permanent Way, and Freight Facilities including Materials Handling Systems, and O&M Facilities, until the end of the Defects Notification Period (DNP).
- 2.1.3 The Contractor shall make provisions in its design and construction activities and works for giving access to and interfacing, integrating, and coordinating with the

activities, programme, and works of the other contractors and third parties, such as utility services providers.

- 2.1.4 The Contractor shall be responsible for managing, coordinating, and resolving all interfaces of his works with the Employer's other contractors and third party stakeholders to achieve the Taking Over of the Works in accordance with the Contract and the Time for Completion.
- 2.1.5 The Contract shall include, without limitation, the design, construction, and removal of all the Temporary Works and the handover of the completed Works to the Employer in a condition in which the Employer will be able to immediately use the Works for the intended purpose and/or to make them available to other contractors who shall be able to commence and carry out their work without delay or disruption.
- 2.1.6 The Contractor, with support from the Employer, shall be responsible for obtaining all necessary approvals from the relevant authorities for the design, construction, and commissioning of the Works. The Contractor shall also comply with all the requirements from relevant authorities in his design, construction, procurement, delivery, installation, and testing and commissioning of the Works.
- 2.1.7 The Works shall include, but are not limited to, the following components:
  - (a) All track components, including rails, sleepers, fasteners, rail pads, base plates, ballast, sub-ballast, bonding, turnouts, crossings, track drainage, slab track, level crossings, and signs and markers;
  - (b) Earthworks, including cut and fill formations, track-side walkways, geofabrics, slope surface protection, landscaping, irrigation and reinforced earth;
  - (c) Tunnels for the Mainline and the associated Mechanical, Electrical, and Plumbing (MEP) and Evacuation Facilities;
  - (d) Permanent and temporary highway crossing, access, and maintenance road works;
  - (e) Surface and subsoil drainage, including culverts, pipes, trenches, open channel drains, and the like;
  - (f) Hydraulic and Hydrological Works for flood protection of the railway and the surrounding areas;
  - (g) Structures, including over-bridges, under-bridges, stormwater culverts, retaining walls, and the like;
  - (h) Permanent and temporary utilities protection as required by the utility services providers;
  - (i) Fencing and gates;
  - (j) Railway Systems as specified in **Section 2.12**;



- (k) Cable containment and undertrack crossing conduits and pits for the Railway Systems;
- (l) Line-side civil works (access roads, equipment bases, etc.);
- (m) Rolling Stock as specified in **Section 2.13**;
- (n) Freight Terminals, including Materials Handling Facilities, as specified in **Section 2.15**; and
- (o) Depot Complex, including the O&M Facilities, as specified in **Section 2.16**.

## **2.2 RIGHT-OF-WAY AND SITE EXTENT**

- 2.2.1 For this Project, there is an Advance Contract engaged by BCDA responsible for the ROW acquisition and securing the Environmental Compliance Certificate (ECC) for the Project. The Contractor shall coordinate with and provide all available information to the Advance Contract Consultant or BCDA.
- 2.2.2 Based on the Contractor's design, the Contractor shall produce drawings to show the required extent of the Site. The land acquired will be such that the ROW will allow the construction of all of the Permanent Works within the ROW.
- 2.2.3 The Site Extent shall comprise the land required for the Permanent Works, together with any other land that the Employer or the Contractor has obtained access to from third parties for the purposes of the Permanent Works. The Site Extent shall also include any temporary easements or temporary possessions of land for roadworks, temporary access roads, utility protection works, yards, wharfs, quarries, borrow pits, haul roads, compounds, and the like, which the Contractor has agreed with third parties as part of his works, including the extent of all temporary and permanent traffic control measures on existing highways, roads, and utilities.
- 2.2.4 The Contractor shall submit the Traffic Impact Assessment (TIA) and Traffic Management Plan (TMP) to all relevant authorities explaining the extent of all proposed temporary and permanent traffic control measures for his construction related activities that affect existing highways, roads, and utilities. The Contractor, with support from the Employer, shall obtain approval for the TMP and shall comply with the requirements specified in the permits issued by the authorities. Construction for each affected section of the Works shall not commence until its TMP has been approved by all relevant authorities.
- 2.2.5 The Contractor shall provide access to the Employer and other contractors, such as the utility services providers' contractors, to carry out their works within the extent of the Site. Such access shall be subject to the Contractor's Access Regime, Programme, and Interface Management Plan.
- 2.2.6 The Contractor must provide for the accommodation of the Employer on his site as per **Section 4**.

- 2.2.7 The Contractor shall be responsible in renewing, adjusting, supplementing, and developing stakeholder records and permits for the Works in liaison with third party stakeholders and utility companies.
- 2.2.8 The Contractor shall comply with the requirements of the ECC in preparing the detailed design and the Environmental Management Plan (EMP).
- 2.2.9 The Contractor shall comply with any security and access control requirements of all relevant authorities, including along the ROW, at the Freight Terminals, and in the Depot Complex.
- 2.2.10 The Contractor, with support from the Employer, shall provide all necessary information to the utility services providers for obtaining the consent for any proposed diversion, access, or service interruption. The Contractor shall also comply with the requirements of the utility services providers for any proposed diversion, access, or service interruption.

## **2.3 POWER AND OTHER UTILITY SUPPLIES**

- 2.3.1 The Contractor shall be responsible for arranging the connection, supply, and maintenance of all power and utilities required to supply the Permanent and Temporary Works.
- 2.3.2 The Contractor shall pay all associated fees, invoices, rates, and charges to all power, communications, and utility companies/providers for services utilized until Taking Over or earlier cessation of the services.
- 2.3.3 The Contractor's scopes also include provision of the permanent utilities supplies for the Permanent Works, including buildings of all substations and obtaining permits from the utilities services companies/providers and any others as necessary for the Works.

## **2.4 THIRD PARTY UTILITY SERVICES DIVERSIONS AND PROTECTION**

- 2.4.1 In the Project, it shall be the utility services providers' responsibility for the diversion of existing utility services. The Contractor's scopes shall include discovery and identification of existing and planned utilities and services that will be in conflict or having interface with the Works.
- 2.4.2 The Contractor shall also coordinate with the utility services providers for all necessary requirements to facilitate diversion or protection works, including, but not limited to, the following:
  - (a) Take into account for any requirements in the design in relation to utility services diversion or protection works;
  - (b) Take into account in his works area planning and allow access for the utility services providers to carry out the utility services diversion or protection works; and

- (c) Take into account in his Programme for the utility diversion or protection works without any adverse impact on the delivery of the Project.
- 2.4.3 Existing and planned future utilities and services requirements include, but not limited to, the following:
  - (a) Overhead power transmission and distribution cables should it be found that there will be inadequate clearance between the current location of the cables and the proposed railway operations;
  - (b) Existing utility services next to, over, or under the alignment should they be found to require diversion or protection as required by and agreed with the relevant utility service providers; and
  - (c) Ground space where utilities are to be laid in the future and provisions must be made to enable laying and protection of those planned or proposed utilities.
- 2.4.4 In case provisions within the ROW are required for the utility services protection, the Contractor shall be responsible for the design and construction of those provision.
- 2.4.5 The Contractor shall incorporate in its design and construction of temporary and permanent protection structures that prevent transfer of unacceptable loads or vibrations, or which otherwise divert, protect or make provisions for diversions that shall satisfy the requirements of the Utility Authority/Owner, so as to obtain Notice of No-Objection for their solution.

## **2.5 DIVERSIONS OF HIGHWAYS, ROADS, BRIDGES, CULVERTS, AND OTHER CIVIL STRUCTURES**

- 2.5.1 The Works includes the design and diversion of existing and planned highway infrastructure, such as bridges, roads, embankments, retaining walls, underpasses, traffic controls, major or minor traffic and pedestrian signage, sidewalks, street lighting, street surface and buried drainage, kerbs and stormwater gullies, manholes, chambers, street landscaping, barriers , fencing, gates, speed attenuation structures and the like, and including temporary diversions and related works as may be required by the relevant authorities in their permits.
- 2.5.2 The Works includes the design and construction of railway crossings, such as level crossings, over-bridges (roadoverrail), under-bridges (railoverroad), or small underpasses (road/trackunderrail), and in each case the submission of the recommendation of the type of railway crossing to the relevant authorities for obtaining theirapproval.

## **2.6 LAND CLEARING, DISPOSAL, AND DEMOLITION OF EXISTING BUILDINGS AND OTHER STRUCTURES**

- 2.6.1 The Works includes site clearance, grubbing, and demolition to be done in preparation for any Works, including removal, wholly or in part, and satisfactory disposal of all

buildings, fences, structures, vegetation, abandoned utilities, and pipelines within the ROW which are not designated to remain as part of the SCR.

- 2.6.2 The Works includes obtaining the approval and complying with the requirements from relevant stakeholders and local authorities for the disposal off site of unsuitable/hazardous waste or surplus excavated materials and hard debris, such as concrete, building rubble, or kerb and road pavements, and the subsequent disposal off site of any such materials.
- 2.6.3 The Works includes preparing the ground surface within the works compound areas for drainage, footings, paved areas, walkways, and any other purpose to facilitate his Works.

## **2.7 TREE CUTTING**

- 2.7.1 The Works includes cutting and disposal off site of trees which will conflict with the SCR.
- 2.7.2 The scope of works for the Advance Contract includes the inventory of affected trees and crops, which will be provided to the Contractor. The Contractor shall review the information provided by the Advance Contract Consultant or BCDA and advise the Employer for additional affected trees and crops in accordance with his design and construction planning.
- 2.7.3 The Contractor, with support from the Employer, shall prepare and submit the Tree Cutting Plan to relevant authorities for obtaining the Tree Cutting Permit.
- 2.7.4 No trees shall be cut until the Tree Cutting Permit has been obtained.

## **2.8 ENVIRONMENTAL REQUIREMENTS**

- 2.8.1 The scope of works for the Advance Contract includes preparation of the Environmental Impact Assessment (EIA) for obtaining the ECC. The Contractor shall coordinate and provide any available information in supporting the Advance Contract Consultant or BCDA in preparing the EIA for obtaining the ECC.
- 2.8.2 The Contractor shall take into account in his design, construction planning, and construction activities to adhere to all the requirements specified in the ECC and shall follow the local statutory governing standards and specifications in complying to these requirements.

## **2.9 RAILWAY INFRASTRUCTURES**

- 2.9.1 Bridge and Viaduct Structures: Various structures shall be designed and constructed by the Contractor as a part of this Project and shall include river-crossing bridges, viaducts, over-bridges, under-bridges, underpasses, etc.
- 2.9.2 Earthworks:

- (a) The Contractor shall design and construct the earthworks, including cut and fill formations, track-side walkways, geofabrics, slope surface protection and erosion control, landscaping, irrigation, and reinforced earth.
- (b) The Contractor shall also design and carry out the ground treatment for fulfilling the requirements of earthworks.

### 2.9.3 Tunnels:

- (a) Tunnel structures shall be designed and constructed by the Contractor as part of this Project.
- (b) The Contractor shall design and construct all evacuation provision, including evacuation adit, for the tunnel structures.
- (c) The Contractor shall design, procure, deliver, install, and carry out testing and commissioning of all the MEP Systems within the tunnels.

### 2.9.4 Buildings:

- (a) The Contractor shall design and construct all buildings for the operation of the freight railway, including buildings facilities in Freight Terminals, Depot Complex, and Substations.
- (b) The Contractor shall design, procure, deliver, install, and carry out testing and commissioning of the MEP Systems, including mechanical system (ventilation and air-conditioning), plumbing system, fire protection system, water supply distribution and pumping system, and electrical system for the operation of those buildings.

## **2.10 MISCELLANEOUS CIVIL WORKS**

2.10.1 The Contractor shall design and construct the drainage, sewerage, waterworks, and other utilities systems along the alignment, including all other related works as considered necessary.

2.10.2 The Contractor shall design and construct infrastructure works for the Freight Terminals and Depot Complex, including, but not limited to:

- (a) Internal roads, pavements, and footpaths;
- (b) Access roads from the public highways;
- (c) Water Supply System including borewells, Water Treatment System including recycling plant for the trainwash at the Depot Complex, storage tanks and pumping system sewage collection, Treatment and Disposal System including providing soak pits, septic tanks, etc.;
- (d) Storm Water Drainage System, including road drainage;
- (e) Street and general exterior lighting;
- (f) Signages; and
- (g) All other related works and services as necessary to enable the Freight Terminals and Depot Complex and their buildings to function properly.

2.10.3 The Contractor shall design and construct all wayside signs and signboards along the alignment and within the Freight Terminals and the Depot Complex.

## **2.11 FLOOD PROTECTION**

2.11.1 The Contractor shall carry out hydraulic and hydrology assessment for the Project, and design and construct the necessary works for the flood protection to the Project and the surrounding areas.

2.11.2 The return period for flood protection to all railway facilities shall be 1 in 100 years.

## **2.12 RAILWAY SYSTEMS**

2.12.1 The Contractor shall design, procure, deliver, install, and carry out testing and commissioning of the Railway Systems for a fully functional and integrated, safe, secure, efficient, and reliable freight railway. The Railway Systems shall include, but not limited to, the following systems:

- (a) Signalling and Train Control Systems where an ETCS Level 0 Signalling System (or equivalent) shall be adopted,
- (b) Communications Systems where TETRA digital communications shall be adopted, and
- (c) Power Supply and Distribution System for all freight and railway facilities and all railway systems, including the design and construction of electricity substations as necessary and obtaining their associated planning consents.
- (d) Asset Protection Systems.
- (e) Maintenance Management Information System (MMIS).

2.12.2 The Contractor shall design and construct the civil provision for the proper function of the Railway Systems, such as the wayside cable containment within the earthworks for track formation, viaducts, bridges, and tunnels.

2.12.3 The Contractor shall allow in his design and provide justification to the Employer that the future installation of Operations Control Center (OCC) and Supervisory Control and Data Acquisition (SCADA) will not be frustrated, particularly in space aspect.

## **2.13 ROLLING STOCK**

2.13.1 The proposed Rolling Stock for SCR shall be composed of diesel-electric locomotives and trailer cars for containerized cargo.

2.13.2 The Contractor shall design, procure, deliver, and carry out testing and commissioning of the Rolling Stock, both locomotives and trailer cars.

2.13.3 The Contractor shall determine the fleet size of the Rolling Stock for the Project based on the traffic forecast of Year 2021 in Table 1.

2.13.4 The Freight Terminals shall be capable of handling the length of trainset as specified below:

- (a) Subic NCT Terminal–250meters,
- (b) Subic Logistics Terminal– 650meters. and
- (c) Clark Logistics Terminal– 650meters.

## **2.14 TRACKWORKS**

2.14.1 The Contractor shall design, procure, deliver, install, and carry out testing and commissioning of the trackworks for both ballasted and slab track.

2.14.2 All track components, including, but not limited to, rails, sleepers, fasteners, rail pads, base plates, ballast and sub-ballast for ballast track, concrete blocks and slabs for slab track, vibration reduction, fittings and fixtures, turnouts, crossings, guard rails/check rails, track drainage, level crossings, signs and markers, spares as required, and all other related works as necessary for the following:

- (a) Mainline and Spur Line, and
- (b) Loop lines, yards, and sidings at the Freight Terminals and Depot Complex.

## **2.15 FREIGHT TERMINALS**

2.15.1 The Contractor shall design, procure, deliver, install, construct, and carry out the testing and commissioning of all elements of the Freight Terminals at the following locations:

- (a) Subic NCT Terminal inside SBFZ,
- (b) Subic Logistics Terminal inside Binictican Heights in SBFZ, and
- (c) Clark Logistics Terminal near SCTEX Clark North Interchange inside CFZ.

2.15.2 The Freight Terminals shall include, but not limited to, the following:

- (a) Train and truck movements;
- (b) Loading and unloading, lifting and stacking, transferring and conveying, and storage facilities for containerized commodities and products;
- (c) All necessary data acquisition, control, processing, and logistics management within the facilities; and
- (d) All civil, building, and MEP works to support and service the above.

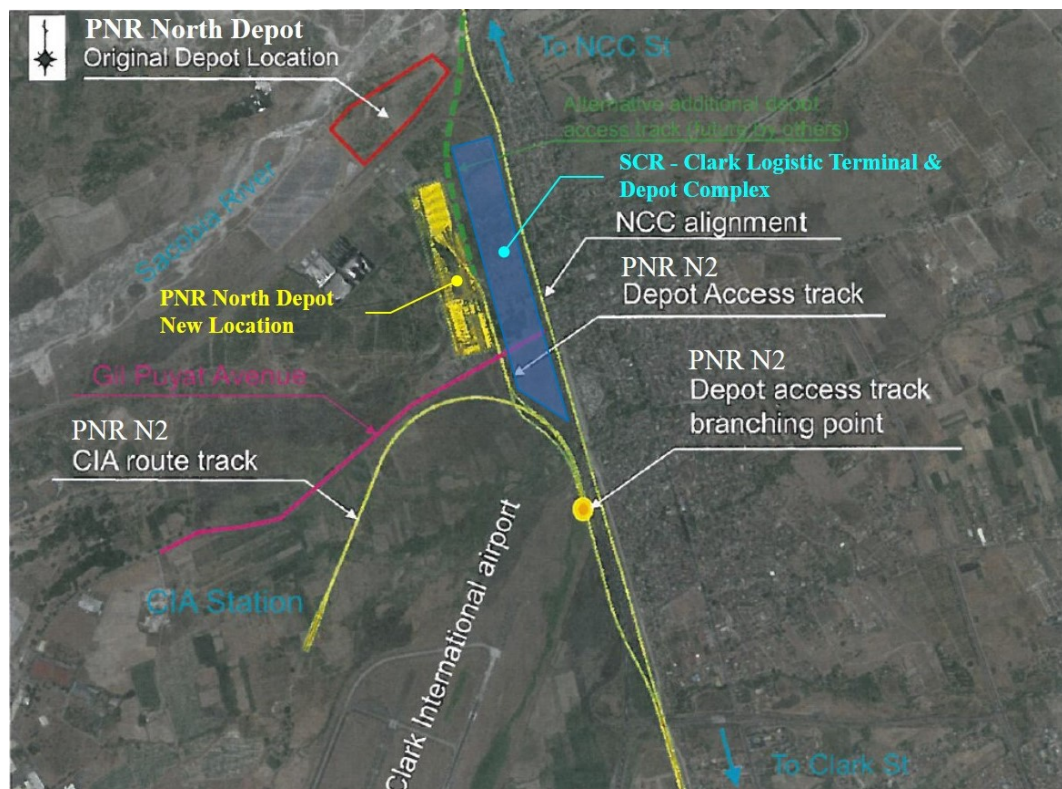
2.15.3 The Freight Terminals shall be capable to handle Year 2021 traffic forecast of containerized cargo (Table 1)with provision for Year 2040 traffic forecast.

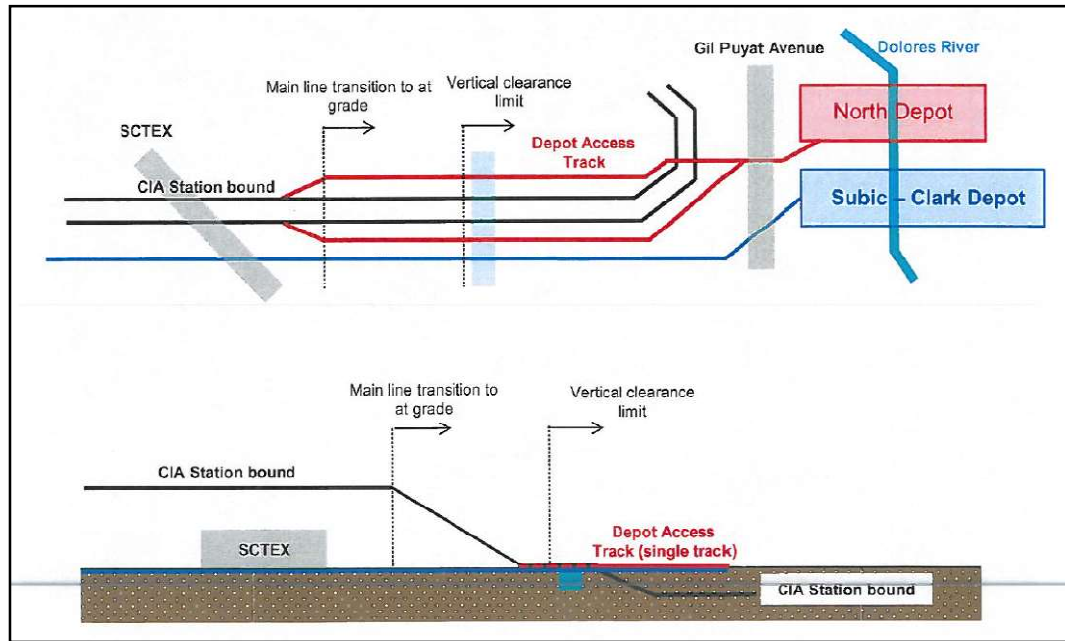


- 2.15.4 The Contractor shall note and take into account that there shall be Custom Facilities within the Freight Terminals. The Contractor shall design, procure, deliver, install, construct, and carry out the testing and commissioning for the provisions of such Custom Facilities within the Freight Terminals as per the requirements that will be given by the relevant customs authorities of both SBFZ and CFZ. The Contractor, with the support from the Employer, shall also co-ordinate and obtain approvals from relevant customs authorities regarding the provisions for the Customs Facilities.
- 2.15.5 For Subic NCT Terminal, it will be located within the NCT operation area. The Contractor, with the support from the Employer, shall co-ordinate and obtain agreement with the NCT's Owner and Operator as well as comply with the requirements that will be given by the NCT's Owner and Operator on the design and construction activities of the Terminal, such as but not limited to the layout and land required, the materials handling between the port and the Freight Terminal, and the requirement during construction.
- 2.15.6 The Contractor shall note and take into account the height limit requirement by Subic Bay International Airport (SFS) in the design and construction of the Subic NCT Terminal and the approaching railway section. The Contractor, with the support from the Employer, shall co-ordinate and obtain agreement from the SFS operator and relevant authorities regarding the design and construction of SCR in vicinity of the SFS, such as but not limited to the interfaces with the runway and hangars facilities of SFS.
- 2.15.7 For Subic Logistics Terminal, the Contractor, with the support from the Employer, shall co-ordinate with relevant stakeholders on the materials handling between the ports in SBFZ and the Freight Terminal, and incorporate those materials handling requirements in the design of the Subic Logistics Terminal for obtaining agreement with the relevant stakeholders.
- 2.15.8 The Contractor shall note and take into account the height limit requirement by CRK in the design and construction of Clark Logistics Terminal and Depot Complex.
- 2.15.9 The Contractor shall note and take into account that there will be a construction project under PNR North Line 2 (PNR-N2) Works Contract for the construction of the PNR North Depot, access track to CRK, and railway to NCC. The PNR North Depot will be located adjacent to the Clark Logistics Terminal and Depot Complex (Figure 2). The Contractor shall be responsible for coordinating with the PNR-N2 contractor and the designer in ensuring that his design and construction have been incorporated for all the interfacing issues between the PNR-N2 and SCR works. The tentative interface issues are listed, but not limited to, the following:
- (a) Flood protection and the associated drainage provision for the two projects;
  - (b) Permanent and temporary diversion provision of existing river crossing the two projects;
  - (c) Final formation level of the PNR North Depot and the Clark Logistics Terminal and Depot Complex;

- (d) Permanent and temporary public access of the PNR North Depot and the Clark Logistics Terminal and Depot Complex;
- (e) Permanent and temporary diversion provision of existing roadscrossing the two projects, especially Gil Puyat Avenue;
- (f) Arrangement of alignment crossing between the two projects;
- (g) General arrangement of Clark Logistics Terminal and Depot Complex, which will be located between the PNR North Depot and the railway tracks to NCC;
- (h) Waste water discharges of the PNR North Depot and the Clark Logistics Terminal and Depot Complex;
- (i) Permanent and temporary utility connections to the PNR North Depot and the Clark Logistics Terminal and Depot Complex;
- (j) Temporary site drainage arrangement of the two projects;
- (k) Site area arrangement during construction between the two projects;
- (l) Permanent boundary ownership and the associated security arrangement of the two projects; and
- (m) Any other construction interfaces, such as crane coverages overlapping, construction sequencing, etc.

**FIGURE 2. PNR NORTH DEPOT AND CLARK LOGISTICS TERMINAL AND DEPOT COMPLEX**





## 2.16 OPERATION AND MAINTENANCE FACILITIES

- 2.16.1 The Contractor shall design, procure, deliver, install, construct, and carry out the testing and commissioning of all elements for O&M Facilities at the Clark Depot Complex.
- 2.16.2 The O&M Facilities in the Clark Depot Complex shall be capable to handle Year 2021 traffic forecast of containerized cargo (Table 1) with provision for Year 2040 traffic forecast.
- 2.16.3 The Contractor shall be responsible for the procurement, delivery, and performance of the following railway maintenance equipment:
- (a) Tamping machine,
  - (b) Switch grinding and deburring machine,
  - (c) Ballast distributing and profiling machine,
  - (d) Rail grinding machine,
  - (e) Multi-purpose vehicle, and
  - (f) Track-mounted crane.
- 2.16.4 The Contractor shall be drawn to the attention for the requirements listed in above **Sections 2.15.7** and **2.15.8** for the design and construction of the Clark Depot Complex.

## **2.17 FENCING AND GATES**

- 2.17.1 The Contractor shall design and construct fences with access gates on both sides of the alignment along the ROW, including any trackside ancillary buildings and facilities.
- 2.17.2 The Contractor shall design and construct fences with access gates around the perimeter of the Freight Terminals and Depot Complex.

## **2.18 PROVISIONS FOR FUTURE PASSENGER SERVICE**

- 2.18.1 The Contractor shall take into account in his alignment design for the provision of future passenger service, including the future passenger stations as specified in **Section 1.6**. Locations of these future passenger stations can be referred to in Appendix D of the SCRP Feasibility Study Report attached to this Bidding Documents.
- 2.18.2 In addition to the design for the construction of the single-track freight railway of the Project, the Contractor shall also prepare and submit to the Employer the design for the construction of the future second track for the implementation of future passenger service. The depth of the design shall be sufficient for land acquisition purpose and shall include, but not limited to, the following components:
- (a) Alignment and track schematic of the future second track;
  - (b) Infrastructures provisions, including earthworks, ground treatment, viaducts, bridges, road crossings, and the like;
  - (c) Tunnel and the associated facilities, including the tunnel ventilation and evacuation facilities in accordance with National Fire Protection Association (NFPA) 130 or equivalent;
  - (d) Depot Complex for the operation and maintenance for the future passenger traffic. Fleet size for the future passenger traffic shall be determined based on the Year 2040 passenger traffic forecast in Table 2.
  - (e) Construction methodology for the second track and impact assessment report on the operating railway to illustrate how the impact of the construction of the second track on the operating railway can be minimized as much as practicable.

TABLE2. PASSENGER TRAFFIC FORECASTS

| Direction/Station |               | Length<br>(km) | 2021          |               | 2030          |               | 2040          |               |
|-------------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                   |               |                | Boarding      | Alighting     | Boarding      | Alighting     | Boarding      | Alighting     |
| Southbound        | NCC           | 15.56          | 1,409         |               | 1,756         |               | 2,130         |               |
|                   | Clark         | 16.76          | 3,045         | 725           | 3,773         | 886           | 4,569         | 1,098         |
|                   | Porac         | 15.57          | 2,226         | 2,018         | 2,691         | 2,451         | 3,162         | 2,879         |
|                   | Floridablanca | 14.07          | 1,954         | 2,204         | 2,341         | 2,663         | 2,723         | 3,148         |
|                   | Dinalupihan   | 17.19          | 2,376         | 2,715         | 2,895         | 3,294         | 3,337         | 3,870         |
|                   | Subic         |                |               | 3,348         |               | 4,162         |               | 4,926         |
|                   | <b>Total</b>  | <b>79.15</b>   | <b>11,010</b> | <b>11,010</b> | <b>13,456</b> | <b>13,456</b> | <b>15,921</b> | <b>15,921</b> |
| Northbound        | Subic         | 17.19          | 3,176         |               | 3,879         |               | 4,555         |               |
|                   | Dinalupihan   | 14.07          | 3,600         | 2,302         | 4,322         | 2,773         | 5,106         | 3,218         |
|                   | Floridablanca | 15.57          | 2,193         | 1,965         | 2,645         | 2,347         | 3,101         | 2,729         |
|                   | Porac         | 16.76          | 2,344         | 2,203         | 2,869         | 2,656         | 3,350         | 3,116         |
|                   | Clark         | 15.56          | 816           | 3,990         | 1,215         | 4,880         | 1,490         | 5,801         |
|                   | NCC           |                |               | 1,669         |               | 2,274         |               | 2,738         |
|                   | <b>Total</b>  | <b>79.15</b>   | <b>12,129</b> | <b>12,129</b> | <b>14,930</b> | <b>14,930</b> | <b>17,602</b> | <b>17,602</b> |
| <b>NB+SB</b>      |               |                | <b>23,139</b> | <b>23,139</b> | <b>28,386</b> | <b>28,386</b> | <b>33,523</b> | <b>33,523</b> |

2.18.3 The Contractor shall take into account in his design for any necessary provisions for the construction of future second track.

## 2.19 PROVISIONS FOR FUTURE ELECTRIFICATION

2.19.1 The Contractor shall take into account in his design for the provision to enable future electrification, such as sufficient space and necessary clearance in the cut and embankment, viaducts, bridges, underpasses, and tunnels.

## 2.20 FUTURE EXTENSION TO NEW CLARK CITY

2.20.1 The Contractor shall prepare and submit to the Employer for a feasibility design for the SCR to be extended to the NCC. The feasibility design shall cover technical, environmental, financial, and economic aspects for freight and passenger traffic to NCC.

2.20.2 The technical assessment of the feasibility design shall cover, but not limited to, the following:

- (a) Alignment,
- (b) Civil and structural works,
- (c) Trackworks,
- (d) Railway systems,
- (e) Freight terminals,
- (f) O&M facilities,
- (g) Passenger stations, and

(h) Rail operation.

2.20.3 The environmental review of the feasibility design shall cover, but not limited to, the following:

- (a) Air quality,
- (b) Noise,
- (c) Water quality,
- (d) Waste management,
- (e) Land contamination,
- (f) Ecology,
- (g) Heritage, and
- (h) Other hazards.

## **2.21 SURVEYS**

2.21.1 The Contractor shall conduct topographical survey to obtain all necessary information for carrying out the design and construction works as per the requirements of the Project.

2.21.2 The Contractor shall also conduct other necessary surveys, such as Light Detection and Ranging (LiDAR) Survey, to obtain all necessary information for carrying out the design and construction works for the flood protection to the Project and the surrounding areas.

## **2.22 GEOTECHNICAL INVESTIGATION**

2.22.1 The Contractor shall conduct detailed geotechnical investigation to obtain all necessary geotechnical information for carrying out the design and construction works as per the requirements of the Project.

## **2.23 VALIDATION/REFINEMENT OF DATA**

2.23.1 The Contractor shall validate the data provided by the Employer or other contractors employed by the Employer, including additional surveys if considered necessary by the Contractor for the design of the Permanent Works and verify the available ROW information at site.

## **2.24 ASSOCIATED WORKS AND TEMPORARY WORKS**

2.24.1 Temporary Diversions and Restoration:

- (a) The Contractor shall be responsible for all the necessary temporary traffic diversions and traffic management, waterway diversions/diversion of the natural water flow, etc., as required for the execution of the Permanent and Temporary Works, and ensuring smooth flow of the same during construction and for restoration of the same on completion of the works.
- (b) The temporary barricading/fencing of the area shall be required while working so as to ensure both safe construction methodologies and safety of the public.

2.24.2 Temporary Facilities, Temporary Utilities, and Equipment for Use by Contractor and Others:

- (a) The Contractor shall be responsible for the provision of all Temporary Facilities, such as provisional site office, main site office, site huts, or survey equipment, and Temporary Utility Services, such as electricity and water supply, sanitation and sewerage, office cleaning, waste and garbage disposal, etc., for the use of the Contractor and the Employer during project execution.
- (b) The Contractor shall be responsible for the provision of all Temporary Works associated with the Permanent Works, including, but not limited to:
  - i. Access roads to site as required;
  - ii. Temporary bridges, if required;
  - iii. Dismantling of the portion of existing structures (wherever and to the extent required) for the purpose of constructing Permanent Works adjacent to it, with the approvals from relevant authorities or stakeholders;
  - iv. Temporary Facilities and Temporary Utility Services as required by the Contractor for the safe execution of the Permanent Works;
  - v. Temporary barriers and other protection measures in the vicinity of, but not limited to, power lines, excavations, site delivery areas, batching plants, etc.;
  - vi. Temporary traffic management and temporary signages as necessary for safe movement of public and construction machinery associated with the execution of the Permanent Works; all traffic control devices shall conform with the requirements of the Department of Public Works and Highways (DPWH) and the Traffic Engineering Center (TEC) or other relevant authorities; and
  - vii. Excavation and associated temporary lateral support system.
- (c) Any other temporary work as required for execution of the Permanent Works and removal of the same on completion of the Works.

### **3 PROJECT MANAGEMENT**

#### **3.1 MANAGEMENT PLANS**

- 3.1.1 The Contractor shall manage the Contract in a professional and competent manner in accordance with best practice, various standards, and other obligations by incorporating these into a comprehensive series of Management Plans.
- 3.1.2 Each Plan shall be standalone (i.e. cover the subject in its entirety although references to other Management Plans can be made where procedures are interlinked). The Contractor shall program the development of these Plans such that any Management Plan which is referenced in another is available at the appropriate time.
- 3.1.3 The completed set of documents shall cover all of the Contractor's proposed procedures, methods, processes, organization, and logical sequencing, and when combined, shall demonstrate that these will combine to completely fulfill the Contract requirements.
- 3.1.4 The exact make up and interlinking of the Management Plans shall remain the responsibility of the Contractor. However, the following is a list of Plans which shall be provided as a minimum:
  - (a) Project Management Plan,
  - (b) Project Health and Safety Plan,
  - (c) Project Environmental Plan,
  - (d) Quality Assurance Plan,
  - (e) Traffic Management Plan,
  - (f) Interface Management Plan,
  - (g) System Assurance and Risk Management Plan
  - (h) Testing and Commissioning Plan.
  - (i) Operation and Maintenance Training Plan
  - (j) Spares Delivery and Storage Plan
  - (k) DNP Management Plan

#### **3.2 PROGRAMME**

- 3.2.1 The Contractor shall prepare and submit the Programme indicating the start and completion dates for the different components of the Works.



- 3.2.2 The Contractor shall notify the Employer of any change to the Programme where this will have an impact on the completion dates of the different components of the Works.

### **3.3 REPORTING**

- 3.3.1 Monthly Progress Reports shall be prepared and submitted to the Employer within seven (7) days following the end of the month to which it relates. The Report shall take into account the work performed, the financial accomplishments, difficulties encountered as well as measures undertaken to overcome the difficulties during the month, and shall record all significant issues. It shall include an Executive Summary.
- 3.3.2 The Contractor shall be required to attend Monthly Progress Meetings to be held at dates and times generally not later than ten (10) days after the issuance of the Contractor’s Monthly Progress Report. The Contractor shall ensure that attendees capable of discussing, clarifying, and explaining the content of the Monthly Progress Report and matters arising are present at all meetings.
- 3.3.3 The Contractor may also be required to attend ad hoc or interim meetings convened at any time upon reasonable notice either on or off the site to discuss and address any aspect of the progress of the Contract.
- 3.3.4 The Contractor shall prepare minutes of all such meetings which will be submitted for review and comment by the Employer, after which all agreed minutes shall be signed off.

### **3.4 PROJECT ORGANIZATIONAL CHART**

- 3.4.1 Within twenty-eight (28) days after the Commencement Date, the Contractor shall provide the Employer the Contractor’s Organizational Chart for the Project.

### **3.5 INTERFACE MANAGEMENT**

#### **3.5.1 Systems Integration:**

- (a) The Contractor shall provide the Works such that all internal and external systems are designed, manufactured, constructed, and installed so as to be functionally, spatially, and economically compatible with each other and with other projects, facilities, systems, and civil engineering infrastructures.
- (b) The Contractor shall be responsible for ensuring that the Works is properly interfaced and integrated.

#### **3.5.2 Interfaces:**

- (a) For the duration of the Works, the Contractor shall be responsible for coordination of all interface activities, deliverables, and programme interface milestones with all persons, agencies, authorities, firms, companies, or any organization whosoever having any impact on the execution and completion of the Works by the Contractor (Interfacing Parties), including, without limitation:

- i. Other contractors working at or near the site.
  - ii. Other designers preparing future projects for execution at or near the site,
  - iii. Other contractors working on projects and facilities related to the Project,
  - iv. Contractors or suppliers pre-approved by the Employer and awarded sub-contracts by the Contractor,
  - v. Consultants, designers, contractors, and suppliers to the Project appointed by the Employer,
  - vi. Owners and operators of existing and proposed ports,
  - vii. Utilities and services providers that the Contractor shall need to provide supplies to the Works,
  - viii. Local authorities, agencies, and government departments from whom the Contractor shall obtain permissions or approvals for the Works, and
  - ix. The Railway Operator.
- (b) The Contractor shall also be responsible for coordinating all interfaces that he is leading with the works of the Employer's contractors and other contractors during all phases of the contract (design, construction, manufacturing, installation, testing and commissioning, and DNP).
- (c) The external interfacing parties (Stakeholders) include those who may be identified by the Contractor or others in the future as being required for progress, approval, or completion of the Works, or whose work is being impacted by or impacting the Works.
- (d) The Contractor shall be responsible for:
- i. Developing and updating a comprehensive Stakeholder List.
  - ii. Developing and updating an Interface Management Plan,
  - iii. Determining and issuing interface information in the format requested by each Stakeholder as and when necessary to Stakeholders,
  - iv. Organizing, chairing, and taking minutes of all Stakeholders Meetings,
  - v. Obtaining all necessary permits and approvals from Stakeholders for the design and installation of the Works, and
  - vi. Coordinating and interfacing with and accommodating Third Party Stakeholders who have requested permits or approvals from the Employer; this will include evaluation of third party proposed infrastructure and schedule, and recommending solutions to the

Employer, which shall include the preparation of a draft response on the Employer's behalf.

- (e) The Contractor shall be responsible for coordinating all systems interface activities within its Works during design, manufacturing, installation, construction, and testing and commissioning.
- (f) The Contractor shall hold and retain the responsibility to coordinate and cooperate with any interfacing party diligently and in a timely manner considering the timeline of the Interfacing Parties and to the satisfaction of the Employer.

### 3.5.3 Cooperation and Coordination:

- (a) The Contractor shall coordinate and cooperate with Interfacing Parties on all site-related matters, including, but not limited to, site access and occupation, safety, verification of work compatibility, and survey control. He shall advise the Interfacing Parties in advance when a construction item is ready for inspection or test, whether in the field or manufacturing plant, to verify compatibility with the Interfacing Parties' needs, and shall facilitate access to the site or third party property (as the case may be) for the Interfacing Parties.
- (b) Should construction or installation be under way by other contractors or third parties within or adjacent to the limits of the work specified, the Contractor shall cooperate and coordinate with all the other contractors or third parties to avoid any delay or hindrance to their work.
- (c) The Contractor shall share access to the site and other contract sites and facilities, and perform the Works concurrently in the same location and at the same time as works of other contractors and operations of others. The Contractor shall assume that all contractors and any other organization working near or within the project sites will require access through the Contractor's site.
- (d) When two or more contractors are employed on related or adjacent work, or obtain materials from the same material source, each shall conduct their operations in such a manner as not to cause any unnecessary delay or hindrance to the other.
- (e) The Contractor shall give direction on all site-related matters, including safety, site security, verification of work compatibility, and survey control.
- (f) The Contractor shall be responsible for giving their support and cooperation to the Employer's other contractors in the planning of access and coordination of all work. The Contractor will be responsible for coordinating their design and construction across all disciplines with interfacing contractors and third parties.

#### 3.5.4 Interface Management Plan:

- (a) The Contractor shall prepare and submit for the Employer's acceptance an Interface Management Plan.
- (b) The Interface Management Plan shall detail the Contractor's approach towards managing project interfaces, system migration, project integration, and the organization, staff, methods, procedures, and tools which the Contractor shall put in place to manage the interfaces to achieve full integration and coordination of the Works.
- (c) The Contractor's Interface Management Plan shall address all interfaces and allowing sufficient flexibility to accommodate changes in the interfaces identified during the early stage of design and additional interfaces identified during the succeeding phases of the execution of the Works.
- (d) The Contractor's Interface Management Plan shall identify the interface points with others and associated actions to mitigate any potential impact to the Programme.
- (e) The plan shall also address and cover all foreseeable interfaces during the course of execution of the Works from start of design through to testing and commissioning.
- (f) The Contractor's Interface Management Plan shall include as a minimum:
  - i. Interface requirements.
  - ii. Interfacing and integration parties and responsibilities.
  - iii. Integration strategy, phases, roles, milestones and responsibility.
  - iv. Interface and integration risks management, compliance and traceability.
  - v. Systems Interface Diagrams.
  - vi. Systems Interface Matrix or Block Diagrams.
  - vii. Summary of Interface Control Documents for each interface.
  - viii. Key Staff responsible for Interface and Integration coordination.
  - ix. Interface Management organisation and resource plan.
  - x. Interface Management procedures and processes for control.
  - xi. Further documentation templates as appropriate.
  - xii. Combined service drawings preparation, procedure and coordination.

#### 3.5.5 Interface Register

- (a) The Contractor shall develop an interface matrix and interface items log (Interface Register).
- (b) The Contractor shall use the requirements management tool to manage all interfaces and maintain its status.
- (c) The database tool and format shall be subject to the Employer’s approval.
- (d) The Contractor shall provide updates to Interface Register on a monthly basis.
- (e) The Contractor shall immediately inform the Employer if there are
- (f) any changes in the Contractor’s planned execution of the Works that have (or may have) an impact on the work being or to be performed by others, or if additional interfaces are identified by the Contractor.

#### **3.5.6 Interface Documentation:**

- (a) The Contractor shall produce Interface Control Documents (ICDs), with input from Interfacing Parties, to define the scope of each interface which they are leading.
- (b) The Contractor shall continue developing the ICD, alongside the Interfacing Parties, throughout the duration of the Project.
- (c) Formalization of agreed technical interface resolution will be the formal signed-off ICD.

#### **3.5.7 Organization and Management:**

- (a) The Contractor shall appoint an Interface and Integration Manager who shall be responsible for overseeing, coordinating, and managing all interfaces and systems. He shall be experienced enough in these roles on similar projects and shall be familiar with all aspects of the Works, and capable of and authorized to communicate directly with the Employer and other contractors and third parties on interface, coordination, and integration related issues.
- (b) At design review, all interface requirements shall be included, with all Interface Parties involved, in a documented review and approval process.

#### **3.5.8 Reporting:**

- (a) A summary of principal issues shall be included in each Monthly Progress Report.
- (b) The Contractor shall advise the Employer in writing of any problems encountered by him in obtaining necessary information and/or lack of cooperation from any Interfacing Party.
- (c) In the event that the Employer considers that an interface is not proceeding satisfactorily, the Employer, within the framework of a government

coordination committee or not, will review the matter and propose a coordinated plan including the Contractor and the Interfacing Party or Parties as to the required action.

- 3.5.9 Interfacing Parties: The list in Table 3 below indicates the currently known principal Interface Parties and the associated interface issues for the Project:

**TABLE 3. TENTATIVE INTERFACE PARTIES AND ASSOCIATED INTERFACE ISSUES**

| <b>Interface Parties</b>                        | <b>Tentative Interfaces Issues</b>  |
|---|---|
| Subic NCT Owner and Operator                    | <ul style="list-style-type: none"> <li>Requirement on the design and construction activities of the Subic NCT Terminal which will be located within the NCT boundary, such as the layout and land required, the materials handling between the port and the Freight Terminal, and the requirement during construction.</li> </ul> |
| Subic Bay International Airport (SFS) Operators | <ul style="list-style-type: none"> <li>Height limit requirement on the design and construction of SCR in vicinity of SFS.</li> <li>Interfaces of the approaching section to Subic NCT Terminal with the runway and hangar facilities of the airport.</li> </ul>   |
| Port Owners and Operators in SBFZ               | <ul style="list-style-type: none"> <li>Requirement on the design of the Subic Logistics Terminal, such as the materials handling requirement between the nearby ports and the Freight Terminal.</li> </ul>  |
| Clark International Airport Corporation (CIAC)  | <ul style="list-style-type: none"> <li>Height limit requirement on the design and construction of SCR in vicinity of CRK.</li> </ul>  |
| PNR-N2 Works Contract Contractor and Designer   | <ul style="list-style-type: none"> <li>Interface in the design and construction of Clark Logistics Terminal and Depot Complex with the PNR North Depot, the access track to CRK, and the railway to NCC.</li> </ul>   |
| Advance Contract Consultant or BCDA             | <ul style="list-style-type: none"> <li>Land acquisition and ROW of the SCR.</li> <li>EIA and ECC.</li> </ul>  |
| Railway Operator                                | <ul style="list-style-type: none"> <li>Testing and commissioning issues.</li> <li>O&amp;M issues.</li> </ul>  |
| DPWH or Relevant Authorities                    | <ul style="list-style-type: none"> <li>Permanent and temporary diversion of existing roads, highways, bridges, culverts, and other civil structures.</li> </ul>   |
| Utility Providers                               | <ul style="list-style-type: none"> <li>Utility diversion or protection.</li> <li>Permanent and temporary utility supply.</li> </ul>   |

#### 4 EMPLOYER’S FACILITIES

- 4.1.1 The Contractor shall provide the accommodation, facilities, and equipment for the Employer on his site as per the following schedules:

**TABLE4. SCHEDULE OF BRAND NEW VEHICLES**

| Quantity | Description  |
|----------|--|
| 5        | Pickup – 2×4, diesel engine, double cab, 4 doors, camper shell, including its operation and maintenance for the duration of the Engineering, Procurement, Construction, and Commissioning (EPCC) Contract: drivers, fuel, lubricants, repairs, insurance, etc. |
| 10       | Pickup – 4×4, diesel engine, double cab, 4 doors, camper shell, including its operation and maintenance for the duration of the EPCC Contract: drivers, fuel, lubricants, repairs, insurance, etc.   |

**TABLE5. SCHEDULE OF OFFICE BUILDINGS AND LIVING QUARTERS**

| Quantity | Description  |
|----------|--|
| 1        | Main Office Building – 600 sqm floor area, with internet and intranet network, with blinds on all windows, including its operation and maintenance for the duration of the EPCC Contract: electricity, water, communications, 24-hour security, utility personnel, etc.      |
| 1        | Satellite Office Building – 250 sqm floor area, with internet and intranet network, with blinds on all windows, including its operation and maintenance for the duration of the EPCC Contract: electricity, water, communications, 24-hour security, utility personnel, etc. |
| 1        | Main Living Quarters – 300 sqm floor area, with blinds on all windows, including its operation and maintenance for the duration of the EPCC Contract: electricity, water, communications, 24-hour security, utility personnel, etc.  |
| 1        | Satellite Living Quarters – 120 sqm floor area, with blinds on all windows, including its operation and maintenance for the duration of the EPCC Contract: electricity, water, communications, 24-hour security, utility personnel, etc.                                     |

**TABLE6. SCHEDULE OF FURNITURES, EQUIPMENT, AND APPLIANCES FOR OFFICES**

| Quantity | Description  |
|----------|--|
| 50       | Office Desk – 80 cm × 140 cm, with drawers with locks and keys |
| 30       | Office Desk – 70 cm × 120 cm, with drawers with locks and keys |

| Quantity | Description  |
|----------|--|
| 10       | Clerical Desk – with drawers with locks and keys   |
| 80       | Swivel Chair – on rollers, with armrest, with padded seat and back rest  |
| 10       | Clerical Chair – swivel type   |
| 30       | Visitors Chair – upright, with padded seat and back rest   |
| 10       | Steel Filing Cabinet – with 4 drawers with locks and keys, fire resistant  |
| 5        | Horizontal Plan Filing Cabinet – with 6 drawers with locks and keys, fire resistant  |
| 5        | Plan Filing Rack   |
| 10       | Bookshelf  |
| 2        | Conference Table – for 10 persons  |
| 20       | Conference Chair – swivel type   |
| 5        | White Board – 90 cm × 160 cm   |
| 5        | Laptop Computer – Windows OS (Operating System), Core i7 CPU (Central Processing Unit) or equivalent, 16 GB RAM (Random Access Memory), 1 TB data storage, 1080p resolution 15” screen, WiFi card, USB (Universal Serial Bus) and HDMI (High-Definition Multimedia Interface) ports, with mouse, with Microsoft Office |
| 45       | Laptop Computer – Windows OS, Core i5 CPU or equivalent, 8 GB RAM, 250 GB data storage, 1080p resolution 12” detachable screen, WiFi card, USB and HDMI ports, with mouse, with Microsoft Office   |
| 2        | Desktop Computer – Windows OS, Core i7 CPU or equivalent, 64 GB RAM, 2 TB data storage, 1080p resolution 27” screen, WiFi card, USB and HDMI ports, with mouse and keyboard, with UPS (Uninterruptible Power Supply), with Microsoft Office and CADD (Computer-Aided Design and Drafting) software                     |
| 5        | Network Printer/Copier – heavy duty, laser, color, A3 size, with scanning capability   |
| 5        | Printer – portable, color, A4 size, with scanning capability   |
| 5        | Cellphone – Android OS, 8 GB RAM, 1 TB data storage, 1080p resolution 6” screen, with GPS (Global Positioning System)-taggable 16 MP camera, with power bank   |



| Quantity | Description   |
|----------|---|
| 45       | Cellphone – Android OS, 4 GB RAM, 250 GB data storage, 5” screen, with power bank |
| 5        | External Hard Drive – 4 TB  |
| 10       | Portable Hard Drive – 1 TB  |
| 100      | Flash Drive – 16 GB   |
| 18       | Air Conditioner – 1.5 hp, window type   |
| 5        | Air Conditioner – 1 hp, window type   |
| 5        | Electric Stand Fan – 16” diameter blade   |
| 2        | Refrigerator – 10 cu ft   |
| 8        | Water Dispenser – electric, hot and cold  |
| 5        | Pencil Sharpener – table-mounted  |
| 2        | Cutting Mat – 24” × 36”, self-healing   |
| 2        | Ruler – 36”, steel  |
| 10       | Ruler – 12”, plastic  |
| 10       | Scissor   |
| 10       | Two-Hole Puncher  |
| 10       | Tape Dispenser  |
| 10       | Cutter  |
| 50       | Incoming/Outgoing Table Tray  |
| 50       | Stapler   |
| 50       | Stapler Remover   |
| 200      | Field Book  |
| 50       | Waste Bin – plastic   |
| 2        | Generator Set – 110 kVA   |
| 12       | Fire Extinguisher – 10 lbs  |
| 10       | First Aid Kit   |
| 1        | Manual of Chinese Railway Standards – English version                             |

**TABLE 7. SCHEDULE OF FURNITURES, EQUIPMENT, AND APPLIANCES FOR  
LIVING QUARTERS**

| <b>Quantity</b> | <b>Description</b>  |
|-----------------|---|
| 5               | Bed – single, with 10 cm thick foam rubber mattress   |
| 45              | Bed – double deck, with 10 cm thick foam rubber mattresses  |
| 2               | Dining Table – for 10 persons   |
| 20              | Dining Chair – upright, with back rest  |
| 3               | Long Sofa – for 4 persons, with synthetic leather upholstery  |
| 12              | Air Conditioner – 1.5 hp, window type   |
| 5               | Air Conditioner – 1 hp, window type   |
| 5               | Electric Stand Fan – 16” diameter blade   |
| 2               | Refrigerator – 10 cu ft   |
| 2               | Gas Stove – 2-burner, with hose regulator and LPG (Liquefied Petroleum Gas) tank  |
| 2               | Water Dispenser – electric, hot and cold  |
| 3               | Dining Set – for 15 persons: spoons, forks, plates, cups, and saucers   |
| 2               | Kitchenware Set – tray, 5 serving plates, 5 serving bowls, pitcher, chopping board, 3 kitchen knives, casserole, frying pan, etc. |
| 2               | Television Set – 36” screen, color  |
| 2               | Video Player  |
| 95              | Pillow – 30 cm × 60 cm × 15 cm, with pillow case  |
| 95              | Bed Sheet – 150 cm × 200 cm, cotton   |
| 95              | Blanket – 160 cm × 200 cm, cotton   |
| 2               | Generator Set – 110 kVA   |
| 6               | Fire Extinguisher – 10 lbs  |

**TABLE8. SCHEDULE OF QUARTERLY SUPPLIES AND CONSUMABLES FOR OFFICES**

| <b>Quantity</b> | <b>Description</b>                     |
|-----------------|--|
| 100             | Network Printer/Copier Toner Cartridge |
| 50              | Portable Printer Ink/Toner Cartridge   |
| 100 reams       | Copy Paper – A3 size                   |
| 200 reams       | Copy Paper – A4 size                   |
| 150             | Yellow Pad                             |
| 150             | Brown Envelop – long                   |
| 150             | Brown Envelop – A4                     |
| 150             | Folder – long                          |
| 50              | Pencil                                 |
| 50              | Ball Pen                               |
| 25              | Eraser                                 |
| 25              | Correction Tape                        |
| 25              | Glue Stick                             |
| 50 rolls        | Magic Tape                             |
| 50 rolls        | Scotch Tape – wide                     |
| 50 rolls        | Masking Tape – wide                    |
| 25 boxes        | Paper Clip                             |
| 25 boxes        | Staple Wire                            |
| 25 boxes        | Fastener                               |
| 5 boxes         | Highlighter Pen – various color        |
| 5 boxes         | Permanent Marker – various color       |
| 5 boxes         | Whiteboard Marker – various color      |
| 1 roll          | Tracing Paper                          |
| 1 roll          | Cross Section Paper                    |
| 150             | Cell Card – ₱500                       |
| 50              | LED (Light-Emitting Diode) Bulb – 20 W |

| Quantity    | Description               |
|-------------|---------------------------|
| 250 bottles | Mineral Water – 5 gallons |

**TABLE9. SCHEDULE OF QUARTERLY SUPPLIES AND CONSUMABLES FOR LIVING QUARTERS**

| Quantity    | Description               |
|-------------|---------------------------|
| 50          | LED Bulb – 20 W           |
| 100 bottles | Mineral Water – 5 gallons |
| 5 tanks     | LPG – 11 kgs              |

**TABLE10. SCHEDULE OF PERSONAL PROTECTIVE EQUIPMENT**

| Quantity | Description                 |
|----------|-----------------------------|
| 100      | Hard Hat                    |
| 100      | Safety Vest – reflectorized |
| 100      | Safety Shoe – steel toe     |

## **5 FUNCTIONAL AND TECHNICAL REQUIREMENT**

### **5.1 FREIGHT TERMINALS**

#### **5.1.1 Service**

- (a) The Freight Terminals are rail intermodal freight facilities and will handle container traffic.
- (b) Stacking facilities for both loaded and empty containers shall also be provided within the Subic Logistic Terminal and Clark Logistic Terminal.
- (c) The site shall include locomotive turning facilities.
- (d) The site shall be linked to the adjacent public road network.

**5.1.2 Location and Sizing**

- (a) Subic New Container Terminal (NCT) Terminal shall be located at NCT 1 and NCT2 in SBFZ.
- (b) Subic Logistic Terminal shall be located inside Binictican Height in SBFZ;
- (c) Clark Logistic Terminal shall be located near Clark North Interchange inside CFZ.
- (d) The land occupied by the Freight Terminals shall be such that it provides sufficient space, and is of appropriate proportions, that it can operate in an efficient manner and is able to fulfil the Employer’s requirements.

**5.1.3 Functionalities**

- (a) The Freight Facility shall be designed to provide the following functionalities:
  - i. Accommodate rail vehicles appropriate to handle Year 2021 traffic forecast of containerized cargo with provision for Year 2040 traffic forecast.
  - ii. Load and/or unload rail wagons
  - iii. Provide storage facilities for containers in Subic Logistic Terminal and Clark Logistic Terminal as defined by the traffic requirements for Year 2021 traffic forecast with provision for Year 2040 traffic forecast.
  - iv. Control train movements within the Freight Terminal
  - v. Control the receipt and dispatch of trains from and to the mainline / spur line
  - vi. Have systems to oversee and control the management of the facility
  - vii. Communicate data to and from the site through the Communication System
  - viii. Be appropriately linked to the adjacent public highway network
  - ix. Provide appropriate accommodation for the staff working on the site
  - x. Provide a healthy, safe and secure working environment
- (b) The systems present within the Freight Terminal shall operate in an integrated manner and provide an efficient exchange of information between systems.
- (c) Shunting yard shall be provided inside Subic Logistic Terminal for stabling and shunting of trains going to/from Subic NCT Terminal.

#### 5.1.4 Rail Operations within the Freight Terminals

- (a) Freight Facilities shall be designed with sufficient sidings and access routes such that they are able to handle the volumes of commodities which are forecast to pass through the facility.

#### 5.1.5 Train Operating Speeds

- (a) All train operations, including those where movements are under the control of ETCS equipment (or equivalent) or not and including remote creep control, shall be under the direct management of the Freight Terminal Control Room at all times.
- (b) All trains fitted with ETCS equipment (or equivalent) shall operate in shunting mode whilst within the Freight Terminal.
- (c) ETCS (or equivalent) shunting mode shall limit train speeds to a maximum of 30 kph within the Freight Terminals.

#### 5.1.6 Track Configuration

##### **Re-railer**

- (a) Re-railers shall be provided in locations within Freight Terminals where it is deemed by the Employer that there is a significant risk of derailment.

##### **Transfer Track**

- (b) Transfer track(s) shall be provided at each Freight Terminal where operational control of trains is transferred from main line / spur line control to local control to enable movements within the Terminal.
- (c) Where specified, transfer tracks shall be used for all access and egress routes for the flow directions determined in the Year 2040 freight traffic forecast.
- (d) Each transfer track shall have catch points at both ends to protect the mainline and the freight facility from unauthorized train movements and runaway trains.

##### **Freight Terminal Sidings**

- (e) The Freight Terminal shall be capable of handling the length of trainset as below:
  - Subic NCT Terminal: 250m
  - Subic Logistic Terminal: 650m
  - Clark Logistic Terminal: 650m
- (f) Where there is a requirement to place handling, or other equipment, between the tracks the centre to centre track distances shall be increased accordingly.

- (g) Road access shall be provided to at least one side of every siding.
- (h) Sidings used for the loading or off-loading of container trains shall be arranged such that the top of the rail is at the same level as the finished road surface level where vehicle access is required to a second track.
- (i) Finished surfaces where track is level with adjacent surfaces shall be capable of carrying loads imposed by mobile plant carrying loaded containers.

#### **Crippled Wagon Storage**

- (j) Cripple sidings are to be provided at Freight Terminals, the location number and arrangement to be agreed with the Employer.

#### **Facility Run-Round and Headshunt**

- (k) In Freight Terminal where there is a requirement to allow locomotives to run-round, the length of the headshunt shall be such that it is able to accommodate the planned number of locomotives for the trains utilising the facility.

#### **Turning Wye**

- (l) A Tuning Wye-track shall be provided if necessary for turning single ended locomotives at the Freight Terminal.

#### **5.1.7 Switch Operation**

- (a) All switches within the facility shall be motorized.
- (b) Switch and track occupancy shall indicate on the signalling workstation within the Freight Facility Control Room where provided.
- (c) All switches within the Freight Terminal shall be provided with points indicators as a means of indication of their setting to train drivers.

#### **5.1.8 Train Movements**

CCTV equipment shall be provided to facilitate the monitoring of rail movements within the freight facility by operations staff in the Freight Terminal Control Room.

#### **5.1.9 Asset Protection and Monitoring**

- (a) All train movements into and out of a Freight Terminal shall pass through an RFID tag reader for the management of all wagon movements.
- (b) The RFID data shall be linked through the Communication System.
- (c) The RFID tag reader shall provide the following functionality:
  - i. Vehicle ID;

- ii. Freight Terminal Location;
- iii. Time;
- iv. Date; and
- v. Vehicle Arriving/ Departing.

#### 5.1.10 Gate Access

The design of the gate access shall take the following consideration into account, and shall comply with the local code of practice and regulation:

- Assessment in the queuing at the access gate.
- Sufficient width for the access lanes for heavy good vehicles at the site entrance access gate.
- Sufficient width of the island for the manned gate houses proposed at each access point.
- The access gate design needs to accommodate a vehicle rejection facility.

#### 5.1.11 Container Working Areas

The Contractor shall take into account for the following design requirements for the container working:

- (a) One-way traffic flow is required for operational and safety reasons, except in circumstances where two-way operations are required to enhance safety or improve the efficiency of site operations
- (b) Loading and working areas shall be widened to ensure sufficient space for vehicle movements with cranes/ loading equipment.

#### 5.1.12 Commodity Equipment and Storage

##### **Material Handling**

- (a) Material handling equipment shall be provided in each Freight Terminal to match the requirements, in terms of volume and throughput, of the containers being handled.
- (b) The design of the materials handling arrangements shall ensure that maintenance requirements of the equipment are fully identified.

##### **Working and Hard-Standing Areas**

- (c) All Freight Terminals shall be provided with dedicated areas where materials are handled by road vehicles, delivering, removing, or moving material round the site.



- (d) All such areas shall be designed and constructed such that the construction provides a resilient surface able to withstand the forecast traffic movements and takes account of the likely vehicles movements associated with the loading, unloading and transporting process.

#### **Container Terminals**

- (e) All container handling facilities shall be provided with dedicated areas for stacking loaded and empty containers.
- (f) The design and construction of such areas shall provide surfaces suitable for the required design loading.
- (g) The container stacking area shall facilitate the stacking of loaded containers to a height of four containers and the stacking of empty containers to a height of six containers, but the total stacking height shall not exceed the height limit requirement by Clark International Airport (CIA) if applicable.
- (h) Loaded and empty container stacking shall be provided in two dedicated areas suitably located for the efficient operation of the facility.
- (i) Where it is forecast that loaded container traffic is to be stored on site provision shall be made for 'plug-in' points for refrigerated ('reefer') and temperature sensitive containers.

#### **5.1.13 Site Security**

- (a) All Freight Terminals shall be provided with full security measures around the site including the provision of appropriate fencing of the Terminal.
- (b) The Freight Terminal shall be provided with security CCTV systems covering general areas.
- (c) Security CCTV images shall be conveyed to the individual Freight Terminal Control Room for display on the Integrated Human Machine Interface.
- (d) Security CCTV images shall be conveyed to the Security Gate House CCTV display.
- (e) The rail access point to the Freight Terminal shall be monitored through the use of infra-red detection beams such that passage into or out of the Terminal can be detected by the system.
- (f) Such monitoring of the rail access point shall be provided in addition to the CCTV monitoring of the site perimeter.
- (g) At both the road / pedestrian and rail entrances to the Freight Terminal the lighting levels shall be such that they allow the monitoring CCTV to provide evidence quality imagery.
- (h) CCTV images from the Freight Terminal shall be continually recorded.

#### 5.1.14 Schedule of Facilities and Equipment

The following facilities and equipment with adequate capacity and fit for purpose design shall be provided by the Contractor:

- (a) Transfer tracks for exchange of control of freight trains between local control and the main line / spur line control
- (b) A turning Wye track, if necessary, for locomotives fitted with single ended cab
- (c) Fixed and mobile plant for the handling of containers
- (d) Freight Control Center with a distributed control system for the control of all material handling equipment within the Freight Terminal
- (e) Mobile plant fueling facilities
- (f) Customs x-ray facilities

#### 5.1.15 Schedule of Accommodation

The following accommodations with adequate areas and fit for purpose fitting out shall be provided by the Contractor:

- (a) Administration building
- (b) Security and Gate House building
- (c) Customs Building
- (d) Remote Welfare building for staff amenities
- (e) General Store building
- (f) MV/LV and building services plant building
- (g) Substation

### **5.2 DEPOT COMPLEX**

#### 5.2.1 Services

The Clark Depot Complex shall serve as a central maintenance and stabling facility for all the rolling stock of the SCR. It shall also serve as a base for the maintenance works of all the fixed infrastructure.

#### 5.2.2 Location and Sizing

- (a) The Clark Depot Complex is located near Clark North Interchange inside Clark Freeport Zone (CFZ).

- (b) The overall plot of the depot shall be sufficient to fulfil the maintenance and stabling of the full fleet size of the below type rolling stocks listed in clause 5.2.3 for Year 2021 traffic forecast of containerized cargo with provision for Year 2040 traffic forecast.
- (c) A space provision shall also be allowed within the depot for the future provision of Operation Control Centre of the whole SCR network for the future passenger traffic.

#### 5.2.3 Depot Maintenance Capacity

The depot shall be designed to maintain the following types of rolling stocks:

##### **Locomotives**

- i. Mainline Freight
- ii. Freight Terminal Shunting
- iii. Depot Shunting
- iv. Engineering Trains

##### **Freight Wagon**

- v. Container

##### **Engineering Trains**

- vi. Tamping machine
- vii. Switch grinding and deburring machine
- viii. Ballast distributing and profiling machine
- ix. Rail grinding machine
- x. Multi-purpose vehicle
- xi. Track-mounted crane
- xii. Flat Wagon

#### 5.2.4 Functionalities

The depot will be designed to have the following functionalities:

- (a) Maintain and stable the full fleet of freight locomotives, wagons and engineering trains covering the full spectrum of asset maintenance requirements and in-situ overhaul of the rolling stock.
- (b) Control all train movements within the depot up to the interface at the transfer tracks.

- (c) Control all the maintenance activities in the depot and coordinating with the mainline / spur line train control system for the receipt and dispatch of trains from and to the mainline.
- (d) Store, provision and maintain the signaling system, track works and other fixed infrastructure of the network.
- (e) Store all the inventories necessary for maintaining the reliable and safe operation of the network.
- (f) Provision of training to all operations and maintenance staffs of the SCR.

#### 5.2.5 Depot Operations

##### (a) Depot Operating and Train Speed

- i. All train operations within the depot limits shall be under control of the depot controller from the Depot Control Room.
- ii. The depot limits shall be the ends of the transfer tracks as defined by the signaling system.
- iii. All trains fitted with ETCS equipment (or equivalent) shall operate under shunting mode
- iv. ETCS (or equivalent) shunting mode shall limit train speeds to a maximum of 30 kph
- v. All other trains shall be manually controlled to a maximum speed of 30 kph
- vi. All terminal tracks shall be fitted with buffer stops designed for the maximum force of trains impacting at the maximum allowable operating speed

##### (b) Depot Berthing Tracks

- i. The Contractor shall provide adequate berthing tracks for freight trains.
- ii. The berthing tracks shall be designed to allow for maintenance staff access roads and future electrification.
- iii. The berthing tracks shall have shunter and maintenance staff walkways along the full length between each track.
- iv. The berthing tracks shall have shunters' walkways across all tracks at each end.
- v. Shunter and maintenance staff walkways shall be located either side of each track.
- vi. All depot tracks shall be level to prevent train runaway.

(c) Depot Shunting Facilities

- i. The Contractor shall provide adequate head shunts for the efficient operation of the depot and yard
- ii. The Contractor shall provide one freight dead end cripple siding.

(d) Depot Infrastructure (P-Way) Tracks and Yard

- i. A P-Way storage yard and a loading track shall be provided within the Depot Complex for the storage of ballast, track panels, sleepers, rails, switch and switch component.
- ii. The P-Way yard shall have a single loading track for loading engineer's trains with materials. Hard standing shall be provided adjacent to this track for cranes and fork lift trucks. An area with compacted and finished beyond this standing shall also be provided for storage of permanent way materials.
- iii. The track in the loading track shall be embedded with the top of rail at finished hard standing surface

(e) Arrival and Departure Transfer Tracks

- i. The depot shall have transfer tracks.
- ii. Each transfer track shall be under the control of the mainline train control system.
- iii. Each transfer track shall have catch points at either end to protect both the mainline and the depot from unauthorized train movements and runaway trains.
- iv. Each transfer track shall have a Wheel Measurement System installed.

(f) Depot Signaling and Control

- i. The depot signaling and control system shall be ETCS level 0 or equivalent operating in shunting mode.
- ii. The depot shall have motorized switches.
- iii. All switches shall have detection.
- iv. All switches shall have route indicators.
- v. All routes shall be set, and all switches controlled from the depot control room signaling terminal.

(g) Wye track

- i. A Tuning Wye-track shall be provided if necessary for turning single ended locomotives.

5.2.6 Train Maintenance Periodicities and Downtimes

- (a) Sizing of the maintenance facilities, in particular the freight maintenance shed and the berthing sidings shall be based on the fleet sizes and the required planned maintenance regimes and down times.
- (b) The Contractor shall submit the maintenance periodicities and down times for each type of maintenance for locomotive and wagon to the Employer for agreement.
- (c) The Contractor shall also agree with the Employer for the percentage of capacity to be assumed regarding unplanned maintenance and repairs.
- (d) As part of the design validation, berthing plans shall be provided for each facility track to demonstrate the required capacity occupancy and the spare capacity for unplanned works is achieved.

5.2.7 Rolling Stock Servicing and Maintenance

The Depot Complex shall have the following facilities:

(a) Freight train washing

- i. Automatic under frame washing for wagons and locomotives.
- ii. Manual side and roof washing with pressure lances for locomotives.
- iii. Under frame washing for on track yellow plant.
- iv. Hand washing for on track yellow plant.

(b) Provisioning

- i. Re-Fueling
- ii. Replenishing sand boxes
- iii. Topping up engine oil
- iv. Topping up engine coolant

(c) Routine Maintenance

- i. Planned maintenance for locomotives.
- ii. Regular inspection and brake tests for wagons.

- iii. Regular container clamp checks for wagons.
- (d) Corrective Maintenance
  - i. Correction of faults.
  - ii. Replacement of brake blocks [
  - iii. Repair of loading and unloading damage to wagons
  - iv. Repair of wagon locking devices
  - v. Repair of couplers
- (e) Heavy Maintenance and Overhaul
  - i. Planned maintenance for locomotives.
  - ii. Engine changes
  - iii. Bogie changes
  - iv. Traction motor overhaul
  - v. Alternator replacement

#### **5.2.8 Security provisions**

- (a) The Contractor shall provide full security measures around the depot.
- (b) These shall include a fully fenced and gated depot boundary.
- (c) A fully controlled access gate shall be provided at the main road access to the facility.
- (d) Full CCTV coverage shall be provided.
- (e) Access Control Systems (ACS) shall be provided.
- (f) Emergency site egress points shall be provided in the fence line, with ACS and emergency override.
- (g) All track entrances to the fully fenced facility shall have Passive Infra Red (PIR) intruder detection systems fitted, providing alarms to the Depot Control Centre.

#### **5.2.9 Depot Facilities and Equipment**

The following facilities with adequate capacity and complete with all fit for purpose functionalities shall be provided by the Contractor:

- (a) Pneumatic supply system with air compressors, all the necessary distribution pipework and control equipment

- (b) Train washing plant
- (c) Mobile high platforms for access to roof equipment of rolling stock
- (d) Refueling facilities
- (e) Various provisioning facilities such as water, sanding, lubricant, etc.
- (f) Underfloor wheel lathes
- (g) Signaling control panels for both mainlines and depot
- (h) All the cranage, lifting and jacking equipment
- (i) All the machine shop equipment necessary to support heavy repair and overhaul activities for the locomotives and wagons
- (j) Center or side pits for the maintenance tracks
- (k) Waste Management facility

#### 5.2.10 Other Maintenance Equipment

The following equipment with adequate capacity and complete with all fit for purpose functionalities shall be provided by the Contractor:

- (a) Tamping machine – for tamping of ballast bed, aligning the tracks, lifting the tracks to proper elevations, and setting the proper cants on the curved sections.
- (b) Switching grinding and deburring machine – for grinding of built up welds and burrs on switch blades and crossing frogs stock.
- (c) Ballast distributing and profiling machine – for distributing the ballast to where it is required.
- (d) Rail grinding machine
- (e) Multi-purpose vehicle – for transportation of track workers, materials, tools along the line.
- (f) Flat wagon
- (g) Track-mounted crane – for maintenance of bridges, lifting of defective rolling stocks and other obstructions, etc.

#### 5.2.11 Schedule of Accommodation

The following accommodations with sufficient space and fit for purpose fitting out will be provided by the Contractor:

- (a) Administration building including all the staff amenities



- (b) Depot Control Center
- (c) Operations Control Center (space provision only for future passenger traffic)
- (d) Security Gate house
- (e) Locomotive inspection and repair shed
- (f) Wagon Repair shed
- (g) Heavy Maintenance and Overhaul workshop
- (h) Locomotive Berthing and Cleaning shed
- (i) Train Provisioning shed
- (j) Yellow Plant facility
- (k) Signaling and Communication shed
- (l) Stores building
- (m) Building for the storage of hazardous materials
- (n) Training Building
- (o) Operations and Maintenance building
- (p) Oil and fuel storage area
- (q) MV/LV and building services plant building
- (r) Substation

## **5.3 RAILWAY SYSTEMS**

### **5.3.1 Signalling and Train Control Systems**

- (a) The main purpose of Signalling is to secure the safety of train operation in all signalling areas including depot and freight terminals.
- (b) The contractor shall take full responsibility for design, supply, factory testing, installation, testing and commissioning, training, defects and liabilities for the signalling and train control system.
- (c) The Contractor shall provide all necessary equipment, wiring and cabling as required to fit each systems, subsystems and trainset as part of the signalling scope.
- (d) The signalling and train control system shall cover the mainline, spur line, depot and freight terminals of the SCR.

- (e) The signalling system shall be based on ETCS Level 0 technology of or equivalent.
- (f) All equipment shall be constructed in a sufficiently robust manner, and arranged so as not to suffer deterioration, wear, or damage due to vibration or shock loads encountered.

#### 5.3.2 Communications Systems.

- (a) The Contractor shall provide communication systems to meet the operation and maintenance needs of the SCR, including but not limited to the following subsystems:
  - i. Fibre optic-based Network Communication System;
  - ii. Radio System;
  - iii. Telephone System;
  - iv. CCTV System
  - v. PA System
- (b) The contractor shall take full responsibility for design, supply, factory testing, installation, testing and commissioning, training, defects and liabilities for the communication system.
- (c) The Contractor shall provide all necessary equipment, wiring and cabling as required to fit each sub-systems as part of the communication scope.
- (d) The communication system shall cover the mainline, spur line, depot and freight terminals of the SCR.

#### 5.3.3 Asset Protection Systems.

- (a) The Contractor shall provide the following asset protection system for SCR:
  - i. Hot Axle Bearing Detector (HABD)
  - ii. Radio Frequency Identifier (RFID) System
- (b) Hot Axle Bearing Detection
  - i. A HABD system shall be provided to detect the heat build up effect of defective axle / wheel bearings on wagon and locomotive wheel sets.
  - ii. The HABD system shall provide an alarm when an axle / wheel bearing is detected at being over a particular threshold temperature.
  - iii. Due to the hazardous nature of the detector laser, a detector head shall be provided that is only uncovered due to the passage of a train.

- iv. On detection of an alarm by the HABD equipment, there shall be a direct feed to signalling control system to initiate an alarm

(c) Radio Frequency Identifier (RFID) System

- i. In order to identify locomotives and wagons when passing through particular locations such as freight terminals, a RFID system shall be provided at such sites.

5.3.4 Maintenance Management Information System (MMIS).

- (a) The rail systems shall interface the Linear Asset Management System (LAMS) through the MMIS in order to support SCR maintenance activities.
- (b) The interface shall be designed to satisfy the SCR Asset Maintenance Strategy and shall be subject to the approval of the Employer.
- (c) Alarm and status information shall be required from equipment which does not have a direct connection to the Communication System, such as rolling stock or depot equipment.
- (d) The MMIS shall be dual redundant which shall be located in geographically separate locations to avoid common mode failures.
- (e) The MMIS shall provide independent interfaces to the LAMS at each location.
- (f) Full functionality of the MMIS shall be maintained throughout any single component failure.
- (g) All status and alarm data required by the LAMS shall be collated from all rail assets without limitation, including;
  - rail systems,
  - power,
  - MEP,
  - rolling stock,
  - O&M facilities and equipment
  - track,
  - freight facilities,
  - civil infrastructures, etc.
- (h) The collated data shall be organised into a format which is supported and usable by the LAMS in order to carry out maintenance activities.

- (i) The interface shall allow bi-directional exchange of information.
- (j) Alarm and status conditions passed to the LAMS shall enable maintenance orders to be placed by the LAMS.
- (k) Remote access to the LAMS for diagnostic and maintenance investigations including accessing operation and maintenance manuals shall be possible from any location within the SCR network via the Communication System.
- (l) All diagnostic and maintenance access shall be protected by security features and password protection to ensure the integrity of the LAMS and the rail systems is not compromised.
- (m) Asset Numbering:
  - The Contractor shall provide an asset numbering plan, to detail method, format and procedures to ensure all assets owned by the Employer are suitably tagged to the satisfaction of the Employer.
  - Each configured item shall have an asset tag which contains a unique asset number and a bar code which can be read by a handheld terminal, the bar code format to be agreed with the Employer.
  - All asset tags shall be installed in easily accessible and viewable locations.
  - The asset tag shall be of a durable, tamper resistant material, highly adhesive and capable of withstanding the railway environment.
- (n) Software Design
  - Open protocols shall be used wherever possible and proprietary protocols separately identified with provision made for the free-issue of these protocols to system integrators.
  - All software and protocols shall be fully specified such that a 3rd party shall be able to implement the protocol for replacement / modified systems.
  - The Contractor shall include provision for the evolution, upgrade path and support of software and systems.
  - All commercial “off the shelf” third party software, with the exception of operating systems, shall be the latest version available.
- (o) Alarm and status information shall be transmitted by the MMIS to the LAMS at a frequency of at least once every minute.
- (p) The addition of new assets to be managed by the LAMS shall be carried out by simple modification to the MMIS.

- (q) The interface shall be secure and shall not affect the integrity of the rail systems or the safety of the railway.
- (r) The MMIS shall store alarm and status data for 31 days.
- (s) Degraded modes of operation shall be defined by the Contractor.

## **5.4 ROLLING STOCK**

5.4.1 The rolling stock shall be designed for operation compatible with the track parameters.

5.4.2 The Contractor shall take full responsibility for the design, manufacture, delivery and performance of the trains to be provided under the contract.

5.4.3 Basic locomotive requirement shall be as follows:

- Track gauge: 1435mm
- Length: 23m
- Width: 2.9m
- Number of axles: 6 (co-co)
- Maximum axle load: 25 ton
- Gross weight: 150 ton
- Maximum speed: 80kph

5.4.4 Basic requirement for containerized cargo trailers car shall be as follows:

- Track gauge: 1435mm
- Length: 13.5m
- Width: 2.9m
- Number of axles: 4 (bo-bo)
- Maximum axle load: 25 ton
- Tare weight: 20 ton (car)
- Net weight: 60.9 ton (container + payload)
- Gross weight: 80.96 ton

5.4.5 The containerized cargo trailers shall be able to handle up to 2 TEU.

- 5.4.6 The ultimate length of one trainset shall be 650m.
- 5.4.7 The freight trains for SCR shall use at least 5500 hp locomotives with tractive effort of at least 600 kN to haul 650m trains at maximum.
- 5.4.8 At least 2100 hp industrial locomotives, capable of hauling up to 10 trailer cars, shall also be provided inside the freight terminals to assist in assembling, disassembling and circulating cargos.

5.4.9 Maintenance Requirements

- (a) All equipment shall be constructed in a sufficiently robust manner, and arranged so as not to suffer deterioration, wear, or damage due to vibration or shock loads encountered in traction service.
- (b) There shall not be any single point failure of equipment/ component on rolling stock which cause an unsafe situation during normal and degraded modes of operation. It shall be designed in a redundant manner.
- (c) Equipment items or components of the same model shall be readily interchangeable. They shall be designed and manufactured so that no additional fitting, machining, adjustment or modification, other than those approved by the Employer, would be necessary during replacement. As far as practicable, the same model of equipment shall be used to fulfil similar functions at different applications.

5.4.10 Fire Requirements

- (a) The design and manufacturing of all equipment shall be in accordance with international fire safety requirement, such as EN45545.
- (b) Fire protection system and equipment shall be designed according to the Philippine Fire Code.

5.4.11 Noise and Vibration

- (a) The Contractor shall co-ordinate with the Advance Works Contractor for any noise requirement in EIA for setting the noise performance targets of the rolling stock.

## **5.5 BRIDGES AND STRUCTURES**

5.5.1 Clearance

- (a) The Contractor shall take into account in the design of the overbridges, underbridges, rail viaducts, river crossing bridges and underpasses for the following clearance requirement:
  - i. Gauge requirement for all rolling stocks, including engineering trains, for the freight trains;

- ii. Gauge requirement for future passenger trains;
  - iii. Track-sided cable containment;
  - iv. Allowance for future electrification.
- (b) For public roads and highway crossing, clearance requirement from DPWH shall be followed.

#### 5.5.2 Fire Resistance of Structures

- (a) The Contractor shall carry out study to specify the fire resistance of the structural elements based on the location and functional requirement of the structure.
- (b) All structural elements shall have minimum two hours fire resistance, and protective coating to be applied where necessary.

#### 5.5.3 Earthing, Bonding and Lightning Protection

- (a) Earthing, bonding and lightning protection shall be provided for all bridges and building structures.
- (b) The system shall be designed such that if the railway is electrified, the earthing system can be migrated simply from un-electrified to an electrified railway.
- (c) The systems are required to ensure that under all normal, foreseeable and degraded fault conditions, the touch and step potential between conductive surfaces do not exceed the safe limits.
- (d) The Earthing and Lightning Protection Systems shall be designed and installed to assure personnel and staff safety.
- (e) The Earthing and Lightning Protection Systems shall be designed and installed to provide adequate protection to electrical and electronics systems.

#### 5.5.4 Vehicle Parapets for over-Bridges

- (a) Solid parapets of minimum 1.5m above walkway level shall be provided on overbridges, while solid parapets of minimum of 1.1m above walkway level shall be provided on the approaches.
- (b) For the span length of the overbridges, the parapet shall have the safety fence from the top of the parapet and extending a minimum height of 2.0m above the top of parapet level
- (c) The safety fence shall be extended on top of the normal containment parapet, with a minimum 2.0m height from top of parapet, for a length of not less than 5m from each end of the bridge and shall terminate in a further transition reducing to 1.0m high at a distance of 10m from the end of the bridge.

#### 5.5.5 Handrails for Under-Bridges

- (a) Parapets shall be provided to restrain personnel and minor maintenance equipment from falling from the bridge onto the road right of way below.
- (b) The design shall be designed aimed at to minimise damage to the bridge superstructure and allow speedy replacement in the event of impact from a train which, during a derailment event, is not contained by the derailment control and/or protection measures implemented in the design that limit the transverse movement of a derailed train.

#### 5.5.6 Provision for Train Derailment

- (a) The structures shall be designed in such a way that, in the event of a derailment, the resulting damage to bridge structures is limited to a minimum.
- (b) Crash walls shall be provided to protect overbridges sub-structures in case of train collision.
- (c) Adequate concrete up-stand walls shall be provided on all underbridges and approaches structures to retain train vehicles on track area and to mitigate the risk of train overturning or fall from the bridge.

#### 5.5.7 Crash Barrier

Crash barriers shall be provided to protect underbridge and sub-structure piers and abutments

#### 5.5.8 Drainage and Flood Protection

- (a) Adequate drainage provision shall be provided for collecting surface water from structures.
- (b) Backfill materials behind abutments and wing walls shall be granular, free-draining materials to prevent build-up of hydrostatic pressure behind the wall.
- (c) All bridges passing over watercourses shall be protected from flooding under 1 in 100 years return period.

#### 5.5.9 Erosion and Slope Protection

Adequate erosion control and protection shall be provided for slopes behind bridge abutments.



## 5.6 EARTHWORKS

### 5.6.1 Width of Rail Track Formation

The Contractor shall take the following consideration into account in determining the width of rail track formation in embankment or cutting:

- i. Alignment requirement;
- ii. Gauge requirement for all rolling stocks, including engineering trains, for the freight trains;
- iii. Gauge requirement for future passenger trains;
- iv. Track-sided cable containment;
- v. Allowance for future electrification.

### 5.6.2 Surface Clearance

- (a) Before the embankment construction, all sod and vegetable matter shall be removed from the surface on which the embankment is to be placed, and the cleared surface shall be completely broken up.
- (b) The compaction of sub-soil shall be carried out after the removal of the top layer of natural soil (cleaning minimum thickness: 500 mm).
- (c) The Contractor shall fill up all holes with the same material of the core embankment.

### 5.6.3 Earth Materials

- (a) Suitable excavated materials along cut sections shall be used for embankment sections (local fill) to minimize outsourcing the materials from other locations. The Contractor shall submit the core filling material to be used with the testing and acceptance criteria to the Employer for approval, while the fill material shall also satisfy design requirements of DPWH Standard Specifications for Public Works and Highways.
- (b) Through the entire cross section, the materials used in each layer shall belong to the same material group or subgroup.

### 5.6.4 Compaction

- (a) The Contractor shall follow the compaction requirement specified in DPWH Standard Specification for Public Works and Highways.
- (b) In any case the thickness of the layers of compacted material for railway track formation shall be not greater than 300 mm.

### 5.6.5 Ballast Protection

- (a) Ballast walls shall be provided at both sides of the track to prevent unwanted dispersion of ballast.

#### 5.6.6 Drainage and Flood Protection

- (b) Design flood levels along the alignment shall be taken into account during subsequent phases of the Project. Return period for flood protection to all railway facilities shall be 1 in 100 years.
- (c) Drainage facilities shall be designed to prevent flooding along the railway and saturating the subgrade which may cause local failure.
- (d) Adequate drainage facilities, such as ditch canals, shall be constructed at both sides of the track to facilitate drainage along the railway. Transverse slope of 3% shall be provided in the subgrade surface for both cut and fill sections to facilitate natural flow to water to ditch canals. Intercepting ditch and cross-drains shall be required, as dictated by the existing condition along the alignment.

#### 5.6.7 Settlement Requirement

- (e) All the rail track formation in embankment and cut section shall comply the following settlement requirement.
- (f) Settlement limits for serviceability purposes to limit track movement shall generally be as follows:

**TABLE 11: SETTLEMENT FOR TRACK MOVEMENT**

| <b>Time after opening to rail traffic following end of construction</b>                                  | <b>Maximum permitted settlement after opening to rail traffic – Ballasted Track</b> | <b>Maximum permitted settlement after opening to rail traffic – Slab Track</b> |
|--|---|--|
| 4 weeks  | 15mm  | 10mm   |
| 6 months   | 25mm cumulative   | 15mm   |
| 12 months  | 30mm cumulative   | 15mm   |
| Maximum angular distortion   | 1/500<br>over a length of 20m   | 1/1300<br>over a length of 20m   |
| Differential settlements between structural foundations supporting superstructure shall not exceed 6.0mm |   |  |

#### 5.6.8 Embankment Slope Protection

- (a) Adequate erosion control and protection shall be provided for all filled and cut slopes.

## 5.7 TUNNELS

### 5.7.1 Clearance

The Contractor shall take into account in the design of the tunnel for the following clearance requirement:

- i. Gauge requirement for all rolling stocks, including engineering trains, for the freight trains;
- ii. Gauge requirement for future passenger trains;
- iii. Track-sided cable containment;
- iv. Allowance for future electrification.

5.7.2 The Contractor shall base on the geological condition along the tunnel section to propose the appropriate tunnelling method to be adopted. The tunnelling method and the associated design including temporary and permanent design shall be submitted and agreed with the Employer before any tunnelling works.

### 5.7.3 Monitoring and Instrumentation

- (a) The Contractor shall design, supply and install the instrumentation and monitoring system of the tunnel.
- (b) The objective of the instrumentation and monitoring system of the tunnels are to compare the design hypothesis with:
  - the effective stress-strain behaviour of the ground due to tunnel excavation.
  - the effective stress-strain of tunnel in its operational life
- (c) The monitoring system shall cover the followings:
  - Monitoring during construction of the tunnel
  - Monitoring during operation life of the tunnel
- (d) The Contractor shall provide a monitoring design to the Employer for approval, which shall at least define the followings:
  - Monitoring parameter of the tunnels
  - Monitoring parameters limit values
  - Limit values overcoming corrective actions
  - Monitoring system
  - Instrumentation

#### 5.7.4 Settlement and Groundwater Drawdown

- (a) The Contractor shall ensure the tunnelling works will not induce excessive settlement and groundwater drawdown to the surrounding.
- (b) The Contractor shall carry out analysis on the anticipated induced settlement and groundwater drawdown and the associated impact assessment for both construction and permanent stages, and shall submit to the Employer for approval before any tunnelling works.

#### 5.7.5 MEP System

- (a) The Contractor shall design, procure, deliver, install, and carry out testing and commissioning of all the following MEP system within the tunnels.
  - i. Ventilation System
  - ii. Fire Fighting System
  - iii. Lighting System
  - iv. Pumping and Plumbing System for ingress water if applicable
- (b) The tunnel ventilation system is for the exhaust gas dilution of diesel engine trains. The tunnel ventilation system shall include but not limit to the followings:
  - Extract Ventilation
  - CO and Opacity sensors
  - Programmable logic controller
- (c) The tunnel fire fighting system shall consist but not limit to the following equipment, and shall fulfil the local fire rule and standard.
  - Water pressurization group composed of two main pumps (one is for reserve).
  - The pressurization group, in addition to the shut-off valves and the check valves, shall be provided with the equipment which are designed for the operations and monitoring of the group itself.
  - Water tank for replenishment with instruments to monitor the water level inside than tank.
  - Provision for the joint of the fire-fighters engine near each pressurization control unit
  - Fire water pipe system with hydrants at regular interval.

#### 5.7.6 Earthing and Bonding

The Contractor shall be drawn to the attention that requirements regarding earthing and bonding specified in Section 5.5.3 shall also be applied to the tunnel structures.

#### 5.7.7 Trackform in Tunnel Section

Slab track shall be adopted inside the tunnel section.

#### 5.7.8 Provision for Future Passenger Traffic

The Contractor shall design and construct any necessary provisions for the future second track for the future implementation of passenger traffic. The provision may include, but not limited to, the followings:

- Civil enabling provision, such as stud tunnels, along the main line for future cross-passage connections for tunnel excavation purpose.
- Civil enabling provision along the main line, such as stud tunnels, for future tunnel ventilation for future passenger trains, in accordance with the requirements specified in NFPA 130 or equivalent.
- Ground treatments around the tunnels of the main line for any future connection.

### 5.8 TRACKWORKS

#### 5.8.1 Safety Requirements

##### (a) Derailment Prevention and Containment

- i. Derailment prevention measures, such as the use of guard or check rails, derailment containment walls, shall be provided at all high risk structures, beneath, over or adjacent to the railway such as major bridges, viaducts, aimed at to confine any derailed train within the track itself. The Contractors shall determine the derailment prevention measured required, the locations and details, and submit to the Employer for approval.
- ii. The derailment prevention and mitigation measures shall be designed such that in case of a derailment of the followings:
  - On a bridge, the train shall remain on the bridge;
  - Damage to the bridge or structure is minimized.

##### (b) Vandalism

- i. The track system and track system components and railway access points shall be protected from vandalism or interference by the use of appropriate security measures.
- (c) Prevention of Trespass onto the Railway
  - i. Measures shall be taken to prevent inadvertent and accidental trespass onto the railway.
  - ii. A risk assessment of the railway route shall be performed to determine what measures are required at specific locations along the railway.
  - iii. Sidings, depots and freight terminals shall require particular measures to deal with the prevention of trespass by errant vehicles.

#### 5.8.2 Rail Gauge & Gauge Widening

- (a) Track gauge is 1,435 millimeters (standard gauge), following the decision of NEDA Infrastructure Committee (InfraCom) to adopt standard gauge for all future railway projects in the Philippines.
- (b) Widening of track gauges will be considered on sharp curves ( $R < 300$  meters).
- (c) The outside rail shall be considered as the datum rail for all gauge widening.
- (d) The change in gauge widening shall not be greater than 1 in 1000.
- (e) The change in gauge widening shall be located within the transition at the start and end of the circular curve.
- (f) Minimum distance between centerline of tracks is 5,000 millimeters.

#### 5.8.3 Axle Load and Speeds

- (a) The axle loads to be considered in the selection of trackwork components shall be:
  - i. Up to 25 tonne axle load for freight trains;
  - ii. 25 tonne axle load locomotives on all freight services.
- (b) The train speeds to be considered in the selection of trackwork components shall be:

##### **Mainline**

- i. 80kph for freight trains;
- ii. 160kph for passenger trains (future provision).

##### **Spur Line**

- i. 80kph

**Inside Freight Terminals and Depot Complex**

- i. 30kph

**5.8.4 Train Lengths**

- (a) The freight trains which have been considered to operate on the system shall be a maximum of 650m long.

**5.8.5 Materials Specification**

- (a) The Contractor shall provide a minimum warranty of 5 years or that of the manufacturer of the component whichever is longer for all Track Components.
- (b) The Contractor shall submit the design and material specification for the following items to the Employer for approval before delivery to the site.
  - i. Rails
  - ii. Sleepers
  - iii. Fastenings
  - iv. Rail Pads
  - v. Shoulders / Inserts
  - vi. Clips
  - vii. Insulators
  - viii. Ballast and subballast
  - ix. Switches and Crossing
  - x. Insulated Rail Joints
  - xi. Track Signage and Markers
  - xii. Other Track Works Items, including but not limit to, buffer stops, ballast mats, rail expansion joints, derailleurs, rerailer, level crossing, etc.
  - xiii. Slab Track
  - xiv. Fasteners for Slab Track

## **6 DESIGN REQUIREMENTS**

### **6.1 GENERAL**

- 6.1.1 This section specifies the requirements for the preparation of the Design of the Works. The Contractor shall be responsible for the design of the Works and shall ensure his Design is accurate and in compliance with this *Employer's Requirement*.
- 6.1.2 The Design shall comply with all the requirements pertaining to safety, health, and environment.
- 6.1.3 The Contractor shall prepare a Design Programme to set out the Contractor's anticipated schedule for the preparation of the Design. The Design Programme shall provide the baseline against which the design progress is measured.

### **6.2 REGULATIONS, STANDARDS, AND CODES OF PRACTICE**

- 6.2.1 The Design shall be carried out in accordance with the Regulations, Standards, and Codes of Practice of the People's Republic of China, except to the minimum extent necessary to comply with the laws of the Philippines.
- 6.2.2 The Regulations, Standards, and Codes of Practice used by the Contractor shall be provided to the Employer in both hard and soft copies.

### **6.3 TECHNICAL DESIGN**

- 6.3.1 The design of the Works shall be fully developed and detailed to the Technical Design by the Contractor.
- 6.3.2 During the preparation of the Technical Design, the Contractor shall in particular:
  - i. complete all calculations and analysis;
  - ii. complete all tests and trials and all selection of materials and equipment;
  - iii. assess and take full account of the effect on the Works of the proposed methods of construction, installation, testing and commissioning and temporary works.
  - iv. complete the validation of all the data provided by the Employer including all the additional surveys, investigations and testing as considered necessary by the Contractor to develop the Technical Design of the Works in accordance with the Contract.
- 6.3.3 The Technical Design shall include technical drawings, the Works specification, the technical design report, the construction method statement and all other contents necessary.

### **6.4 DESIGN REVIEW**

- 6.4.1 The Employer shall be given adequate opportunity to review the Design to ensure compliance with this *Employer's Requirement*.



- 6.4.2 An Employer's Representative will be appointed to support the Employer in reviewing the Contractor's design to ensure compliance with this *Employer's Requirement*. The Contractor shall facilitate all reasonable requirements, access, attendance, and coordination with the Employer's Representative during the review process.

## **6.5 ALIGNMENT CONSIDERATION FOR FUTURE PASSENGER SERVICE**

- 6.5.1 The Contractor shall demonstrate in his alignment design that the provision of future passenger service, including the future stations as specified in Section 1.6, will not be frustrated.
- 6.5.2 The alignment, within the extent of platforms in future passenger stations, shall be straight with level gradient.

## **6.6 SETTLEMENT LIMIT**

- 6.6.1 The Contractor shall demonstrate in the design that the predicted settlement is within the settlement limit specified in **Section 5.6.7**.
- 6.6.2 In exceptional cases, where it is considered not reasonably practicable to achieve the settlement limits specified in **Section 5.6.7**, the settlement limits proposed shall be justified in the design submission and shall be subject to the Employer approval.

## **6.7 SEISMIC DESIGN**

- 6.7.1 All the structures, including tunnels, bridges, embankment, buildings, shall be designed to be seismic resistant.
- 6.7.2 The soil supporting SCR structures shall also be analyzed for liquefaction hazard and mitigation measures shall be taken.

## **6.8 FLOOD PROTECTION**

- 6.8.1 The Contractor shall carry out hydraulic and hydrology assessment for the design of the flood protection measures to be adopted under the Project.
- 6.8.2 The Contractor shall demonstrate in the design that adequate drainage provision has been provided and the design of the SCR facilities has considered the flood condition under 1 in 100 years return period, such that the operation of the SCR will not be affected and all railway facilities will not be damaged.
- 6.8.3 The Contractor shall also demonstrate in the design the flood risk or flooding condition of the surrounding area will not be adversely affected due to the SCR Works.
- 6.8.4 The Contractor shall assess any risk of scour or erosion, particularly structures in vicinity of watercourse crossing, and shall design the appropriate protection measures to protect the structures.

## **7 SYSTEM ASSURANCE AND RISK MANAGEMENT REQUIREMENTS**

### **7.1 GENERAL**

- 7.1.1 System Assurance (SA) and Reliability, Availability, Maintainability and Safety (RAMS) are a set of planned and systematic activities to ensure that the systems to be delivered under this Contract shall be safe and reliable for use in railway operations.
- 7.1.2 The Contractor shall prepare and submit the SA documentations as required in the subsequent clauses of this section.

### **7.2 SYSTEM ASSURANCE AND RISK MANAGEMENT ORGANIZATION**

- 7.2.1 The Contractor shall establish a dedicated organization responsible for planning, undertaking, monitoring and management of all SA activities and enables effective communication among all relevant parties.
- 7.2.2 The Contractor shall appoint a competent System Assurance Manager on or before the Date for Commencement of the Works to manage all the system assurance activities as described in this section.
- 7.2.3 The System Assurance Manager shall have sufficient experience and adequate skills of system assurance in the railway industry. Curriculum vitae (CV) of the proposed System Assurance Manager shall be submitted to the Employer for review without objection prior to the commencement of the system assurance works.
- 7.2.4 The Contractor shall submit the alternative personnel to the Employer for review without objection in case of the change of System Assurance Manager.

### **7.3 SYSTEM ASSURANCE AND RISK MANAGEMENT PLAN**

- 7.3.1 The Contractor shall prepare and submit a System Assurance and Risk Management Plan (SARMP).
- 7.3.2 The SARMP shall describe in detail how and when the Contractor will undertake the SA/RAMS activities and shall, as a minimum, contain the details below.
  - (a) Project Scope of Design.
  - (b) Organisation & Key Personnel.
  - (c) Roles and Responsibilities.
  - (d) Monitor/Control of Sub-Contractors (if any).
  - (e) Integration of System Assurance with Design.
  - (f) SA Programme. and
  - (g) Techniques and Methods to be employed.

## 7.4 RISK AND SAFETY REQUIREMENTS

### 7.4.1 Risk and Safety Management Process

- (a) The Contractor shall implement a safety risk management process.
- (b) The Contractor shall undertake all safety activities to demonstrate that the residual safety risks to workers, staff and passengers have been reduced to a tolerable level in accordance with the ALARP principle (As Low As Reasonably Practicable).
- (c) The safety risk management process shall identify all risks associated with the Project, Construction, Operations and Maintenance of the railway system in a Hazard Log. The Contractor shall also review and provide solutions / mitigations to the activities listed in the Hazard Log.
- (d) The ALARP principle shall be used to address all the identified risks in the Hazard Log so that they are either eliminated or reduced to a tolerable level.
- (e) The Contractor shall be responsible for the management and close-out of all hazards items recorded in the Hazard Log.
- (f) The Contractor shall treat risk mitigation measures which are to be mitigated by design as forming an additional set of design safety requirements which need to be satisfied through the Contractor's Assurance Process.
- (g) The Contractor shall demonstrate through safety assurance reports that all safety requirements have been satisfied.
- (h) Risks and mitigations which the Contractor proposes for export to the Employer shall be reviewed without objection by the Employer.

### 7.4.2 Hazard Identification

- (a) The Contractor shall conduct formal hazard identification and analysis exercises, including the following analyses, to identify all relevant risks systematically.
  - i. Preliminary Hazard Analysis: to conduct top level assessment on the design and identify potential risks at early stage, and to initiate appropriate actions to mitigate/eliminate the risks.
  - ii. Systems/ Subsystems Hazard Analysis: to identify and assess risk associated with the design of subsystems including component failure modes, critical human error inputs, and risks resulting from functional relationships between components and equipment comprising each subsystem.
  - iii. Interface Hazard Analysis: to identify and assess existing or potential risks between subsystems and/or systems and their effects on overall

system safety and operations. The emphasis of the assessment shall be focused on interfaces between systems/subsystems.

- (b) The Contractor shall conduct formal Hazard Identification workshops, with the participation of relevant personnel from the Employer, during design stage, to identify the hazards and propose appropriate mitigation measures.
- (c) The purpose, scope, methodology and risk logging mechanism to be adopted for the workshop shall be prepared and submitted to the Employer before conducting the workshop.
- (d) The Contractor shall produce Hazard Log, containing hazards which may affect the safe and / or reliable operations of the future railway due to the design, construction, installation, testing, commissioning, operation and maintenance of the Works.
- (e) The Contractor shall produce and update the Hazard Log in accordance with the template shown in **Table 12** below. The hardcopy and softcopy (in Microsoft® Excel format) shall be prepared and submitted to the Employer. References to relevant information / analysis items shall be included in the hazard log to describe the source(s) of the hazards identified.

TABLE 12: HAZARD LOG TEMPLATE

| Hazard ID | System / Activity Category | Subsystem / Specific Activity | Hazard Description | Location | Potential Cause(s) | Affects |           |       |            |             | Effect(s) / Consequence(s) | Original Risk      |           |          | Hazard Controller (Project) | Proposed Safeguard shall be detail specified by following stage:<br>(1) Design - Design submission / specification ref.<br>(2) Construction - Construction Plan<br>(3) Testing & Commissioning - T&C activity / test record / check / procedure ref.<br>(4) O&M - Operation / Maintenance procedure ref. | Residual Risk |           |          | Remarks | Target Completion Date | Status update |  |            | Closed (Y / N) | Rev. Date |         |
|-----------|----------------------------|-------------------------------|--------------------|----------|--------------------|---------|-----------|-------|------------|-------------|----------------------------|--------------------|-----------|----------|-----------------------------|--|---------------|-----------|----------|---------|------------------------|---------------|--|------------|----------------|-----------|---------|
|           |                            |                               |                    |          |                    | Public  | Passenger | Staff | Contractor | Environment |                            | Service Disruption | Frequency | Severity |                             |  | Risk Index    | Frequency | Severity |         |                        | Risk Index    | Evidence of hazard close-out (e.g.)<br>1. Design Submission<br>2. Test Report<br>3. O&M Procedure<br>4. Training etc | Individual |                |           | Overall |
|           |                            |                               |                    |          |                    |         |           |       |            |             |                            |                    |           |          |                             |  |               |           |          |         |                        |               |  |            |                |           |         |
|           |                            |                               |                    |          |                    |         |           |       |            |             |                            |                    |           |          |                             |  |               |           |          |         |                        |               |  |            |                |           |         |
|           |                            |                               |                    |          |                    |         |           |       |            |             |                            |                    |           |          |                             |  |               |           |          |         |                        |               |  |            |                |           |         |
|           |                            |                               |                    |          |                    |         |           |       |            |             |                            |                    |           |          |                             |  |               |           |          |         |                        |               |  |            |                |           |         |

#### 7.4.3 Risk Assessment

- (a) This assessment assigns Risk Levels (HIGH, MODERATE or LOW) to each identified risk, based on an assessment of its Frequency and Consequence, and determines the corresponding actions required.
- (b) Risk Matrix (Frequency and Consequence)
  - i. To ensure that a consistent approach shall be maintained, the criteria in **Table 13 – Frequency Levels** and **Table 14 – Consequence Levels** shall be used to assess the Frequency and Consequence of risks. The risk matrix is provided in **Table 15 – Risk Matrix**. In addition, a collective team approach involving the relevant subject matter experts shall be adopted in this process.

**TABLE 13: FREQUENCY LEVELS**

| Rank | Category             | Cost Overrun | Progress Delay | Probability of occurrence    |
|------|----------------------|--------------|----------------|------------------------------|
| 5    | Frequent             | > 70%        | > 70%          | ≥ 10 incidents in a year     |
| 4    | Occasional           | ≤ 70%        | ≤ 70%          | 2-10 incidents within a year |
| 3    | Remote               | ≤ 50%        | ≤ 50%          | 1 incident within a year     |
| 2    | Improbable           | ≤ 30%        | ≤ 30%          | 1 incident within 5 years    |
| 1    | Extremely improbable | ≤ 10%        | ≤ 10%          | < 1 incident in 5 years      |

TABLE 14: CONSEQUENCE LEVELS

| Rank | Consequence Category | Impact on Safety   | Impact on Environment | Impact on Time (Delay) | Service (System Disruption) | Service (Line Disruption) | Service (Station Disruption) | Percentage of Cost Overrun (%) | Impact on Image/ Reputation                                       |
|------|----------------------|--|-----------------------|------------------------|-----------------------------|---------------------------|------------------------------|--------------------------------|---|
| A    | Catastrophic         | Equipment destroyed<br>Multiple deaths   | Massive effect        | ≥ 6 months             | > 1 day                     | > 1 week                  | > 1 month                    | > 15                           | Incident in media involving public safety or massive reaction     |
| B    | Hazardous            | A large reduction in safety margins, physical distress or a workload such that the operators cannot be relied upon to perform their tasks accurately or completely<br>Serious injury or a single death<br>Major equipment damage   | Major effect          | 3 to < 6 months        | ≤ 1 day                     | ≤ 1 week                  | ≤ 1 month                    | ≤ 15                           | Regulatory prosecution or lawsuit                                 |
| C    | Major                | A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of an increase in workload or as a result of conditions impairing their efficiency<br>Serious incident<br>Minor Injury to person(s) | Contained effect      | 1 to < 3 months        | ≤ 1 hour                    | ≤ 1 day                   | ≤ 1 week                     | ≤ 5                            | Incident in media   |
| D    | Minor                | Nuisance<br>Operating limitations<br>Use of emergency procedures<br>Minor incident (without injury)  | Minor effect          | 5 to 28 days           | ≤ 20 mins                   | ≤ 3 hours                 | ≤ 1 day                      | ≤ 1                            | Airline / Stakeholder formal complaints > 2 or regulatory warning |
| E    | Negligible           | Few consequences   | No effect             | < 5 days               | -                           | ≤ 1 hour                  | ≤ 1 hour                     | ≤ 0.1                          | Airline / Stakeholder formal complaints ≤ 2                       |

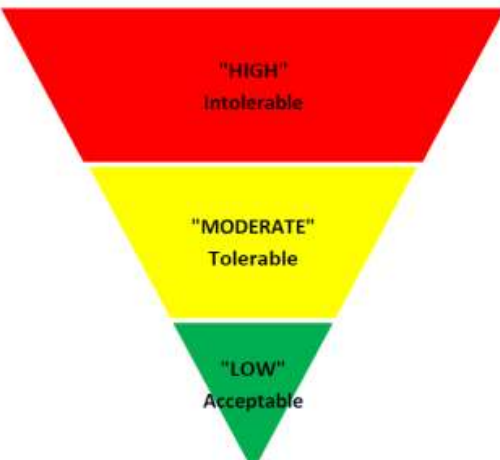
**TABLE 15: RISK MATRIX**

| Frequency               |   | Consequence   |            |        |        |             |
|-------------------------|---|---------------|------------|--------|--------|-------------|
|                         |   | CatastrophicA | HazardousB | MajorC | MinorD | NegligibleE |
| Frequent                | 5 | 5A            | 5B         | 5C     | 5D     | 5E          |
| Occasional              | 4 | 4A            | 4B         | 4C     | 4D     | 4E          |
| Remote                  | 3 | 3A            | 3B         | 3C     | 3D     | 3E          |
| Improbable              | 2 | 2A            | 2B         | 2C     | 2D     | 2E          |
| Extremelyimpr<br>obable | 1 | 1A            | 1B         | 1C     | 1D     | 1E          |

ii. The Contractor shall adopt a 3-level of risk approach used by the Employer, as shown in **Table 16 – Risk Tolerability**. The three levels of risk shall be:

- High Risk - Unacceptable under the existing circumstances;
- Moderate Risk - Acceptable based on risk mitigation, provided it has been reduced to a level which is “As Low As Reasonably Practicable (ALARP); and
- Low Risk – Acceptable

**TABLE 16: RISK TOLERABILITY**

| Tolerability Region   | Assessed Risk Index  | Criteria  |
|---|--|---|
|  <p>"HIGH"<br/>intolerable</p> | <p>5A, 5B, 5C<br/>4A, 4B<br/>3A</p>                        | Unacceptable under the existing circumstances                           |
| <p>"MODERATE"<br/>Tolerable</p>   | <p>5D, 5E<br/>4C, 4D, 4E<br/>3B, 3C, 3D<br/>2A, 2B, 2C</p> | Acceptable based on risk mitigation. It may require management decision |
| <p>"LOW"<br/>Acceptable</p>   | <p>3E<br/>2D, 2E<br/>1B, 1C, 1D, 1E</p>                    | Acceptable  |

(c) Risk Mitigation/Treatment

- When a risk assessment has identified a risk as having unacceptable risks, appropriate control measures have to put in place to eliminate the risk or reduce the risk to an acceptable level.
- Normally by applying one or a combination of several safety measures, risks can be reduced to an acceptable level. Such reduction can be



applied to the frequency and/or consequence of a risk. The hierarchy of risk mitigation measures includes:

- Risk elimination: The most satisfactory method of dealing with a risk is to eliminate it i.e. to stop a dangerous activity or to remove a dangerous equipment from site;
- Risk substitution: This involves substituting a dangerous process or equipment with one that is not as dangerous;
- Engineering controls: Separate or isolate the risk from people or facility at risk by using hardware such as guards, barriers, and other installations;
- Administrative controls: Software issues such as safe working procedures, safety systems, training, permit-to-work etc.; and
- Others:
  - When establishing appropriate risk mitigation measures, reference is made to those measures stipulated in the relevant legislations, national standards, codes of practice, etc.
  - In response to the identified risks and analysis of the safety risks of the consequences of the risks, specific requirements, operating regulations and implementation measures may be imposed which are reviewed to ensure relevance and appropriateness.
  - The identified risks, their assessment results and recommended treatment actions are recorded and tracked for closure in the Hazard Log.
  - The Hazard Log is a living document due to the constantly changing environment and situation. Therefore, reviews are being conducted to identify those changes and subsequently modify the risk treatment to reflect these changes in the Hazard Log.

(d) Risk Monitoring and Review

- i. Risk has a dynamic context resulting from constantly changing external and internal environments. For this reason, monitoring and review of the performance of its risk management process, and changes in the internal and external environments that might affect it, are necessary.
- ii. It is necessary to monitor not only the risk, but also the effectiveness of the associated risk treatments and the management processes for controlling their implementation.

#### 7.4.4 Design Safety Review (DSR)

- (a) Design Safety Review (DSR) meetings shall be convened to review all design, in particular design changes, and SA/RAM activities to ensure hazard are comprehensively identified, within the scope of the Contract. The DSR meetings shall be held quarterly, or when there is any key design change. The Employer may participate in the DSR from time to time.
- (b) The Contractor shall review all analyses and Hazard Log during the DSR in order to ensure that the results have been incorporated in the current design, and the recommended design modifications do not introduce new hazard or increase the risk rating from the existing hazards. The Contractor shall review and identify if there is any design deficiencies and provide recommendations to reduce any potential risks.
- (c) The Contractor shall submit the meeting records and updated Hazard Log after each DSR meeting as evidence to the Employer, and ensure actions arising from the meeting.

#### 7.4.5 Deterministic Safety Assessment (DSA)

- (a) A Deterministic Safety Assessment (DSA) shall be conducted to ensure that relevant safety requirements and principles have been designed in and subsequently built and tested by the Contractor.
- (b) These requirements and principles shall include those from the contract requirements and relevant legislations, codes of practice, and standards. These requirements shall be checked for normal, degraded and emergency operation of the railway system as appropriate.
- (c) Cross reference to the documentary evidence shall be quoted in the checklist to prove compliance and completion. Examples of evidence may include design documents, drawings, calculations, test reports, site verification, formal certificates, and others.
- (d) A summary of compliance status, together with the completed checklist, shall be provided respectively by the Contractor in the design and construction stages. Any non-compliances shall be fully justified to the Employer for review and approval.
- (e) The results of the DSA shall be documented using the template as stipulated in **Table 17** below. The Contractor shall prepare and submit the hardcopy and softcopy (in Microsoft® Excel format) prior to the completion of the design stage and construction stage.

TABLE 17: DSA TEMPLATE

| Item No. | Sub-system / equipment | Reference Clauses of codes of practices / legislation / specification requirements | Relevant design / operations safety requirements and principles | Design   |                    | Construction  |                    | Relevant Hazard ID (if any) | Remark |
|----------|------------------------|--|---|--|--------------------|---|--------------------|-----------------------------|--------|
|          |                        |  |   | Close-out Evidence (e.g. Design Document/ Drawing) | Compliance Status* | Close-out Evidence (e.g. Test report, O&M document etc) | Compliance Status* |                             |        |
|          |                        |  |   |  |                    |   |                    |                             |        |
|          |                        |  |   |  |                    |   |                    |                             |        |
|          |                        |  |   |  |                    |   |                    |                             |        |
|          |                        |  |   | No. of Full Complaint ( C):                        | 0                  | No. of Full Complaint ( C):                             | 0                  |                             |        |
|          |                        |  |   | No. of Non-compliant (N/C):                        | 0                  | No. of Non-compliant (N/C):                             | 0                  |                             |        |
|          |                        |  |   | No. of Inconclusive (I/C):                         | 0                  | No. of Inconclusive (I/C):                              | 0                  |                             |        |
|          |                        |  |   | Total:   | 0                  | Total:  | 0                  |                             |        |

**\*Key for Compliance Status Category:**

C: Full Complaint – no further action or monitoring required

N/C: Non-compliant – subject to rework, re-test etc.

I/C: Inconclusive – review incomplete, awaiting testing, procedures under review or preparation

The date to which the safety requirements and principles are expected to close satisfactorily (ie from N/C or I/C to C), shall be provided for N/C and I/C items

## **7.5 RELIABILITY, AVAILABILITY, MAINTAINABILITY (RAM) REQUIREMENTS**

### **7.5.1 RAM Targets and Analysis**

- (a) The Contractor shall propose appropriate RAM targets (including for system and equipment) for allocated and predicted the railway system based on best industry practices. The Service Availability of the railway system and rolling stock shall be better than 95% and reliability of 97%.
- (b) The Contractor shall clearly define the terms (e.g. definition of failure) and conditions for the RAM targets.
- (c) In order to demonstrate that the RAM have been taken into consideration during the design process, the Contractor shall undertake RAM analysis using verifiable field data from original product suppliers' RAM data or relevant RAM prediction analyses based on verifiable data / international standards for the whole railway systems.
- (d) The RAM analyses shall be conducted at equipment level as minimum, and shall be extended to a lower level upon request by the Employer. The methodology (e.g. using reliability block diagram) shall be specified in the System Assurance and Risk Management Plan (SARMP).
- (e) The Contractor shall list the sources for the RAM failure rate data used in the RAM analysis.

### **7.5.2 Reliability Development / Growth Testing**

- (a) It is a fundamental requirement that the delivered system shall meet the RAM requirements stipulated in this section on the first day of revenue service.
- (b) To ensure achievement of the reliability target on the first day of revenue service operations, the Contractor shall conduct Reliability Growth Testing during the design development stage in order to disclose the design deficiencies and defects; and to predict the reliability performance at the commencement of the Defects Notification Period (DNP). The intention is to identify any weaknesses, incorporate corrective actions, and verify their effectiveness prior to full scale production.
- (c) The prototype shall be subject to reliability test to identify any premature failure and quality defects. The Contractor shall submit the Reliability Growth Testing Report detailing the methodology and the duration of the reliability test, which shall include the accelerated life test, environment stress screening or/and electromagnetic test, where appropriate, before the commencement of on-site testing.

## 7.6 SYSTEM ASSURANCE DEMONSTRATION

### 7.6.1 System Assurance Demonstration Plan (SADP)

- (d) During DNP, the performance of the works undertaken by the Contractor shall be monitored, to demonstrate compliance with the RAM requirements as specified in this section.
- (e) The Contractor shall submit a System Assurance Demonstration Plan (SADP) at least 90 Days before the programmed commencement of the DNP. The SADP shall include but be not limited to the following: organization, responsibility and key personnel of the system assurance demonstration and a programme summarizing the key activities. The demonstration of compliance with the RAM Targets shall be achieved within the DNP.
- (f) The SADP shall describe the Failure Recording and Corrective Action System (FRACAS) and the procedures for collection, analysis, correction and documentation of failures. FRACAS shall be used to ensure all incidents are accurately and consistently categorized as to cause, significance, frequency and chargeability. The FRACAS shall log data on integrated tests and trials, failures, performance and maintenance from the start of integrated testing up to and including the DNP.
- (g) Failure to Achieve RAM Targets.
  - i. Should any RAM targets not be achieved, the Contractor shall subject to the Employer's review without objection, take whatever action deemed necessary to meet the requirements.
  - ii. In the event that any RAM target is not achieved at the end of the DNP, then the demonstration of the achievement of the targets shall be extended at least 1 Month and repeated at Monthly intervals, based upon the preceding 12 Months, until the requirement is achieved.
  - iii. Failure of any one or more sub-systems to achieve the level of functional reliability shall be considered as a defect.

### 7.6.2 System Assurance Demonstration Report (SADR)

- (a) The Contractor shall submit a System Assurance Demonstration Report (SADR) within 1 Month after the completion of the DNP. Interim results shall be provided to the Employer monthly during the DNP. The report shall provide evidence that the respective RAM targets have been achieved and shall include any supporting information and calculations.
- (b) The Contractor shall describe the details of each failure case in the SADR and interim reports. The details of each failure case shall at least include the following: time, date, duration of train service disruption, response time, recovery time, cause of incident, symptom, alarm, remedial action taken etc.

## 7.7 AUDIT

- 7.7.1 Periodically during the life of the Contract, the Employer will conduct compliance audits of the Contractor's System Assurance requirements. Not less than 14 Days' notice will be given by the Employer of a proposed audit. During the audits, the Contractor shall provide all necessary access, assistance and facilities to enable the Employer to verify that the System Assurance and Risk Management Plan is being properly and fully implemented. The Contractor shall assign suitably qualified staff to assist the Employer during the audits.
- 7.7.2 The Employer will take sample assessment to verify the actual implementation of the risk mitigation measures (e.g. referenced document, analyses results, demonstration of functions, etc.) as recorded on the Hazard Log during the audit.
- 7.7.3 The Employer will take sample assessment to verify the corrective and preventative actions required and the dates by which these actions shall be completed as proposed by the Contractor. The Contractor shall provide evidence either in verification audits carried out by the Employer, or by submission of further documents to demonstrate that all agreed corrective and preventive actions have been satisfactorily completed by the agreed dates.

## 7.8 SYSTEM ASSURANCE DELIVERABLES

- 7.8.1 **Table 18 – System Assurance Deliverables** below specifies the analyses and activities to be undertaken during the different stages of the Works.

**TABLE 18: SYSTEM ASSURANCE DELIVERABLES**

| Deliverable                               | Phase | PS Ref    | Design | Manufacturing, Construction, and Testing & Commissioning | DNP |
|---|-------|-----------|--------|--|-----|
| System Assurance and Risk Management Plan |       | 7.3       | O      | U  |     |
| Hazard Log                                |       | 7.4.2     | O      | U  | U   |
| Design Safety Review Meeting Records      |       | 7.4.4     | O      | O  |     |
| Deterministic Safety Assessment Report    |       | 7.4.5     | O      | U  |     |
| RAM Analysis Report                       |       | 7.5.1 (h) | O      | U  |     |
| Reliability Growth Testing Report         |       | 7.5.3     |        | O  |     |
| System Assurance Demonstration Plan       |       | 7.6.1     |        | O  |     |
| System Assurance Demonstration Report     |       | 7.6.2     |        |  | O   |

Legend: O – Output From Phase  
U – Updated During Phase

## 7.9 SYSTEM AND SAFETY ACCEPTANCE

- 7.9.1 All the proper documents shall be provided to the appropriate internal and external authorities for approval through the proper process before testing and commissioning.

## 8 TESTING AND COMMISSIONING

**8.1 GENERAL**

- 8.1.1 The Contractor shall carry out the Testing of the equipment, systems, and sub-systems to demonstrate the performance of the Works in compliance with these Employer's Requirements.
- 8.1.2 The Contractor shall correct any faults found during the Testing and shall arrange for the relevant tests to be repeated once the failure has been rectified. Where changes are made to equipment that has already been tested, regression testing shall be undertaken to ensure that the modification does not affect the performance or functionality previously demonstrated in earlier tests.
- 8.1.3 Completed test result sheets and reports shall be signed by all parties involved in the Testing. Test and inspection result sheets shall be included in the As-Built Drawings and Documents.

**8.2 TESTING AND COMMISSIONING PLAN**

- 8.2.1 The Testing and Commissioning Plan shall cover all activities on and off site throughout the duration of the Testing and Commissioning, including:
  - (a) Factory Acceptance Tests (FATs),
  - (b) Integrated Tests, and
  - (c) Trial Running.
- 8.2.2 The Plan shall identify how the various stages are linked together, including the Testing and Commissioning of individual elements and the final Integrated Tests of the whole system and sub-systems that are inter-dependent on each other.
- 8.2.3 Details of the actions taken to rectify any failure shall be recorded in the log together with the references of the inspection and test records that subsequently demonstrated the close out of the failure.

**8.3 FACTORY ACCEPTANCE TESTS**

- 8.3.1 The FATs shall include requirements and arrangements for Type Tests, First Article Inspections, and Routine Factory Tests.
- 8.3.2 Planning for these Tests shall, together with the Integrated Tests, identify how the various sub-system elements shall be brought together for integrated testing to demonstrate satisfactory integration.

**8.4 INTEGRATED TESTS**

- 8.4.1 The Integrated Tests shall detail and explain how the Contractor shall perform and document the System Acceptance Tests.

- 8.4.2 System Acceptance Tests are the tests undertaken to demonstrate that the combined systems and sub-systems are functioning in accordance with the specified requirements.
- 8.4.3 The System Acceptance Tests are part of the Tests on Completion to be performed in order to achieve the Employer's Taking Over of the Works and demonstrate the full compatibility between all interfacing systems.

## **8.5 TRIAL RUNNING**

- 8.5.1 The arrangements for the Trial Running shall be agreed with the Employer and Railway Operator.
- 8.5.2 It is the Employer's responsibility to agree to the necessary permissions with the Regulator and Railway Operator to carry out the Trial Running tests.
- 8.5.3 The objectives of the Trial Running shall be:
- (a) To ensure the overall compatibility of the performance of all of the interfacing systems; and
  - (b) To demonstrate the full functioning of the railway prior to handing over to the Employer for the Railway Operator to commence trial operation.
- 8.5.4 Execution of Trial Running shall include the review of Trial Running readiness, execution of the Trial Running packages, and reporting of the outcomes of the Trial Running packages.
- 8.5.5 Closing out of the Trial Running shall include tracking of outstanding items and rectification of any deficiencies arising during the Trial Running. The deliverable of this stage is the Final Trial Running Report for submission to the Statutory Authority as part of the Safety Case supporting the readiness to commence operation.

## **9 OPERATION AND MAINTENANCE MANUALS, TRAINING, AND AS-BUILT DRAWINGS**

### **9.1 OPERATION AND MAINTENANCE MANUALS**

- 9.1.1 The Contractor shall provide the information necessary to support the Employer to effectively and efficiently operate and maintain all the systems of the SCR. The information shall include, but not limit to the followings:
- a) System operation manual for each of the systems
  - b) System maintenance manual for each of the systems
  - c) Full set of as-built drawings for each of the systems and the interfaces between the systems



- d) Design information to support the future upgrading or replacement of the systems
- e) Civil and Structural O&M manuals including drainage works
- f) Architectural O&M manuals
- g) MEP O&M manuals
- h) Rail tracks O&M manuals
- i) Depot maintenance equipment O&M manuals
- j) Freight materials handling equipment O&M manuals
- k) Rolling stock O&M manual

9.1.2 The System Operation Manual for each of the systems shall provide the information necessary for the operators to efficiently and effectively operate the system. Each System Operation Manual shall include the following content:

- (a) Description of the functionalities, design parameters, system architecture, key operational features, and locations of the equipment,
- (b) Appropriate set of As-Built Drawings,
- (c) Start-up instructions, procedures, and precautions,
- (d) Operating instructions, procedures, and precautions, and
- (e) Shutdown instructions, procedures, and precautions.

9.1.3 The System Maintenance Manual for each of the Systems shall provide the information necessary for the maintenance staff to effectively and efficiently maintain the Systems. Each System Maintenance Manual shall include the following:

- (a) Description of the functionalities, design parameters, system architecture, key operational features, and locations of the equipment,
- (b) Preventive maintenance schedules, procedures, and work instructions,
- (c) Corrective maintenance procedures and work instructions,
- (d) Overhaul schedules, procedures, and work instructions,
- (e) Dismantling and assembly procedures and work instructions
- (f) Testing requirements and procedures
- (g) Appropriate set of As-Built Drawings and design information
- (h) Special tools and test rigs, and

- (i) List of maintenance spares, including illustrated parts catalogues.

## **9.2 OPERATION AND MAINTENANCE TRAINING**

- 9.2.1 The O&M Training Plan shall provide a programme of courses to facilitate training of the Employer's personnel on the operation and maintenance of the Systems and the Rolling Stock of the railway. The O&M Training Plan shall include the following content for each of the courses:
  - (a) Training objectives,
  - (b) Methods and criteria for evaluating performance and to report the progress of trainees during the training, and
  - (c) Resources required, such as equipment, workshop space, multi-media facilities, etc.
- 9.2.2 The Training Courses shall comprise theoretical and practical sessions and shall be completed with the testing on the relevant Systems by the Contractor's personnel.
- 9.2.3 The following types of courses shall be organized:
  - (a) Operation of the Systems and Rolling Stock,
  - (b) Preventive and Corrective Maintenance Systems,
  - (c) Workshop or Major Maintenance,
  - (d) Software of the systems, and
  - (e) Inventory Management of the Systems and Rolling Stock.

## **9.3 AS-BUILT DRAWINGS AND DOCUMENTS**

- 9.3.1 The Contractor shall maintain all records necessary for the preparation of the As-Built Drawings and Documents.
- 9.3.2 A full set of As-Built Drawings and Documents shall be provided by the Contractor to include the latest revisions to all drawings and documents following the Testing and Commissioning. The Documents shall be in sufficient detail to satisfy that the Employer will have a true and accurate record of the Works as constructed.
- 9.3.3 The Documents shall be provided in both paper format and electronic copy. The Contractor shall submit Building Information Modeling(BIM) models as part of the As-Built Documents. The BIM models shall be consistent with the As-Built Drawings and shall achieve the Level of Detail(LOD) 500.
- 9.3.4 The Contractor shall also submit As-Built Records consisting of all survey results (i.e. geotechnical, geodetic, etc.), all inspection records, design amendments, and other relevant documents.

## 10 SPARE PARTS

- 10.1.1 The Contractor shall prepare, in accordance with normal practice, a list of spare parts recommended to be held at all times. The list shall indicate the quantities required for each item of spares, its description, part number, drawing number, lead time, shelf life and number of units required for the period of five years (beyond the DNP), name and addresses of principal as well as secondary sources of supply of each spare.
- 10.1.2 Before takeover, the Contractor shall equip the depot spare parts store with spare parts as per the recommended list. As a minimum, the Contractor shall supply the spares required to maintain the service at the required reliability, availability and maintainability levels, including Mean Time Between Failures for the specified operation of the system.
- 10.1.3 The recommended schedule shall include all types of unit exchange and emergency spares, the Contractor shall also advise the recommended inventory having regard to the lead time of the respective items.
- 10.1.4 The Contractor shall:
- (a) submit a list of spares down to Line Replacement Units (LRU) level required for the life of the Plant & equipment, manufactured items and system / sub-system;
  - (b) base the spares calculations on the reliability and availability data and the criticality of the equipment;
  - (c) submit the calculations and spares list demonstrating the adequacy of the proposed list for review;
  - (d) submit the proposed identification / inventory system for spares for review;
  - (e) address all issues related to obsolescence of spares / components to meet the specified design life of all sub-systems;
  - (f) submit list of spare parts for ABWF & E&M Equipment and shall be agreed with the Employer;
  - (g) submit list of spares for Architectural Finishes, with an allowance of min 5% overall.
- 10.1.5 The Spares list shall:
- (a) be grouped by plant & equipment, manufactured items and system / sub-system, test equipment and special tools as applicable for stocking identification;
  - (b) each have detailed description with drawing references and correlation with the maintenance manuals;

- (c) for architectural finishes detailed product information such as product name, manufacturer, shelf life, including colour palette if applicable.
- (d) In the event that any of the spares identified have a particular shelf life or special storage requirement, this shall be made known to the Employer with the submission of the spares list, including the necessary action for disposal or storage.

#### 10.1.6 Testing of Spares

The Contractor shall ensure that all spares are correctly calibrated, tested and labelled prior to their delivery. Test certificates for each one of the equipment shall be submitted to the Employer.

## ***Section VII. Bidding Forms***



# ***BID FORM***

---

*[Date]*

## **Department of Transportation**

We, the undersigned, declare that:

(a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract for the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project;

(b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Particular Conditions of Contract, and the Employer's Requirements accompanying this Bid;

The total price of our Bid, excluding any discounts offered below is: *[Insert Information]*;

The discounts offered and the methodology for their application are: *[Insert Information]*;

(c) Our Bid shall be valid for a period of *[Number of Days]* days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[Percentage Amount]* percent of the Contract Price for the due performance of the Contract;

(e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following countries: *[Insert Information]*;

(f) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;

(g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;

(h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed;

(i) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

(j) We likewise certify/confirm that the undersigned 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 the bid, and to sign and execute the ensuing contract

for the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project of the Department of Transportation.

- (k) We acknowledge that failure to sign each and every page of this Bid Form, including the Price Schedules, shall be a ground for the rejection of our Bid.

Name: \_\_\_\_\_

In the Capacity of: \_\_\_\_\_

Signed: \_\_\_\_\_

Duly Authorized to Sign the Bid for and on Behalf of: \_\_\_\_\_

Date: \_\_\_\_\_



# OMNIBUS SWORN STATEMENT

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REPUBLIC OF THE PHILIPPINES )  
CITY/MUNICIPALITY OF \_\_\_\_\_) S.S.

## AFFIDAVIT

I, *[Name of Affiant]*, of legal age, *[Civil Status]*, *[Nationality]*, and residing at *[Address of Affiant]*, after having been duly sworn in accordance with law, do hereby depose and state that:

**1. Select one, delete the other:**

*If a sole proprietorship:* I am the sole proprietor or authorized representative of *[Name of Bidder]* with office address at *[Address of Bidder]*;

*If a partnership, corporation, cooperative, or joint venture:* I am the duly authorized and designated representative of *[Name of Bidder]* with office address at *[Address of Bidder]*;

**2. Select one, delete the other:**

*If a sole proprietorship:* As the owner and sole proprietor or authorized representative of *[Name of Bidder]*, I have full power and authority to do, execute, and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project of the Department of Transportation~~insert~~ “as shown in the attached duly notarized Special Power of Attorney” *for authorized representative*;

*If a partnership, corporation, cooperative, or joint venture:* I am granted full power and authority to do, execute, and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project of the Department of Transportation, accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution, or Secretary’s Certificate, whichever is applicable;

3. *[Name of Bidder]* is not “blacklisted” or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or local government units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
4. 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;
5. *[Name of Bidder]* is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

**6. Select one, delete the rest:**

*If a sole proprietorship:* The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Special Bids and Awards Committee (SBAC), the Technical Working Group and the SBAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*If a partnership or cooperative:* None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Special Bids and Awards Committee (SBAC), the Technical Working Group and the SBAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

*If a corporation or joint venture:* None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Special Bids and Awards Committee (SBAC), the Technical Working Group and the SBAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. [Name of Bidder] complies with existing labor laws and standards;
8. [Name of Bidder] is aware of and has undertaken the following responsibilities as a Bidder:
  - a. Carefully examine all of the Bidding Documents;
  - b. Acknowledge all conditions, local or otherwise, affecting the implementation of the Contract;
  - c. Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d. Inquire or secure Supplemental/Bid Bulletin(s) issued for the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project.
9. [Name of Bidder] 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 government in relation to any procurement project or activity.
10. [Name of Bidder] hereby assigns the following contact number/s and e-mail address/es as the official telephone/fax number and contact reference of the company where the PS BAC and PS notices may be transmitted.

|                 |   |       |
|-----------------|---|-------|
| Telephone No/s. | : | _____ |
| Fax No/s.       | : | _____ |
| E-mail Add/s.   | : | _____ |
| Mobile No/s.    | : | _____ |

It is understood that notice/s transmitted in any of the above-stated telephone/fax numbers and/or e-mail address/es are deemed received as of its transmittal and the reckoning period

for the reglementary periods stated in the bidding documents and the revised Implementing Rules and Regulations of Republic Act No. 9184 shall commence from receipt thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ at \_\_\_\_\_, Philippines.

---

*[Bidder's Representative/Authorized Signatory]*

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of *[Month]**[Year]* at *[Place of Execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[Type of Government Identification Card Used]*, with his/her photograph and signature appearing thereon, with No. \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_\_ day of *[Month]**[Year]*.

NAME OF NOTARY PUBLIC

Serial No. of Commission \_\_\_\_\_

Notary Public for \_\_\_\_\_ until \_\_\_\_\_

Roll of Attorneys No. \_\_\_\_\_

PTR No. \_\_\_\_\_, *[Date Issued]*, *[Place Issued]*

IBP No. \_\_\_\_\_, *[Date Issued]*, *[Place Issued]*

Doc. No. \_\_\_\_\_

Page No. \_\_\_\_\_

Book No. \_\_\_\_\_

Series of \_\_\_\_\_

# ***BID SECURING DECLARATION***

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REPUBLIC OF THE PHILIPPINES )  
CITY/MUNICIPALITY OF \_\_\_\_\_) S.S.

Invitation to Bid: PB No. \_\_\_\_\_

To: The Department of Transportation

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of written demand by the procuring entity for the commission of acts resulting to the enforcement of the Bid Securing Declaration under Sections 23.1(b), 34.2, 40.1, and 69.1, except 69.1(f), of the Implementing Rules and Regulations of Republic Act No. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
  - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - b. I am/We are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right;
  - c. I am/We are declared as the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this \_\_\_\_\_ day of [Month][Year] at [Place of Execution].

---

*[Name of Bidder's Authorized Representative]*

*[Legal Capacity]*

Affiant

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of *[Month]**[Year]* at *[Place of Execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[Type of Government Identification Card Used]*, with his/her photograph and signature appearing thereon, with No. \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_\_ day of *[Month]**[Year]*.

NAME OF NOTARY PUBLIC

Serial No. of Commission \_\_\_\_\_

Notary Public for \_\_\_\_\_ until \_\_\_\_\_

Roll of Attorneys No. \_\_\_\_\_

PTR No. \_\_\_\_\_, *[Date Issued]*, *[Place Issued]*

IBP No. \_\_\_\_\_, *[Date Issued]*, *[Place Issued]*

Doc. No. \_\_\_\_\_

Page No. \_\_\_\_\_

Book No. \_\_\_\_\_

Series of \_\_\_\_\_

# ***TECHNICAL PROPOSAL FORMS (TPF)***

***TABLE A: THRESHOLD TECHNICAL REQUIREMENTS***

| TPF No. | Areas for Assessment                              | Threshold Technical Requirements   |
|---------|---|--|
| 1       | Bidder's Experience                               | As role of main contractor for the Contract, the Bidder must have an experience of having Five Largest Contracts Completed (FLCC) of similar nature completed within the last ten (10) years in the Republic of the Philippines, or in other countries to demonstrate his railway working experience. These contracts, which may have been carried out under various contract formats, shall together be of aggregate value of at least two hundred percent (200%) of the Approved Budget for the Contract (ABC) adjusted and one of these contracts that is similar to this Project, shall be 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. Where a bidder is a wholly-owned subsidiary of a State-Owned Group, the experience record of the Group shall be considered provided the Group commits the availability of appropriate skills and resources. |
| 2       | Design Methodology                                | The Bidder shall submit a design methodology which address the key items identified in the <i>Employer's Requirements</i> and the outline in Technical Proposal Form (TPF) 2.  |
| 3       | Construction Management Strategy                  | The Bidder shall submit a construction management strategy as per the <i>Employer's Requirements</i> and the outline in TPF 3.   |
| 4       | Method Statements for Key Construction Activities | <p>The Bidder shall provide typical method statements for the key construction activities. Each method statement shall describe the proposed approach to construction activity, the level of staffing and experience, the safe system of work, and the construction equipment to be used. The key construction activities are described in, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>a. Site establishment, including access, accommodation, plant and materials storage arrangement, water and power supply, etc.,</li> <li>b. Railway embankment construction works,</li> <li>c. Bridge construction works,</li> </ul>  |

| TPF No. | Areas for Assessment   | Threshold Technical Requirements   |
|---------|------------------------|--|
|         |                        | <ul style="list-style-type: none"> <li>d. Tunneling works,</li> <li>e. Back-up facilities supports (e.g. concrete batching plant, precast viaduct segment yard, power supply, water supply, etc.),</li> <li>f. Flood protection during construction, and</li> <li>g. Systems installation.</li> </ul>  |
| 5       | Contractor's Equipment | <p>The Bidder shall provide its strategy for acquiring and maintaining the key equipment that may be needed to execute the Works in accordance with the Works Program. In the strategy, the Bidder shall specify the manufacturer, capacity, model, power rating, age and maintenance condition, and how it will ensure that the equipment is maintained in accordance with manufacturer's specifications for the duration of the Contract. The Bidder shall specify whether it will own, lease, rent, or specially manufacture the key equipment.</p>   |
| 6       | Code of Conduct        | <p>The Bidder shall submit its Code of Conduct that will apply to the Contractor's Personnel, to ensure compliance with its Environmental, Social, Health, and Safety (ESHS) obligations under the Contract.</p> <p>In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored, and how the Contractor proposes to deal with any breaches.</p>   |
| 7       | Works Program          | <p>The Bidder shall set out a work program for the design and construction of the Works to be undertaken, including identification of major milestones and critical path. The proposed Works Program shall be developed based on the Employer's Requirements and the requirements described in TPF 7. The proposed Works Program shall comply with the completion dates of the Contract. To standardize its presentation, the Works Program shall also include, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>a. Project schedule with planned activities in bar chart format,</li> <li>b. Resources allocation,</li> <li>c. S-curve,</li> <li>d. Manpower schedule,</li> <li>e. Production rates and works quantities,</li> </ul> |

| TPF No. | Areas for Assessment         | Threshold Technical Requirements  |
|---------|------------------------------|---|
|         |                              | <p>f. Working days per month allowed, and</p> <p>g. Major milestones.</p>   |
| 8       | Project Organizational Chart | The Bidder shall provide an organizational chart illustrating the proposed management structure and reporting lines for delivery of the Contract.   |
| 9       | Risk Assessment              | The Bidder shall submit a risk register identifying the hazards anticipated during the implementation of the Contract, which shall include a description of the hazard, location, potential causes, effects/consequences, risk levels, an assessment of the potential impact on health, safety, and environmental, cost, and the proposed mitigation strategy for each hazard.  |
| 10      | Interface Management         | The Bidder shall submit the methodology to demonstrate how he could carry out Interface Management during the implementation of the Contract and the approach to resolve the key interface issues identified in the <i>Employer's Requirements</i> .  |
| 11      | Key Personnel                | <p>The Bidder shall provide the names and details of the suitably qualified Contractor's Representative and Key Personnel (i.e. Project Manager, Design Manager, Construction Manager, Interface Manager, Tunnel Construction Manager, Freight Operation Expert, and Depot Operation Expert, etc.) to perform the Contract. The submitted data on their experience should be in the format as shown in TPF 12 for each candidate and the Bidder should submit a fully detailed Key Personnel resource schedule for the whole contract implementation period. The resource schedule must include:</p> <ol style="list-style-type: none"> <li>Name and role for each Key Personnel position,</li> <li>Duration of each Key Personnel appointment,</li> <li>Level of effort (time) allocated to each Key Personnel position and its distribution throughout the contract implementation period, and</li> <li>Level of English language proficiency of each Key Personnel.</li> </ol> <p>The following Key Personnel shall have minimum years of working experience for the railway related projects as described below:</p> <ol style="list-style-type: none"> <li>Project Manager or Contractor's Representative shall have not less than twenty (20) years' working</li> </ol> |



| TPF No. | Areas for Assessment | Threshold Technical Requirements   |
|---------|----------------------|--|
|         |                      | <p>experience for the relevant railway construction projects, and with a minimum of ten (10) years cumulative experience as Project Manager with experience in a similar railway construction project outside of the People's Republic of China and must have proficiency in English.</p> <p>b. Design Manager shall have not less than twenty (20) years' working experience for the design of the relevant railway construction projects and must have proficiency in English.</p> <p>c. Construction Manager shall have not less than twenty (20) years' working experience for the relevant railway construction projects and must have proficiency in English.</p> <p>d. Interface/coordination Manager shall have not less than fifteen (15) years' working experience for coordination of external stakeholders, interfacing projects, utilities undertakers, railway system; etc., and must have proficiency in English.</p> |
| 12      | Subcontractors       | The Bidder shall submit a construction management strategy as shown in TPF 12, which shall address subcontractor selection and management. Subcontractors' experience shall also be included.  |

**TABLE B: TECHNICAL SCORE EVALUATION TABLE**

| Areas for Assessment of Technical Proposal | Rating (%) | Evaluation Criteria and Scores (Points)  |
|--|------------|--|
|  |            | <p>A = 100% of allocated score<br/> B = 80% of allocated score<br/> C = 50% of allocated score<br/> D = 0% of allocated score</p>  |
| a. Bidder's Experience                     | 5          | <p>As role of main contractor for the Contract, the Bidder must have an experience of having railway construction with construction budget equivalent to at least fifty percent (50%) of the ABC adjusted by the Bidder to current prices using the Philippine Statistics Authority (PSA) consumer price index within the period of the last ten (10) years in the Republic of the Philippines, or in other countries to demonstrate his railway working experience. Where a bidder is a wholly-owned subsidiary of a State-Owned Group, the experience record of the Group shall be considered provided the Group commits the availability of appropriate skills and resources.</p> <p>(A: 5.0 points) Eight (8) Projects or more</p> <p>(B: 4.0 points) Between six (6) to seven (7) Projects</p> <p>(C: 2.5 points) Five (5) Projects</p> <p>(D: 0.0 point) Less than five (5) projects</p> |
| b. Design Methodology                      | 15         | <p>The Bidder shall submit a design methodology which addresses the key items identified in the <i>Employer's Requirements</i> and the outline in Technical Proposal Form (TPF) 2.</p> <p>(A: 15.0 points) Identification of the relevant design issues in pointing out at least five (5) key issues with added value design or innovative aspects of the design which may expedite completion, lower cost, ensure quality, improve sustainability of the project.</p> <p>(B: 12.0 points) Identification of the relevant design issues in pointing out at least three (3) key issues with added value design or innovative aspects of the design which may expedite completion, lower cost, ensure quality, improve</p>   |

| Areas for Assessment of Technical Proposal           | Rating (%) | Evaluation Criteria and Scores (Points)  |
|--|------------|--|
|  |            | <p>sustainability of the project.</p> <p>(C: 7.5 points) Identification of the relevant design issues in pointing out at least two (2) key issues with added value design or innovative aspects of the design which may expedite completion, lower cost, ensure quality, improve sustainability of the project.</p> <p>(D: 0.0 point) Identification of the relevant design issues incomprehensive without identifying any key issues and no added value design nor innovative aspects of the design or none of the above</p>  |
| c. Construction Management Strategy                  | 15         | <p>The Bidder shall submit a construction management strategy as per the <i>Employer's Requirements</i> and the outline in TPF 3.</p> <p>(A: 15.0 points) Appreciation of anticipated construction and construction management difficulties in pointing out at least five (5) key issues with technical solutions to the identified key issues</p> <p>(B: 12.0 points) Appreciation of anticipated construction and construction management difficulties in pointing out at least three (3) key issues with technical solutions to the identified key issues</p> <p>(C: 7.5 points) Appreciation of anticipated construction and construction management difficulties in pointing out at least three (3) key issues; but not providing technical solutions to all the identified key issues</p> <p>(D: 0.0 point) Incomprehensive appreciation of anticipated construction and construction management difficulties without pointing out any key issues or none of the above</p> |
| d. Method Statements for Key Construction Activities | 15         | <p>For the Bidder's submission on Method Statements for Key Construction Activities.</p> <p>(A: 15.0 points) Comprehensive with complete illustration of anticipated method statements for at least five (5) discrete key construction activities on how to achieve the completion dates</p>   |

| Areas for Assessment of Technical Proposal | Rating (%) | Evaluation Criteria and Scores (Points)   |
|--|------------|---|
|  |            | <p>of the Contract</p> <p>(B: 12.0 points) Comprehensive with complete illustration of anticipated method statements for four (4) discrete key construction activities on how to achieve the completion dates of the Contract</p> <p>(C: 7.5 points) Comprehensive with complete illustration of anticipated method statements for two (2) discrete key construction activities on how to achieve the completion dates of the Contract</p> <p>(D: 0.0 point) Incomprehensive or incomplete illustration of anticipated method statements for the key construction activities on how to achieve the completion dates of the Contract or not meeting any of the above</p> <p>Method statement shall be considered as comprehensive if the method statement has described the proposed approach to construction activity, the level of staffing and experience, the safe system of work, and the construction equipment to be used</p> |
| e. Contractor's Equipment                  | 5          | <p>For the Bidder's submission on Contractor's Equipment.</p> <p>(A: 5.0 points) Provided evidence to demonstrate timely delivery of essential equipment or plant to site that are suitable for the major works on construction of the elevated, at-grade and tunnel sections or for the major works</p> <p>(B: 4.0 points) Provided evidence to demonstrate delivery of essential equipment to site on schedule</p> <p>(C: 2.5 points) Provided time table for delivery of essential equipment to site on schedule</p> <p>(D: 0.0 point) Essential equipment or plant delivery schedule not in line with the submitted Work Program or none of the above</p>   |
| f. Risk Assessment                         | 10         | For the Bidder's submission on risk register under the Risk Assessment with the proposed  |

| Areas for Assessment of Technical Proposal | Rating (%) | Evaluation Criteria and Scores (Points)   |
|--|------------|---|
|  |            | <p>mitigation strategy for each hazard.</p> <p>(A: 10.0 points) Comprehensively identified at least five (5) key project risks with valid and relevant mitigation measures</p> <p>(B: 8.0 points) Comprehensively identified four (4) key project risks with valid and relevant mitigation measures</p> <p>(C: 5.0 points) Comprehensively identified at two (2) key project risks with valid and relevant mitigation measures or comprehensive identified at least five (5) key project risks but without valid and relevant mitigation measures</p> <p>(D: 0.0 point) Incomprehensive identification of risks or none identified or none of the above</p> <p>The identification of key project risk shall be considered as comprehensive if it includes a description of the hazard, location, potential causes, effects/consequences, risk levels, an assessment of the potential impact on health, safety, and environmental, cost, and the proposed mitigation strategy for each hazard.</p> |
| g. Interface Management                    | 15         | <p>For the Bidder's submission on interface management methodology with strategy of resolving key interfaces.</p> <p>(A: 15.0 points) Comprehensive with complete illustration of interface management methodology and interface resolving strategy for at least five (5) identified key project interfaces.</p> <p>(B: 12.0 points) Comprehensive with complete illustration of interface management methodology and interface resolving strategy for four (4) identified key project interfaces.</p> <p>(C: 7.5 points) Comprehensive with complete illustration of interface management methodology and interface resolving strategy for two (2) identified key project interfaces.</p> <p>(D: 0.0 point) Incomprehensive or incomplete illustration of interface management methodology or none interface resolving strategy</p>  |

| Areas for Assessment of Technical Proposal   | Rating (%) | Evaluation Criteria and Scores (Points)  |
|--|------------|--|
|  |            | <p>for any key project interfaces.</p> <p>The interface management methodology and the strategy of resolving key project interfaces shall be considered as comprehensive if it includes description of the interface, location, interface parties and the associated responsibilities, interfacing requirement, responsible staff for the interface co-ordination, the procedures and processes for control, and the interface control documents.</p>                        |
| <p>h. Key Personnel</p> <ul style="list-style-type: none"> <li>- Project Manager</li> <li>- Design Manger</li> <li>- Construction Manager</li> <li>- Interface/Coordination Manager</li> <li>- Tunnel Construction Expert</li> <li>- Freight Operation Expert</li> <li>- Depot Operation Expert</li> </ul> | 20         | <p>(A: 20.0 points) All seven (7) key personnel with at least twenty (20) years each of related railway experience</p> <p>(B: 16.0 points) Any five (5) key personnel with at least twenty (20) years each of related railway experience</p> <p>(C: 10.0 points) Any three (3) key personnel with at least twenty (20) years each of related railway experience</p> <p>(D: 0.0 point) None of the above</p> <p>Only one Key Personnel may be proposed for each position.</p> |
| <b>Maximum Total Scores/ Points</b>  | <b>100</b> |  |

## ***TPF 1. BIDDER'S EXPERIENCE***

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As role of main contractor for the Contract, the Bidder must have an experience of having Five Largest Contracts Completed (FLCC) of similar discipline within the last ten (10) years in the Republic of the Philippines, the People's Republic of China, or in other countries to demonstrate his railway working experience. Where a bidder is a wholly-owned subsidiary of a State-Owned Group, the experience record of the Group shall be considered provided the Group commits the availability of appropriate skills and resources.

The Bidder shall submit Certificates of Completion or Owner's Acceptance for each of the submitted completed contracts.

## ***TPF 2. DESIGN METHODOLOGY***

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The Bidder shall submit a design methodology which addresses the key items identified in the *Employer's Requirements*, which include, inter alia, the following:

- (a) Organizational arrangements for the design, including: team structure, roles and responsibilities, design works plan, interface arrangements, design review and approval procedures, and quality assurance arrangements;
- (b) Proposed design deliverables;
- (c) Design statement to describe the approach and methodology that demonstrate the capability in the design of the Project, as described in the *Employer's Requirements*, which the design statement shall cover the following aspects:
  - i. Operation study,
  - ii. Alignment and earthworks design,
  - iii. Hydraulic and hydrology for flood protection,
  - iv. Bridge structures,
  - v. Tunnel structures,
  - vi. Trackworks,
  - vii. Depot general arrangement planning,
  - viii. Freight terminals general arrangement planning, and
  - ix. Railway systems;
- (d) Any added value the Bidder will bring, or examples of innovative aspects of the design which may expedite completion, lower cost, ensure quality, improve sustainability of the project.;
- (e) Comments on the *Employer's Requirements*, including:
  - i. Status of the information available and relevant design issues for the Works,
  - ii. Comments on any errors, defects, or ambiguities noted in the *Employer's Requirements*, and
  - iii. Details of any exceptions in the conceptual design taken to the *Employer's Requirements*;
- (f) Details of the approach to managing risks, stakeholder engagement, consultation, and environmental permits/consents; and
- (g) Value engineering (value management) arrangement.



### ***TPF 3. CONSTRUCTION MANAGEMENT STRATEGY***

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The Bidder shall submit a construction management strategy as per *Employer's Requirements*, which shall address, inter alia, the following:

- (a) Organizational arrangements for construction management, including team structure, roles and responsibilities, interface arrangements, and quality assurance arrangements,
- (b) Subcontractor selection and management,
- (c) Proposals for training of all personnel attending site,
- (d) Stakeholder engagement,
- (e) Support from the Employer in obtaining and managing consents, permits, and approvals from third parties,
- (f) Site setup proposals, including access, accommodation, welfare facilities, and arrangement for plant and material storage,
- (g) Construction phasing proposals, including sequence of work and management of conflicting activities,
- (h) Ensuring that geotechnical investigations meet the regulatory requirements,
- (i) Risk management approach for geotechnical and subsurface aspects of the Works,
- (j) Quality management system, including a draft of the Quality Management Plan,
- (k) Preparation, approval, and implementation for the Contractor's Environmental and Social Management Plan,
- (l) Preparation, approval, and implementation for the Contractor's Health and Safety Management Plan,
- (m) Grievance redress mechanisms,
- (n) Reporting arrangements,
- (o) Arrangements for testing upon completion of the works,
- (p) Arrangements for site handover, including completion of As-Built Drawings and Building Information Modeling (BIM) models, preparation of operation and maintenance manuals, and any other relevant aspects, and
- (q) Appreciation of any key construction constraints or difficulties of the Project and the technical solutions.

## ***TPF 4. METHOD STATEMENTS FOR KEY CONSTRUCTION ACTIVITIES***

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The Bidder shall provide typical method statements for the key construction activities. Each method statement shall describe the proposed approach to construction activity, the level of staffing and experience, the safe system of work, and the construction equipment to be used. The key construction activities are described in, but not limited to, the following:

- (a) Site establishment, including access, accommodation, plant and materials storage arrangement, water and power supply, etc.,
- (b) Railway embankment construction works,
- (c) Bridge construction works,
- (d) Tunnelling works,
- (e) Back-up facilities supports (e.g. concrete batching plant, precast viaduct segment yard, power supply, water supply, etc.),
- (f) Flood protection during construction, and
- (g) Systems installation.

## ***TPF 5. CONTRACTOR'S EQUIPMENT***

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The Bidder shall provide its strategy for acquiring and maintaining the key equipment that may be needed to execute the Works in accordance with the Works Program. In the strategy, the Bidder shall specify the manufacturer, capacity, model, power rating, age and maintenance condition, and how it will ensure that the equipment is maintained in accordance with manufacturer's specifications for the duration of the Contract. The Bidder shall specify whether it will own, lease, rent, or specially manufacture the key equipment.

## ***TPF 6. CODE OF CONDUCT***

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The Bidder shall submit its Code of Conduct that will apply to the Contractor's Personnel, to ensure compliance with its Environmental, Social, Health, and Safety (ESHS) obligations under the Contract.

In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/ engagement, what training will be provided, how it will be monitored, and how the Contractor proposes to deal with any breaches.

## ***TPF 7. WORKS PROGRAM***

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The Bidder shall set out a Works Program for the design and construction of the Works to be undertaken, including identification of major milestones and critical path. The proposed Works Program shall be developed based on the *Employer's Requirements* and shall describe the following:

- (a) Design of the Works, including the submission of the design deliverables, review and approval of the design by the Employer;
- (b) Processes and deliverables needed to commence the Works;
- (c) Execution of the Works within the time for completion, highlighting activities imposing constraints on the construction sequence; and
- (d) Testing, commissioning, and handing over of the completed Works.

## ***TPF 8. PROJECT ORGANIZATIONAL CHART***

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The Bidder shall provide an organizational chart illustrating the proposed management structure and reporting lines for delivery of the Contract.

## ***TPF 9. RISK ASSESSMENT***

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The Bidder shall submit a risk register identifying the hazards anticipated during the implementation of the Contract, which shall include a description of the hazard, location, potential causes, effects/consequences, risk levels, an assessment of the potential impact on health, safety, and environmental, cost, and the proposed mitigation strategy for each hazard.

## ***TPF 10. INTERFACE MANAGEMENT***

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The Bidder shall submit the methodology to demonstrate how he could carry out Interface Management during the implementation of the Contract, which shall include:

- a. Procedure and process for interface control from interfaces identifications, co-ordination to closed out of the interfaces;
- b. Interface management organization;
- c. Tools and documentation to be adopted for interface management;
- d. Reporting system.

The Bidder shall also submit the approach to resolve the key interface issues identified in the *Employer's Requirements*, which shall include:

- a. Description of the interfaces;
- b. Location of the interfaces;
- c. Interfaces parties and the associated responsibilities;
- d. Interface requirements and the impact to the design, construction and program,
- e. Responsible staff for the interface co-ordination,
- f. Procedures and process of interfaces control;
- g. Relevant interface control document;



## ***TPF 11. KEY PERSONNEL QUALIFICATIONS AND LEVEL OF EFFORT***

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The Bidder shall provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using TPF 12 for each candidate. The Bidder shall submit a fully detailed Key Personnel resource schedule for the whole contract implementation period. The resource schedule must include:

- (a) Name and role for each Key Personnel position,
- (b) Duration of each Key Personnel appointment,
- (c) Level of effort (time) allocated to each Key Personnel position and its distribution throughout the contract implementation period,
- (d) Level of English language proficiency of each Key Personnel.

The following Key Personnel shall have minimum years of working experience for the railway related projects as described below:

- e. Project Manager or Contractor's Representative shall have not less than twenty (20) years' working experience for the relevant railway projects, and with a minimum of ten (10) years cumulative experience as Project Manager with experience in a similar railway project outside of the People's Republic of China and must have proficiency in English.
- f. Design Manager shall have not less than twenty (20) years' working experience for the relevant railway projects and must have proficiency in English.
- g. Construction Manager shall have not less than twenty (20) years' working experience for the relevant railway projects and must have proficiency in English.
- h. Interface/coordination Manager shall have not less than fifteen (15) years' working experience for coordination of external stakeholders, interfacing projects, utilities undertakers, railway system; etc., and must have proficiency in English.

Current Position in the Bidding Firm:

| College/University | Degree/Title Obtained | Inclusive Dates |
|--------------------|-----------------------|-----------------|
|                    |                       |                 |
|                    |                       |                 |
|                    |                       |                 |

| Language | Proficiency |         |         |
|----------|-------------|---------|---------|
|          | Speaking    | Reading | Writing |
|          |             |         |         |
|          |             |         |         |
|          |             |         |         |

[illegible]

**Declaration:**

I, the undersigned Key Personnel, certify that to the best of my knowledge and belief, the information contained in my résumé correctly describes myself, my qualifications and my experience.

**Commitment:**

I further commit that I shall be available to work for the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project as *[Proposed Position]* of *[Name of Bidding Firm]* once awarded the contract.

I understand that any misrepresentation or omission in this Form may:

- (a) be taken into consideration during bid evaluation,
- (b) lead to my disqualification from participating in the Bid, and
- (c) lead to my dismissal from the Contract,

\_\_\_\_\_ Date: \_\_\_\_\_  
*[Signature over Printed Name of Key Personnel]*

\_\_\_\_\_ Date: \_\_\_\_\_  
*[Signature over Printed Name of Authorized Representative of the Bidding Firm]*

\_\_\_\_\_

# ***FINANCIAL PROPOSAL FORM***

## ***PRICE SCHEDULE***

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The Bidder shall include the following activities in the Price Schedule:

1. Civil and structural works of tunnel section;
2. Civil and structural works of elevation sections and river crossing bridges;
3. Civil and structural works of at-graded section;
4. Civil and structural works of the freight terminals, including:
  - a. Subic NCT Terminal
  - b. Subic Logistic Terminal
  - c. Clark Logistic Terminal
5. Civil and structural works of Clark Depot Complex
6. MEP System
7. Depot Equipment
8. Other Maintenance Equipment
9. Railway System, including:
  - a. Signalling and Train Control Systems
  - b. Communications Systems
  - c. Power Supply and Distribution System
  - d. Asset Protection Systems
  - e. Maintenance Management Information System
10. Rolling Stocks
11. Trackworks

| Activity No. | Description of Activity/Sub-Activity | Activity/ Sub-Activity Price |
|--------------|--------------------------------------|------------------------------|
| 1            |                                      |                              |
|              |                                      |                              |
|              |                                      |                              |
|              | Subtotal                             |                              |

| Activity No. | Description of Activity/Sub-Activity | Activity/<br>Sub-Activity Price |
|--------------|--------------------------------------|---------------------------------|
| 2            |                                      |                                 |
|              |                                      |                                 |
|              |                                      |                                 |
|              | Subtotal                             |                                 |
| 3            |                                      |                                 |
|              |                                      |                                 |
|              |                                      |                                 |
|              | Subtotal                             |                                 |
| etc.         |                                      |                                 |
|              |                                      |                                 |
|              |                                      |                                 |
|              | Subtotal                             |                                 |
| Taxes        |                                      |                                 |
| Total        |                                      |                                 |

## ***CHECKLIST AND TABBING OF BIDDING REQUIREMENTS***

| <b>Tab</b> |        | <b>Description</b>   |
|------------|--------|--|
| 1          |        | Bid Form   |
| 2          |        | Omnibus Sworn Statement  |
| 3          |        | Bid Securing Declaration   |
| 4          | TPF 1  | Bidder's Experience  |
| 5          | TPF 2  | Design Methodology   |
| 6          | TPF 3  | Construction Management Strategy   |
| 7          | TPF 4  | Method Statements for Key Construction Activities  |
| 8          | TPF 5  | Contractor's Equipment   |
| 9          | TPF 6  | Code of Conduct  |
| 10         | TPF 7  | Works Program  |
| 11         | TPF 8  | Project Organizational Chart   |
| 12         | TPF 9  | Risk Assessment  |
| 13         | TPF 10 | Interface Management   |
| 14         | TPF 11 | Key Personnel Qualifications and Level of Effort   |
| 15         | TPF 12 | Résumé of Key Personnel  |
| 16         | TPF 13 | Subcontractors   |
| 17         |        | Price Schedule   |
| 18         |        | Certification on no negative slippage of fifteen percent (15%) or more in any one (1) of ongoing projects and no negative slippage of ten percent (10%) or more in each of two (2) or more ongoing projects, or if it has such negative slippage, a certified statement disclosing the ongoing project(s) with negative slippage and the percentage of negative slippage as of 31 January 2019 |
| 19         |        | Letter Testimonial from Bank   |

# ***FORM OF CONTRACT AGREEMENT***

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THIS CONTRACT AGREEMENT, made this *[Day]* day of *[Month]*, *[Year]* between

The DEPARTMENT OF TRANSPORTATION with office address at Apo Court along Sergio Osmeña Sr. St., Clark Freeport Zone, Mabalacat, Pampanga

hereinafter called the “Entity”);

and

*[Name and Address of Contractor]* (hereinafter called the “Contractor”).

WHEREAS, the Entity is desirous that the Contractor execute the Engineering, Procurement, Construction, and Commissioning for the Subic-Clark Railway Project (hereinafter called the “Works”) and the Entity has accepted the Bid for *[Amount in Specified Currency in Numbers and Words]* by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS CONTRACT AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Contract Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be attached, deemed to form, and be read and construed as integral part of this Contract Agreement, to wit:
  - (a) Conditions of Contract, consisting of the General Conditions of Contract and the Particular Conditions of Contract;
  - (b) Employer’s Requirements;
  - (c) Invitation to Bid;
  - (d) Instructions to Bidders;
  - (e) Bid Data Sheet;
  - (f) Addenda and/or Supplemental/Bid Bulletins, if any;
  - (g) Bid Form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Entity’s bid evaluation;
  - (h) Performance Security;
  - (i) Notice of Award of Contract and the Bidder’s conforme thereto; and
  - (j) Other contract documents that may be required by existing laws and/or the Entity.



3. In consideration of the payments to be made by the Entity to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Entity to execute and complete the Works and remedy any defects therein in conformity with the provisions of this Contract Agreement in all respects.
4. The Entity hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein, the Contract Price or such other sum as may become payable under the provisions of this Contract Agreement at the times and in the manner prescribed by this Contract Agreement.

IN WITNESS whereof the parties thereto have caused this Contract Agreement to be executed the day and year first before written.

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Entity).

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Entity).

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Contractor).

Binding Signature of Entity:

\_\_\_\_\_  
**ARTHUR P. TUGADE**  
Department of Transportation

\_\_\_\_\_  
Secretary

Binding Signature of Contractor:

\_\_\_\_\_  
*[Name of Bidder's Authorized Representative]*  
*[Legal Capacity]*

*[Addendum showing the corrections, if any, made during the bid evaluation should be attached with this Contract Agreement]*

