



Republic of the Philippines
TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
ISO 9001: 2015 Certified



STANDARD BIDDING DOCUMENT

Procurement of Works

- Single-Stage: One-Envelope -

for projects governed by
Procurement Regulations for ADB Borrowers: Goods, Works,
Nonconsulting and Consulting Services (2017)

Asian Development Bank
December 2021



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Procurement of Works

BIDDING DOCUMENT for Procurement of

**Design and Build of the Regional TVET Innovation Center (RTIC)
of Region XII (General Santos National School of Arts and
Trades) including Rehabilitation/Renovation/Repair of TTI's
existing facilities**

Issued on: 06 September 2024

Invitation for Bids No.: IFB-CW301/E

OCB No.: CW301/E

Employer: Technical Education and Skills Development Authority

Country: Philippines

Preface

This Bidding Document for the Procurement of Works has been prepared by Technical Education and Skills Development Authority and is based on the Standard Bidding Document for the Procurement of Works–Small Contracts (*SBD Works-Small*) issued by the Asian Development Bank dated December 2021.

ADB's *SBD Works-Small* has the structure and the provisions of the Master Procurement Document entitled "Bidding Documents for the Procurement of Works–Small Contracts", prepared by multilateral development banks and other public international financial institutions except where ADB-specific considerations have required a change.

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A. General

1. **Scope of Bid**
 - 1.1 In connection with the Invitation for Bids (IFB) indicated in the Bid Data Sheet (BDS), the Employer, as indicated in the BDS, issues this Bidding Document for the procurement of the Works as specified in Section 6 (Employer's Requirements). The name, identification, and number of contracts of this bidding are provided in the BDS.
 - 1.2 Throughout this Bidding Document,
 - (a) the term "in writing" means communicated in written form and delivered against receipt;
 - (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
 - (c) "day" means calendar day.
2. **Source of Funds**
 - 2.1 The Borrower or Recipient (hereinafter called "Borrower") indicated in the BDS has applied for or received financing (hereinafter called "funds") from the Asian Development Bank (hereinafter called "ADB") toward the cost of the project named in the BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
 - 2.2 Payments by ADB will be made only at the request of the Borrower and upon approval by ADB in accordance with the terms and conditions of the Financing Agreement between the Borrower and ADB (hereinafter called "Financing Agreement"), and will be subject in all respects to the terms and conditions of that Financing Agreement. No party other than the Borrower shall derive any rights from the Financing Agreement or have any claim to the funds.
3. **Fraud and Corruption**
 - 3.1 ADB requires Borrowers (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, and Contractors, agents, subcontractors, subconsultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB's Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, ADB
 - (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party

- or the property of the party to influence improperly the actions of a party;
- (iv) “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
 - (v) “abuse” means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;
 - (vi) “conflict of interest” means any situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations; and
 - (vii) “integrity violation” is any act, as defined under ADB’s Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB’s Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB’s Anticorruption Policy, including failure to adhere to the highest ethical standard.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, subconsultants, subcontractors, service providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
 - (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;
 - (d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB’s Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate¹ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and

¹ Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

- (e) will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers, and contractors, consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.
- 3.2 All Bidders, consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, are obliged to cooperate fully in any investigation when requested by ADB to do so. As determined on a case by case basis by ADB, such cooperation includes, but is not limited to, the following:
- (a) being available to be interviewed and replying fully and truthfully to all questions asked;
 - (b) providing ADB with any items requested that are within the party's control including, but not limited to, documents and other physical objects;
 - (c) upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;
 - (d) cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communications Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);
 - (e) cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and
 - (f) preserving and protecting confidentiality of all information discussed with, and as required by, ADB.
- 3.3 All Bidders, consultants, contractors and suppliers require their officers, directors, employees, personnel, agents to shall ensure that, in its contracts with its subconsultants, Subcontractors and other third parties engaged or involved in ADB-related activities, such subconsultants, Subcontractors and other third parties similarly are obliged to cooperate fully in any investigation when requested by ADB to do so.
- 3.4 The Employer hereby puts the Bidder on notice that the Bidder or any Joint Venture partner of the Bidder (if any) may not be able to receive any payments under the Contract if the Bidder or any of its Joint Venture partners, as appropriate, is, or is owned (in whole or in part) by a person or entity subject to applicable sanctions.

3.5 Furthermore, Bidders shall be aware of the provisions of GCC 28.3 and 73.2 (i).

4. Eligible Bidders

4.1 A Bidder may be a natural person, private entity, or government-owned enterprises subject to ITB 4.5-or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture:

- (a) all partners shall be jointly and severally liable; and
- (b) the Joint Venture shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution.

4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section 5 (Eligible Countries). A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed Subcontractors or Suppliers for any part of the Contract including related services.

4.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:

- (a) they have controlling partners in common; or
- (b) they receive or have received any direct or indirect subsidy from any of them; or
- (c) they have the same legal representative for purposes of this bid; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- (e) a Bidder participates in more than one bid in this bidding process, either individually or as a partner in a Joint Venture, except for alternative offers permitted under ITB 13 of the Bidding Document. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of ITB 4.3 (a)–(d) above, this does not limit the participation of a Bidder as a Subcontractor in another Bid or of a firm as a Subcontractor in more than one Bid; or
- (f) a Bidder, Joint Venture partner, associates, parent company, or any affiliated entity, participated as a Consultant in the preparation of the

design or technical specifications of the works that are the subject of the Bid; or

- (g) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract; or
- (h) a Bidder would be providing goods, works, or nonconsulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
- (i) a Bidder that has a financial or familial relationship with staff of the Employer including project implementing/executing agency, or of a recipient of a part of the loan who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to ADB throughout the procurement process and execution of the contract.

- 4.4 A firm will not be eligible to participate in any procurement activities under an ADB-financed, -administered, or -supported project while under temporary suspension or debarment by ADB pursuant to its Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by ADB, or enforced by ADB pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a temporarily suspended or debarred firm will be rejected and such bid may be in breach of debarment conditions, thereby subject to further ADB's investigation.
- 4.5 Government-owned enterprises in the Borrower's country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Borrower.
- 4.6 A Bidder shall not be under suspension from Bidding by the Employer as the result of the execution of a Bid-Securing Declaration.
- 4.7 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.8 Bidders shall be excluded if, by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods from, or payments to, a particular country, person or entity in respect of goods or services originating in that country. Where the Borrower's country prohibits payments to a particular person or entity or for particular goods or services by such an act of compliance, that firm shall be excluded.

- 5. Eligible Materials, Equipment, and Services**
- 5.1 The materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries as defined in ITB 4.2 above and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment, and services.
- 5.2 For purposes of ITB 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced, or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

B. Contents of Bidding Document

- 6. Sections of Bidding Document**
- 6.1 The Bidding Document consists of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.
- PART I Bidding Procedures**
- Section 1 Instructions to Bidders (ITB)
 - Section 2 Bid Data Sheet (BDS)
 - Section 3 Evaluation and Qualification Criteria (EQC)
 - Section 4 Bidding Forms (BDF)
 - Section 5 Eligible Countries (ELC)
- PART II Requirements**
- Section 6 Employer's Requirements (ERQ)
- PART III Conditions of Contract and Contract Forms**
- Section 7 General Conditions of Contract (GCC)
 - Section 8 Particular Conditions of Contract (PCC)
 - Section 9 Contract Forms (COF)
- 6.2 The IFB issued by the Employer is not part of the Bidding Document.
- 6.3 The Employer is not responsible for the completeness of the Bidding Document and their addenda, if they were not obtained directly from the source stated by the Employer in the IFB.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.
- 7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting**
- 7.1 A prospective Bidder requiring any clarification on the Bidding Document shall contact the Employer in writing at the Employer's address indicated in the BDS or raise his inquiries during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of bids, within a period given in the BDS.

The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 22.2.

- 7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
- 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 7.4 The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.5 The Bidder is requested to submit any questions in writing, to reach the Employer not later than 1 week before the meeting.
- 7.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting.
- 7.7 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

- 8.1 At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding Document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 22.2.

C. Preparation of Bids

- 9. Cost of Bidding** 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10. Language of Bid** 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.
- 11. Documents Comprising the Bid** 11.1 The Bid shall comprise the following:
- (a) Letter of Bid;
 - (b) completed Schedules, in accordance with ITB 12 and ITB 14, or as stipulated in the BDS;
 - (c) Bid Security or Bid-Securing Declaration, in accordance with ITB 19;
 - (d) alternative Bids, at Bidder's option and if permissible, in accordance with ITB 13;
 - (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;
 - (f) documentary evidence in accordance with ITB 17, establishing the Bidder's qualifications to perform the contract;
 - (g) Technical Proposal in accordance with ITB 16;
 - (h) any other document required in the BDS.
- 11.2 In addition to the requirements under ITB 11.1, Bids submitted by a Joint Venture shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all partners and submitted with the Bid, together with a copy of the proposed agreement.
- 12. Letter of Bid and Schedules** 12.1 The Letter of Bid, Schedules, and all documents listed under Clause 11, shall be prepared using the relevant forms in Section 4 (Bidding Forms), if so provided. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested and as required in the BDS.
- 13. Alternative Bids** 13.1 Unless otherwise indicated in the BDS, alternative Bids shall not be considered.
- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the BDS, as will the method of evaluating different times for completion.
- 13.3 When specified in the BDS pursuant to ITB 13.1, and subject to ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Document must first price the Employer's design as

described in the Bidding Document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology, and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer.

13.4 When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified in the BDS and described in Section 6 (Employer's Requirements). The method for their evaluation will be stipulated in Section 3 (Evaluation and Qualification Criteria).

14. Bid Prices and Discounts

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below.

14.2 The Bidder shall submit a bid for the whole of the works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section 4 (Bidding Forms). In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities. Unit rates and prices for all items of the Works described in the Bill of Quantities shall be expressed in positive values. If unit rates and prices are expressed in negative values, the bid will be rejected.

14.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered. Absence of the total bid price in the Letter of Bid may result in the rejection of the Bid.

14.4 The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid, in accordance with ITB 12.1.

14.5 The prices shall be either fixed or adjustable as specified in the BDS.

(a) In the case of Fixed Price, prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as nonresponsive and rejected.

(b) In the case of Adjustable Price, prices quoted by the Bidder shall be subject to adjustment during performance of the contract to reflect changes in the cost elements such as labor, material, transport, and contractor's equipment in accordance with the provisions of the Conditions of Contract. A Bid submitted with a fixed price will be treated as nonresponsive and be rejected. The Bidder shall furnish the indexes and weightings for the price adjustment formulas in the Tables of Adjustment Data included in Section 4 (Bidding Forms) and the Employer may require the Bidder to justify its proposed indexes and weightings. Any bid that omits indexes and weightings shall be subject to clarification with the Bidder.

- 14.6 If so indicated in ITB 1.1, bids are invited for individual contracts or for any combination of contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 14.4, provided the Bids for all contracts are submitted and opened at the same time.
- 14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total bid price submitted by the Bidder.
- 15. Currencies of Bid and Payment**
- 15.1 The currency(ies) of the Bid and payment shall be as specified in the BDS.
- 15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the prices shown in the appropriate form(s) of Section 4, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.
- 16. Documents Comprising the Technical Proposal**
- 16.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule, environmental, health and safety (EHS) management commensurate with the proposed scope of works, EHS Code of Conduct, and any other information as stipulated in Section 4 (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.
- 17. Documents Establishing the Qualifications of the Bidder**
- 17.1 To establish its qualifications to perform the Contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section 4 (Bidding Forms).
- 17.2 Domestic Bidders, individually or in Joint Ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility as described in ITB 33.
- 18. Period of Validity of Bids**
- 18.1 Bids shall remain valid for the bid validity period specified in the BDS. The bid validity period starts from the date fixed for the bid submission deadline date prescribed by the Employer in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.

18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 19, it shall also be extended 28 days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its Bid.

19. Bid Security/Bid-Securing Declaration

19.1 Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, in original form, either a Bid-Securing Declaration or a bid security as specified in the BDS. In the case of a bid security, the amount and currency shall be as specified in the BDS.

19.2 If a Bid-Securing Declaration is required pursuant to ITB 19.1, it shall use the form included in Section 4 (Bidding Forms). The Employer will declare a Bidder ineligible to be awarded a Contract for a specified period of time, as indicated in the BDS, if the Bid-Securing Declaration is executed

19.3 If a bid security is specified pursuant to ITB 19.1, the bid security shall be, at the Bidder's option, in any of the following forms:

- (a) an unconditional bank guarantee (hard copy of the bank guarantee or in the form of SWIFT message MT760), or
- (b) an irrevocable letter of credit, or
- (c) a cashier's or certified check.

all from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section 4 (Bidding Forms) or another form acceptable to the Employer. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

19.4 Unless otherwise specified in the BDS, any Bid not accompanied by a substantially compliant bid security or Bid-Securing Declaration, if one is required in accordance with ITB 19.1, shall be rejected by the Employer as nonresponsive.

19.5 If a bid security is specified pursuant to ITB 19.1, the bid security of unsuccessful Bidders shall be returned promptly upon the successful Bidder's furnishing of the performance security pursuant to ITB 44.

19.6 If a bid security is specified pursuant to ITB 19.1, the bid security of the successful Bidder shall be returned promptly once the successful Bidder has signed the Contract and furnished the required performance security.

19.7 The bid security may be forfeited or the Bid-Securing Declaration executed, if

- (a) notwithstanding ITB 24.3, a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, except as provided in ITB 18.2; or
- (b) the successful Bidder fails to
 - (i) sign the Contract in accordance with ITB 43;
 - (ii) furnish a performance security in accordance with ITB 44;
 - (iii) accept arithmetical corrections in accordance with ITB 31; or
 - (iv) furnish a domestic preference security, if applicable, in accordance with ITB 44.3.

19.8 If the bid security is required as per ITB 19.1, the bid security of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the bid security shall be in the name of any or all of the Joint Venture partners. If the Bid-Securing Declaration is required as per ITB 19.1, the Bid-Securing Declaration of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1.

20. Format and Signing of Bid

20.1 The Bidder shall prepare one original set of the documents comprising the Bid as described in ITB 11 and clearly mark it "ORIGINAL." Alternative Bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." In addition, the Bidder shall submit copies of the Bid in the number specified in the BDS, and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

20.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. If a Bidder submits a deficient authorization, the Bid shall not be rejected in the first instance. The Employer shall request the Bidder to submit an acceptable authorization within the number of days as specified in the BDS. Failure to provide an acceptable authorization within the period stated in the Employer's request shall cause the rejection of the Bid. If either the Letter of Bid or the Bid-Securing Declaration (if applicable) is not signed, the Bid shall be rejected.

20.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission and Opening of Bids

21. Sealing and Marking of Bids

21.1 Bidders shall submit their Bids as specified in the BDS. Procedures for submission, sealing, and marking are as follows:

- (a) Bidders submitting Bids by mail or by hand shall enclose the original and each copy of the Bid, including alternative Bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL," "ALTERNATIVE," and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB 21.2 and ITB 21.3.
- (b) Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in the BDS.

21.2 The inner and outer envelopes shall

- (a) bear the name and address of the Bidder;
- (b) be addressed to the Employer as provided in BDS 22.1;
- (c) bear the specific identification of this bidding process indicated in BDS 1.1; and
- (d) bear a warning not to open before the time and date for bid opening.

21.3 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

22.1 Bids must be received by the Employer at the address and no later than the date and time indicated in the BDS.

22.2 The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1 The Employer shall not consider any Bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any Bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

24.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.2 (except for withdrawal notices, which do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be

- (a) prepared and submitted in accordance with ITB 20 and ITB 21 (except for withdrawal notices, which do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and

(b) received by the Employer prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

24.3 No Bid may be withdrawn, substituted, or modified 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 Letter of Bid or any extension thereof.

25. Bid Opening

25.1 The Employer shall open the Bids in public at the address, on the date, and time specified in the BDS in the presence of Bidders' designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 21.1, shall be as specified in the BDS.

25.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted. The substituted Bid shall not be opened, but returned to the Bidder. No bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening. Only envelopes that are opened and read out at bid opening shall be considered further.

25.3 All other envelopes shall be opened one at a time, reading out the name of the Bidder; the Bid Price(s), including any discounts and alternative bids and indicating whether there is a modification; the presence of a bid security or Bid-Securing Declaration, if required; and any other details as the Employer may consider appropriate. Only discounts and alternative offers read out at bid opening shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Letter of Bid and Schedules are to be initialed by at least three representatives of the Employer attending the bid opening. No Bid shall be rejected at bid opening except for late Bids, in accordance with ITB 23.1.

25.4 The Employer shall prepare a record of the bid opening that shall include, as a minimum, the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per contract if applicable, including any discounts and alternative offers; and the presence or absence of a bid security or a Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted Bids on time, and posted online when electronic bidding is permitted.

E. Evaluation and Comparison of Bids

- 26. Confidentiality**
- 26.1 Information relating to the examination, evaluation, comparison, and postqualification of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until the publication of Contract award.
- 26.2 Any attempt by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing.
- 27. Clarification of Bids**
- 27.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 31.
- 27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected.
- 28. Deviations, Reservations, and Omissions**
- 28.1 During the evaluation of Bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
- (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
- 29. Determination of Responsiveness**
- 29.1 The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11.
- 29.2 A substantially responsive Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,
- (a) if accepted, would:
- (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
- (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or

(b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

29.3 The Employer shall examine the technical aspects of the Bid submitted in accordance with ITB 16, Technical Proposal, in particular, to confirm that all requirements of Section 6 (Employer's Requirements) have been met without any material deviation, reservation, or omission.

29.4 If a Bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

30. Nonmaterial Nonconformities

30.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid that do not constitute a material deviation, reservation, or omission.

30.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

30.3 Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price may be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the methods indicated in Section 3 (Evaluation and Qualification Criteria).

31. Correction of Arithmetical Errors

31.1 Provided that the Bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:

(a) Only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.

(b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

(c) If there is a discrepancy between the bid price in the Summary of Bill of Quantities and the bid amount in item (c) of the Letter of Bid, the bid price in the Summary of Bill of Quantities will prevail and the bid amount in item (c) of the Letter of Bid will be corrected.

(d) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a), (b) and (c) above.

- 31.2 If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified and its bid security may be forfeited or its Bid-Securing Declaration executed.
- 32. Conversion to Single Currency**
- 32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS.
- 33. Domestic Preference**
- 33.1 Unless otherwise specified in the BDS, domestic preference shall not apply.
- 34. Subcontractors**
- 34.1 Unless otherwise stated in the BDS, the Employer does not intend for the contractor to execute any specific elements of the Works through nominated Subcontractors.
- 34.2 If Subcontractors are proposed for any of the key activities listed in Section 3 (Evaluation and Qualification) Criteria 2.4.2, they shall be considered as "Specialist Subcontractors" and shall meet qualification requirements for the relevant key activities.
- 35. Evaluation and Comparison of Bids**
- 35.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 35.2 To evaluate a Bid, the Employer shall consider the following:
- (a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities for admeasurement contracts, or Schedule of Prices for lump sum contracts, but including Daywork items, where priced competitively;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB 31.1;
 - (c) price adjustment due to discounts offered in accordance with ITB 14.4;
 - (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;
 - (e) adjustment for nonmaterial nonconformities in accordance with ITB 30.3;
 - (f) assessment whether the bid is abnormally low in accordance with ITB 36; and
 - (g) application of all the evaluation factors indicated in Section 3 (Evaluation and Qualification Criteria).
- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 35.4 If this Bidding Document allows Bidders to quote separate prices for different contracts, and to award multiple contracts to a single Bidder, the methodology to determine the lowest evaluated price of the contract combinations, including any discounts offered in the Letter of Bid, is specified in Section 3 (Evaluation and Qualification Criteria).

- 35.5 The Employer shall compare all substantially responsive Bids to determine the lowest evaluated Bid, in accordance with ITB 35.2.
- 36. Abnormally Low Bids**
- 36.1 An abnormally low bid is one where the bid price, in combination with other elements of the bid, appears to be so low that it raises concerns as to the capability of the Bidder to perform the contract for the offered bid price.
- 36.2 When the offered bid price appears to be abnormally low, the Employer shall undertake a three-step review process as follows:
- (a) identify abnormally low costs and unit rates by comparing them with the engineer's estimates, other substantially responsive bids, or recently awarded similar contracts;
 - (b) clarify and analyze the bidder's resource inputs and pricing, including overheads, contingencies and profit margins; and
 - (c) decide whether to accept or reject the bid.
- 36.3 With regard to ITB 36.2 (b) above, the Employer will seek a written explanation from the bidder of the reasons for the offered bid price, including a detailed analysis of costs and unit prices, by reference to the scope, proposed methodology, schedule, and allocation of risks and responsibilities. This may also include information regarding the economy of the manufacturing process; the services to be provided, or the construction method to be used; the technical solutions to be adopted; and any exceptionally favorable conditions available to the bidder for the works, equipment or services proposed.
- 36.4 After examining the explanation given and the detailed price analyses presented by the bidder, the Employer may:
- (a) accept the bid, if the evidence provided satisfactorily accounts for the low bid price and costs, in which case the bid is not considered abnormally low;
 - (b) accept the bid, but require that the amount of the performance security be increased at the expense of the bidder to a level sufficient to protect the Employer against financial loss. The amount of the performance security shall generally be not more than 20% of the contract price; or
 - (c) reject the bid if the evidence provided does not satisfactorily account for the low bid price, and make a similar determination for the next ranked bid, if required.
- 37. Unbalanced or Front-Loaded Bids**
- 37.1 If the Bid, which results in the lowest evaluated Bid Price, is seriously unbalanced or front-loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed, as well as the pricing and sources of materials, equipment and labor.
- 37.2 After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may as appropriate:
- (a) accept the Bid; or

(b) accept the Bid, but require that the total amount of the Performance Security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract subject to ITB 44.2; or

(c) reject the Bid and make a similar determination for the next ranked bid.

38. Qualification of the Bidder

38.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive Bid meets the qualifying criteria specified in Section 3 (Evaluation and Qualification Criteria).

38.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.1. Unless permitted in the BDS, the determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, or affiliates.

38.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. The Employer reserves the right to reject the bid of any bidder found to be in circumstances described in GCC 73.2(c). A negative determination shall result in disqualification of the Bid, in which event the Employer shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.

39. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

39.1 The Employer reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

40. Notice of Intention for Award of Contract

40.1 If Standstill provisions apply as specified in the BDS, the standstill period shall be defined in the BDS to specify the duration subsequent to notification of intention for award of contract (before making the actual contract award) within which any unsuccessful bidder can challenge the proposed award.

F. Award of Contract

41. Award Criteria

41.1 The Employer shall award the Contract to the Bidder whose offer has been determined in line with ITB 35 to ITB 37 above, to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

42. Notification of Award

42.1 Prior to the expiration of the period of bid validity and upon expiry of the standstill period specified in ITB 40.1, or upon satisfactory resolution of a complaint filed within standstill period, if applicable, the Employer shall transmit the Notification of Award through issuance of Letter of Acceptance using the form included in Section 9 (Contract Forms) to the

successful Bidder, in writing, that its Bid has been accepted. At the same time, the Employer shall also notify all other Bidders of the results of the bidding.

- 42.2 Unless standstill period applies, upon notification of award through issuance of Letter of Acceptance, unsuccessful Bidders may request in writing to the Employer for a debriefing seeking explanations on the grounds on which their Bids were not selected. The Employer shall promptly respond in writing and/or in a debriefing meeting to any unsuccessful Bidder who, after publication of contract award, requests a debriefing.
- 42.3 Until a formal contract is prepared and executed, the notification of award through issuance of Letter of Acceptance shall constitute a binding Contract.
- 42.4 Within 2 weeks of the award of contract or expiry of the standstill period, where such period applies, or, if a complaint has been filed within the standstill period, upon receipt of ADB's confirmation of satisfactory resolution of the complaint, the borrower shall publish in an English language newspaper or widely known and freely accessible website the results identifying the bid and lot or package numbers, as applicable and the following information:
- (a) name of each Bidder who submitted a Bid;
 - (b) bid prices as read out at bid opening;
 - (c) name and evaluated prices of each Bid that was evaluated;
 - (d) name of Bidders whose bids were rejected and the reasons for their rejection; and
 - (e) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

43. Signing of Contract

- 43.1 Promptly after notification, the Employer shall send the successful Bidder the Contract Agreement.
- 43.2 Within 28 days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

44. Performance Security

- 44.1 Within 28 days of the receipt of notification of award through issuance of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, subject to ITB 36 and ITB 37, using for that purpose the Performance Security Form included in Section 9 (Contract Forms), or another form acceptable to the Employer. If the bank issuing performance security is located outside the Employer's country, it shall be counter-guaranteed or encashable by a bank in the Employer's country.
- 44.2 Failure of the successful Bidder to submit the abovementioned performance security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security or execution of the Bid-Securing Declaration. In that event, the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

44.3 The above provision shall also apply to the furnishing of a domestic preference security, if so required.

45. Bidding-Related Complaints

45.1 The procedures for dealing with Bidding-Related Complaints arising out of this bidding process are specified in the BDS.

Section 2: Bid Data Sheet

A. General

ITB 1.1	The number of the Invitation for Bids (IFB) is: CW301/E - Design and Build of Regional TVET Innovation Center (RTIC) of Region XII (General Santos National School of Arts and Trade) including Rehabilitation/Renovation/Repair of TTI's existing facilities
ITB 1.1	The Employer is: Technical Education and Skills Development Authority (TESDA)
ITB 1.1	<p>The name of the bidding process is: Design and Build of Regional TVET Innovation Center (RTIC) of Region XII (General Santos National School of Arts and Trade) including Rehabilitation/Renovation/Repair of TTI's existing facilities</p> <p>The identification number of the bidding process is: CW301/E</p> <p>The number and identification of lots comprising this bidding process is: None</p>
ITB 2.1	The Borrower is: Republic of the Philippines
ITB 2.1	The name of the Project is: Supporting Innovation in the Philippine Technical and Vocational Education and Training System Project

B. Contents of Bidding Documents

ITB 7.1	<p>For clarification purposes only, the Employer's address is:</p> <p>Attention: Ms. Arcadia Creselda P. Balinas, Chief Administrative Officer, Procurement Division, Administrative Service</p> <p>Street address: East Service Road, South Luzon Expressway (SLEX), Fort Bonifacio</p> <p>Floor/Room number: TESDA Administration Building</p> <p>City: Taguig City</p> <p>ZIP code: 1630</p> <p>Country: Philippines</p> <p>Telephone: 0288938296</p> <p>Fax: None</p> <p>E-mail: bacsecretariat_siptvets@tesda.gov.ph</p>
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	Requests for clarification should be received by the Employer no later than: 14 days prior to deadline for submission of bids.
ITB 7.4	<p>A Pre-Bid meeting shall take place.</p> <p>Date: 20 September 2024</p> <p>Time: 2:00 PM</p> <p>Place: virtual through Zoom (<i>official link to follow</i>)</p> <p>A site visit conducted by the Employer will not be organized.</p>

C. Preparation of Bids

ITB 10.1	The language of the Bid is: English
ITB 11.1 (b)	<p>In accordance with ITB 12 and ITB 14, the following schedules shall be submitted with the bid, including the Activity Schedule for lump sum contracts:</p> <ol style="list-style-type: none"> 1. Proposed key personnels with CVs and supporting documents (see Form PER-1 and PER-2) 2. Schedule of Equipment (see Form EQU) 3. Site Organization 4. Proposed Method Statements for Design and Construction 5. Proposed Mobilization Schedule 6. Proposed Construction Schedule 7. Proposed Outline for the Site-Specific Environmental Management Plan (SSEMP) and Site Health and Safety Management Plan (SHSMP)
ITB 11.1 (h)	<p>The Bidder shall submit with its Bid the following additional documents:</p> <ol style="list-style-type: none"> 1. Copy of valid PCAB License 2. Certificate of Appearance (evidence of site visit)
ITB 12.1	The units and rates in figures entered into the Activity Schedule should be typewritten or if written by hand, must be in print form. Activity Schedule not presented accordingly may be considered nonresponsive.
ITB 13.1	Alternative bids shall not be permitted.
ITB 13.2	Alternative times for completion shall not be permitted.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: None
ITB 14.5	The prices quoted by the Bidder shall be fixed during the performance of the Contract.
ITB 15.1	The prices shall be quoted by the bidder and shall be paid in: Philippine Peso

ITB 18.1	The bid validity period shall be 120 days.
ITB 19.1	The Bidder shall furnish a Bid-Securing Declaration .
ITB 19.2	The ineligibility period will be two (2) years .
ITB 19.4	Subject to the succeeding sentences, any bid not accompanied by Bid-Securing Declaration shall be rejected by the Employer as nonresponsive . If a Bidder submits a Bid-Securing Declaration that (i) deviates in form, content, and/or period of validity or (ii) does not provide sufficient identification of the Bidder (including, without limitation, failure to indicate the name of the Joint Venture or, where the Joint Venture has not yet been constituted, the names of all future Joint Venture Partners), the Employer shall request the Bidder to submit a compliant Bid-Securing Declaration within 7 days of receiving such a request. Failure to provide a compliant Bid-Securing Declaration within the prescribed period of receiving such a request shall cause the rejection of the Bid.
ITB 20.1	In addition to the original Bid, the number of copies is: one (1) printed copy (“COPY”) and one (1) electronic copy saved in a universal serial bus (USB)
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: An organizational document, board resolution or its equivalent, or power of attorney specifying the representative’s authority to sign the Bid on behalf of, and to legally bind, the Bidder. If the Bidder is an intended or an existing Joint Venture, the power of attorney should be signed by all partners and specify the authority of the named representative of the Joint Venture to sign on behalf of, and legally bind, the intended or existing Joint Venture. If the Joint Venture has not yet been formed, also include evidence from all proposed Joint Venture partners of their intent to enter into a Joint Venture in the event of a contract award in accordance with ITB 11.2.
ITB 20.2	The Bidder shall submit an acceptable authorization within fourteen (14) days.

D. Submission and Opening of Bids

ITB 21.1	Bidders shall submit their Bids by mail or by hand.
ITB 21.1 (b)	Electronic bidding submission procedures shall be: not applicable
ITB 22.1	For bid submission purposes only, the Employer’s address is: Attention: Ms. Arcadia Creselda P. Balinas, Chief Administrative Officer, Procurement Division, Administrative Service Street address: East Service Road, South Luzon Expressway (SLEX), Fort Bonifacio Floor/Room number: TESDA Administration Building City: Taguig City

	<p>ZIP code: 1630</p> <p>Country: Philippines</p> <p>The deadline for bid submission is:</p> <p>Date: 24 October 2024</p> <p>Time: 12:00 NN (Philippine Standard Time)</p>
ITB 25.1	<p>The bid opening shall take place at:</p> <p>Street address: TESDA Central Office, East Service Road, South Luzon Expressway (SLEX), Fort Bonifacio</p> <p>Floor/Room number: Gabriela Silang Room, TESDA Women's Center</p> <p>City: Taguig</p> <p>Country: Philippines</p> <p>Date: 24 October 2024</p> <p>Time: 1:30 PM (Philippine Standard Time)</p>
ITB 25.1	Electronic bid opening procedure shall be as follows: <i>not applicable</i>
ITB 25.3	The Letter of Bid and Schedules shall be initialed by three (3) representatives of the Employer attending the Bid opening.

E. Evaluation and Comparison of Bids

ITB 32.1	Not applicable.
ITB 33.1	Domestic preference shall not apply.
ITB 34.1	The Employer does not intend for the contractor to execute any specific elements of the Works through nominated subcontractors.
ITB 38.2	The qualifications of other firms such as the Bidder's subsidiaries, parent entities, or affiliates shall not be permitted.
ITB 40.1	Standstill provisions shall not apply.

F. Award of Contract

ITB 45.1	<p>The procedures for Bidding-Related Complaints are referenced in the Procurement Regulations for ADB Borrowers (Appendix 7). The Bidder should submit its complaint following these procedures, in writing, to:</p> <p>For the attention: DDG VIDAL D. VILLANUEVA III</p> <p>Title/position: Chairperson, Bids and Awards Committee</p> <p>Employer: Technical Education and Skills Development Authority</p>
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	E-mail address: bacsecretariat_siptvets@tesda.gov.ph
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1. Evaluation

In addition to the criteria listed in ITB 35.2 (a)–(f), other relevant factors are as follows:

1.1 Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to successfully implement the contract considering its proposed site organization, method statement, mobilization, and construction schedule (to be described by the Bidder in sufficient detail to demonstrate the adequacy of its work methods, scheduling, and material sourcing) including the extent to which they are presented in a consistent manner and comply with requirements stipulated in Section 6 (Employer's Requirements) without material deviation, reservation, or omission.

Noncompliance with equipment and personnel requirements described in Section 6 (Employer's Requirements) shall not normally be a ground for bid rejection, and such noncompliance will be subject to clarification during bid evaluation and rectification prior to contract award.

1.2 Completion Time

An alternative Completion Time **shall not be** permitted.

1.3 Technical Alternatives

Technical alternatives **shall not be** permitted.

1.4 Specialist Subcontractors

Only the specific experience of Specialist Subcontractors for key activities specified in criterion 2.4.2 Construction Experience in Key Activities will be considered. The experience of Specialist Subcontractors in contracts of similar size and nature, and their financial resources shall not be added to those of the Bidder for purposes of qualification of the Bidder.

1.5 Quantifiable Nonconformities and Omissions

Subject to ITB 14.2 and ITB 35.2, the evaluated cost of quantifiable nonconformities including omissions, is determined as follows:

Pursuant to ITB 30.3, the cost of all quantifiable nonmaterial nonconformities shall be evaluated, including omissions in Daywork where competitively priced but excluding omission of prices in the Bill of Quantities. The Employer will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of bids.

1.6 Domestic Preference

If domestic preference does not apply.

1.7 Other Criteria

1.7.1 Site-Specific Environmental Management Plan (SSEMP) and Site Health and Safety Management Plan (SHSMP);

Any bid not accompanied by proposed outlines for SSEMP and SHSMP may be rejected by the Employer as nonresponsive. If a Bidder submits a SSEMP/SHSMP that is not commensurate with the risks and impacts of the proposed works and activities in the bidding document, the Employer shall issue a request for clarification to request for further information from the Bidder. The Bidder must submit the requested information within **five (5) working** days of receiving such a request. Failure to provide a satisfactory response to the request for further information within the prescribed period of receiving such a request may cause the rejection of the Bid.

1.7.2 Sustainable Procurement

The following sustainable procurement technical requirements will be evaluated on a pass/fail basis. Failure to meet any of the following requirements will result in mandatory rejection of the bid.

Not applicable.

1.7.3 Life Cycle costs (for Financial Evaluation)

Life cycle costing **shall not** apply.

1.8 Multiple Contracts

Not applicable.

2. Qualification

2.1 Eligibility

Criteria	Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture		Submission Requirements
		All Partners Combined	Each Partner	

2.1.1 Nationality

Nationality in accordance with ITB 4.2.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Forms ELI – 1; ELI – 2 with attachments
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2.1.2 Conflict of Interest

No conflicts of interest in accordance with ITB 4.3.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid
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2.1.3 ADB Eligibility

Not having been declared ineligible by ADB, as described in ITB 4.4.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid
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2.1.4 Government-Owned Enterprise

Bidder required to meet conditions of ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Forms ELI - 1, ELI - 2 with attachments
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2.1.5 United Nations Eligibility

Not having been excluded by an act of compliance with a United Nations Security Council resolution in accordance with ITB 4.8.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid
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2.2 Historical Contract Nonperformance

2.2.1 History of Nonperforming Contracts

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Nonperformance of a contract ^a did not occur as a result of contractor default since 1 January 2021	Must meet requirement	Must meet requirement	Must meet requirement ^b	Not Applicable	Form CON-1

^a Nonperformance, as decided by the Employer, shall include all contracts where (a) nonperformance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Nonperformance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Nonperformance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

^b This requirement also applies to contracts executed by the Bidder as Joint Venture partner.

2.2.2 Suspension Based on Execution of Bid-Securing Declaration

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Not under suspension based on execution of a Bid-Securing Declaration pursuant to ITB 4.6.	Must meet requirement	Must meet requirement	Must meet requirement	Not applicable	Letter of Bid

2.2.1 Pending Litigation and Arbitration

Pending litigation and arbitration criterion **shall** apply.

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
All pending litigation, arbitration, or other material events impacting the net worth and/or liquidity of the bidder, if any, shall be treated as resolved against the Bidder and so shall in total not represent more than . 50% percent of the Bidder's net worth calculated as the difference between total assets and total liabilities.	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form CON - 1

2.2.4 Declaration: Environmental, Health and Safety Past Performance

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Declare any contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any environmental compliance, and, health and safety contractual obligations in the past five years.	Must make the declaration. If the bidder proposes Specialist Sub-contractor/s to meet EQC 2.4.2, those Specialist Sub-contractor/s must also make the declaration	Not applicable	Each partner must make the declaration. If the bidder proposes Specialist Sub-contractor/s to meet EQC 2.4.2, those Specialist Sub-contractor/s must also make the declaration	Not applicable	Form CON-2

2.3 Financial Situation

2.3.1 Historical Financial Performance

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Submission of audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, for the last three (3) years to demonstrate the current soundness of the Bidder's financial position. As a minimum, the Bidder's net worth for the last year, calculated as the difference between total assets and total liabilities should be positive.	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Form FIN - 1 with attachments

2.3.2 Average Annual Construction Turnover

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Minimum average annual construction turnover of PHP213,000,000 , calculated as total certified payments received for contracts in progress or completed for years 2017, 2018, 2019, 2022 and 2023	Must meet requirement	Must meet requirement	Must meet 25% of the requirement	Must meet 40% of the requirement	Form FIN - 2

2.3.3 Financial Resources

If the bid evaluation process and the decision for the award of the Contract takes more than 1 year from the date of bid submission, Bidders may be asked to resubmit their current contract commitments and latest information on financial resources supported by latest audited accounts or audited financial statements, or if not required by the law of the Bidder's country, other financial statements acceptable to the Employer, and the Bidders' financial capacity, will be reassessed on this basis.

Criteria Requirement	Compliance Requirements				Documents Submission Requirements
	Single Entity	Joint Venture			
		All Partners Combined	Each Partner	One Partner	
For Single Entities The Bidder must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its current contract commitments defined in FIN - 4, meet or exceed the total requirement for the Subject Contract of PHP 36 million.	Must meet requirement	Not applicable	Not applicable	Not applicable	Form FIN – 3 and Form FIN – 4
For Joint Ventures (1) One partner must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its own current contract commitments defined in FIN - 4, meet or exceed its required share of 40% from the total requirement for the Subject Contract. AND	Not applicable	Not applicable	Not applicable	Must meet requirement	Form FIN – 3 and Form FIN – 4
(2) Each partner must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its own current contract commitments defined in FIN - 4, meet or exceed its required share of 25% from the total requirement for the Subject Contract. AND	Not applicable	Not applicable	Must meet requirement	Not applicable	Form FIN – 3 and Form FIN – 4
(3) The Joint Venture must demonstrate that the combined financial resources of all partners defined in FIN - 3, less all the partners' total financial obligations for the current contract commitments defined in FIN - 4, meet or exceed the total requirement for the Subject Contract of PHP 36 million.	Not applicable	Must meet requirement	Not applicable	Not applicable	Form FIN – 3 and Form FIN – 4

2.4 Design and Construction Experience

2.4.1 Contracts of Similar Size and Nature

Criteria	Compliance Requirements			Documents	
	Requirement	Single Entity	Joint Venture		Submission Requirements
All Partners Combined			Each Partner	One Partner	
<p>Participation as a contractor, Joint Venture partner, or Subcontractor, in at least one (1) contract that have been satisfactorily and substantially completed within the last five (5) years and that are similar to the proposed works, where the value of the Bidder’s participation under each contract exceeds PHP128 million. The similarity of the Bidder’s participation shall be based on the requirements in Section 6 of this bidding document.</p> <p>OR</p> <p>Participation as a contractor, Joint Venture partner, or Subcontractor, in at least two contracts that have been satisfactorily and substantially completed within the last five (5) years and that are similar to the proposed works, where the value of the Bidder’s participation under each contract exceeds PHP64 million. The similarity of the Bidder’s participation shall be based on the requirements in Section 6 of this bidding document.</p>	Must meet requirement	Must meet requirement as follows: (i) Either one partner must meet requirement Or (ii) any two partners must each demonstrate one (1) satisfactorily and substantially completed contract of similar size and nature	Not applicable ^c	Not applicable	Form EXP – 1 Attachments: 1. Signed Contract Agreement, <u>and</u> 2. Taking-Over Certificate, Certificate of Completion of the Works (or equivalent) or Performance Certificate. <u>Note:</u> If the documents are not in English, an accurate certified translation of these documents in English shall be provided.

2.4.2 Construction Experience in Key Activities

2.4.2 (a) Must be complied with by the Bidder. In case of a Joint Venture Bidder, the Bidder or at least one of the partners must meet the requirement in the key activity. For contracts under which the Bidder participated as a Joint Venture partner, only the Bidder's designated scope of works under the contracts shall be considered to meet this requirement.

Table A

Criteria		Compliance Requirements		Documents
Requirement	Single Entity	Joint Venture	Submission Requirements	
For the above or other contracts executed during the period stipulated in 2.4.1, a minimum construction experience in the following key activities:				
1 Design of a building or facility, at least two (2) storeys, with a minimum floor area of 2,000 sq.m.	Must meet requirement	Must meet requirement	Form EXP – 2 Attachments: 1. Signed Contract Agreement, <u>and</u> 2. Taking-Over Certificate, Certificate of Completion of the Works (or equivalent) or Performance Certificate.	
2 Construction and commissioning of a building or facility with a minimum floor area of 2,000 sq.m.	Must meet requirement	Must meet requirement	Form EXP – 2 Attachments: 1. Signed Contract Agreement, <u>and</u> 2. Taking-Over Certificate, Certificate of Completion of the Works (or equivalent) or Performance Certificate.	

2.4.3 Specific Experience in Managing Environmental, Health and Safety Aspects

Criteria	Compliance Requirements		Documents
Requirement	Single Entity or Its Specialist Subcontractors	Joint Venture or Its Specialist Subcontractors	Submission Requirements

<p>For the contracts in 2.4.1 and 2.4.2 above and/or any other contracts [substantially completed and under implementation] as prime contractor, Joint Venture partner, or Subcontractor between 1st January 2021 and Bid submission deadline, experience in managing EHS risks and impacts in the following aspects:</p> <p>1. Construction or renovation of an infrastructure project</p>	<p>Must meet requirements</p>	<p>One member must meet requirements</p> <p>Or</p> <p>All members must meet requirements</p>	<p>Form EXP – 3</p>
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2.5 Organizational Environmental, Health and Safety System

2.5.1 Environmental, Health and Safety Certification

Criteria	Compliance Requirements		Documents
Requirement	Single Entity or Its Specialist Subcontractors	Joint Venture or Its Specialist Subcontractors	Submission Requirements
<p>Availability of a valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by the Bidder), and applicable to the worksite:</p> <p>ISO 14001 or equivalent</p>	<p>Must meet requirements</p>	<p>One member must meet requirements</p> <p>Or</p> <p>All members must meet requirements</p>	<p>Form EXP – 4</p>

2.5.2 Environmental, Health and Safety Documentation

Criteria	Compliance Requirements		Documents
Requirement	Single Entity or Its Specialist Subcontractors	Joint Venture or Its Specialist Subcontractors	Submission Requirements
<p>Availability of in-house policies and procedures for EHS management compliant with Philippine laws, rules and regulations and government agency issuances.</p> <ol style="list-style-type: none"> 1. Health and Safety on worksites policy and related guidance; 2. Local recruitment and EHS trainings of local staff/subcontractors/local partners; and 3. Waste management practice. 	<p>Must meet requirements</p>	<p>One member must meet requirements</p> <p>Or</p> <p>All members must meet requirements</p>	<p>Form EXP – 5</p>

2.5.3 Environmental, Health and Safety Dedicated Personnel

Criteria	Compliance Requirements		Documents
Requirement	Single Entity or Its Specialist Subcontractors	Joint Venture or Its Specialist Subcontractors	Submission Requirements
Availability of in-house personnel dedicated to EHS issues: 1. Department of Labor and Employment (DOLE) Accredited Safety Officer 2. Environmental Specialist	Must meet requirements	One member must meet requirements Or All members must meet requirements	Form EXP – 6

2.6 Valid PCAB License

The bidder must at least be a **PCAB License Category “AA”, Size Range “Medium B”** contractor.

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Letter of Bid

-Note-

The Bidder must accomplish the Letter of Bid on its letterhead clearly showing the Bidder's complete name and address.

Date:

OCB No.:

Invitation for Bid No.:

To: *[insert complete name of the Employer]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8.
- (b) We acknowledge that we have read and understand ADB's Anticorruption Policy (1998) and Integrity Principles and Guidelines (2015), both as amended from time to time.
- (c) We offer to execute in conformity with the Bidding Documents the following Works: *[insert narrative]*
- (d) The total price of our Bid, excluding any discounts offered in item (d) below is:

[amount of foreign currency in words], [amount in figures], and [amount of local currency in words], [amount in figures]

The total bid price from the Summary of Bill of Quantities for admeasurement contracts or Activity Schedule for lump sum contracts should be entered by the Bidder inside this box. Absence of the total bid price in the Letter of Bid may result in the rejection of the bid.

- (e) The discounts offered and the methodology for their application are as follows: *[insert discounts and methodology for their application if any]*
- (f) Our bid shall be valid for a period of *[insert bid validity period as specified in ITB 18.1 of the BDS]* days starts from the date fixed for the bid submission deadline in accordance with ITB 22.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (g) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document.
- (h) Our firm, including any Subcontractors or Suppliers for any part of the Contract, have nationalities from eligible countries in accordance with ITB 4.2.
- (i) We, our directors, key officers, key personnel, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3.

If there is any conflict of interest, please state details:

- (i) Parties involved in the conflict of interest: _____

- (ii) Details about the conflict of interest: _____
- (j) We are not participating, as a Bidder, either individually or as partner in a Joint Venture, in more than one Bid in this bidding process in accordance with ITB 4.3(e), other than alternative offers submitted in accordance with ITB 13.
- (k) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, are not subject to, or not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Asian Development Bank or a debarment imposed by the Asian Development Bank in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the Asian Development Bank and other development banks.¹
- (l) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, are not under ongoing investigation and/or sanctions proceedings by the Asian Development Bank or any multilateral development bank.

If under ongoing investigation and/or sanction proceedings by the Asian Development Bank or any multilateral development bank, please state details:

- (i) Name of the multilateral development bank: _____
- (ii) Reason for the ongoing investigation/allegations: _____
- (m) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the Contract, are not temporarily suspended, debarred, declared ineligible, or subject to any national and/or international sanctions by any country, any international organization, any multilateral development bank and other donor agency.

If so temporarily suspended, debarred, declared ineligible, or subject to any national and/or international sanctions by any country, any international organization, any multilateral development bank and other donor agency, please state details (as applicable to each Joint Venture partner, their respective direct or indirect shareholders, directors, key officers, key personnel, associate, parent company, affiliate, subsidiaries, Subcontractors, consultants, subconsultants, manufacturers, service providers and/or Suppliers):

- (i) Name of Institution: _____
- (ii) Period of the temporary suspension, debarment, ineligibility, or national or international sanction [*start and end date*]: _____
- (iii) Reason for the temporary suspension, debarment, ineligibility, or national or international sanction: _____
- (n) Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers, Suppliers, key officers, directors and key personnel have never been charged or convicted with any criminal offense (including felonies but excluding misdemeanors) or infractions and/or violations of ordinance; nor charged or found liable in any civil or administrative proceedings in the last 10 years;

¹ These institutions include African Development Bank, European Bank for Reconstruction and Development (EBRD), Inter-American Development Bank (IADB), and the World Bank Group. According to paragraph 9 of the Agreement, other international financial institutions may join upon the consent of all Participating Institutions and signature of a Letter of Adherence by the international financial institution substantially in the form provided (Annex B to the Agreement). Upon adherence, such international financial institution shall become a Participating Institution for purposes of the Agreement. Bidders are advised to check www.adb.org/integrity for updates.

or undergoing investigation for such, or subject to any criminal, civil or administrative orders, monitorship or enforcement actions.

If so charged, convicted/found liable, under ongoing investigation, or subject to orders, monitorship or enforcement actions, please state details:

- (i) Nature of the offense, violation, proceedings, investigation, and/or monitorship or enforcement actions: _____
- (ii) Court, area of jurisdiction and/or the enforcement agency: _____
- (iii) Resolution [i.e. *dismissed; settled; or convicted/duration of penalty*]: _____
- (iv) Other relevant details [*please specify*]: _____

- (o) Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers, can make and receive electronic fund transfer payments through the international banking system or otherwise discharge the Employer's obligation upon initiation of wire transfer.

If unable to make or receive funds through the international banking system or otherwise discharge the Employer's obligation upon initiation of wire transfer, please state the details:

- (i) Nature of the restriction: _____
- (ii) Jurisdiction of the restriction: _____
- (iii) Other relevant details: _____

- (p) Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers, key officers, directors and key personnel are not from a country which is prohibited to export goods or services to, or receive any payments from the Employer's country and/or are not prohibited to receive payments for particular goods or services by the Employer's country by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

- (q) We understand that it is our obligation to notify the Employer of any changes in connection with the matters described in paragraphs (i), (k), (l), (m), (n), (o), (p) and (t) of this Letter of Bid.

- (r) [We are not a government-owned enterprise] / [We are a government-owned enterprise but meet the requirements of ITB 4.5].²

- (s) We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration in accordance with ITB 4.6.

- (t) We have paid, or intend to pay, either directly or indirectly, the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract:³

Name of Recipient	Address	Reason	Amount
.....
.....

- (u) We understand that this Bid, together with your written acceptance thereof included in your notification of award through the issuance of Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed.

- (v) We understand that you are not bound to accept the lowest evaluated Bid or any other Bid that you may receive.

² Use one of the two options as appropriate.

³ If none has been paid or is to be paid, indicate "None".

- (w) At any time following submission of our Bid, we shall permit, and shall cause our Joint Venture partners, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract to permit ADB or its representative to inspect our site, assets, accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB. We understand that failure of this obligation may constitute obstructive practice that may result in debarment and/or contract termination.
- (x) Regardless of whether the contract will be awarded to us, we shall preserve all accounts, records and other documents related to bid submission for at least 3 years from the date of submission of the bid or the period prescribed in applicable law, whichever is longer.
- (y) If we are awarded the contract, we shall preserve all accounts, records and other documents related to the procurement and execution of the contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer.
- (z) If our Bid is accepted, we commit to mobilizing key equipment and personnel in accordance with the requirements set forth in Section 6 (Employer's Requirements) and our technical proposal, or as otherwise agreed with the Employer.
- (aa) We certify on behalf of the Bidder, that the information provided in the bid has been fully reviewed, given in good faith, and to the best of our knowledge is true and complete. We understand that it is our obligation to inform the Employer of any changes to the information as and when it becomes known to us. We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded, and may result in remedial actions, in accordance with ADB's Anticorruption Policy (1998, as amended to date) and Integrity Principles and Guidelines (2015, as amended from time to time).

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

.....

Schedules

Schedule of Payment Currencies

	A	B	C	D
Name of Payment Currency	Amount of Currency	Rate of Exchange to Local Currency	Local Currency Equivalent $C = A \times B$	Percentage of Net Bid Price (NBP) $\frac{100 \times C}{NBP}$
Local Currency		1.00		
Net Bid Price				100.00
Provisional Sums Expressed in Local Currency		1.00		
BID PRICE				

-- Note --

Bid Price shall be quoted in Philippine Peso only.

Activity Schedule

[Schedules of Prices – Lump Sum Contract]

The Bidder shall indicate the list of major activities comprising the works and the number of measurement units consistent with the description of works, drawings, and specifications in Section 6 Employer's Requirements. Each work item shall be described in sufficient detail to provide clear guidance to Employer with respect to the type of works, their scope and complexity, and compliance with the required standards.

Bidders are required to enter the prices against each work item on a lump sum basis. **Work items against which no lump sum price is entered by the Bidder will not be paid by the Employer when executed and shall be deemed covered by other work items against which the lump sum prices were entered.** The sum of prices entered against each work item will represent the total bid price.

The whole cost of complying with the provisions of the Contract (including compliance with laws and national/local rules and regulations, and requirements for environmental, social, safety, and labor standards) shall be included in the Items provided in the Activity Schedule, and where no Items are provided, the cost shall be deemed to be distributed among the Amounts for the related Items of Work.

The format provided below is only an *example*, and the Contractor shall be responsible for formulating its own Schedule of Prices taking into account all the requirements under Section 6. Employer's Requirements. The **Bidder must sub-divide** its Schedule of Prices to (1) Professional Fees; (2) General Requirements; (3) Construction of the New Building/TTIs; and (4) Renovation/Rehabilitation of Existing Facility.

No.	Description	Unit	Qty.	Unit Price	Total
1	Professional Fees				
1.1	Detailed A&E Design / Professional Fee				
1.2	Site surveys, studies, investigations				
...n	<i>[Bidder is responsible to provide further details / breakdown per Design Strategy / Methodology proposed]</i>				
2	General Requirements				
2.1	Permits				
2.2	Bonds and Insurances				
2.3	Health and Safety				
...					
...n	<i>[Bidder is responsible to provide further details / breakdown per its preliminary conceptual design]</i>				
3	Construction of the New Building/TTI	m ²	3,000		
...	<i>[Bidder is responsible to provide further details / breakdown per its preliminary conceptual design]</i>				
...					
...n					
4	Renovation / rehabilitation of existing facility				
4.1	Warehousing building				
4.1.1	<i>[Bidder to provide further details / breakdown]</i>				
4.2	Automotive Servicing Building				
...					
4.3	Covered Court				
...					
...n	<i>[Bidder is responsible to provide further details / breakdown per its preliminary rehabilitation considerations as a result of its site visit]</i>				

Bid-Securing Declaration

Date: *[insert date (as day, month and year)]*

Bid No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a bid for an alternative]*

To: *[insert complete name of the Employer]*

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Borrower for the period of time of *[insert the number of months or years indicated in ITB 19.2 of the BDS]* starting on the date that we receive a notification from the Employer, if we are in breach of our obligation(s) under the bid conditions, because we

- (a) have withdrawn our Bid during the period of bid validity specified in the Letter of Technical Bid and Letter of Price Bid; or
- (b) do not accept the correction of errors in accordance with the Instruction to Bidders (hereinafter “the ITB”); or
- (c) having been notified of the acceptance of our Bid by the Employer during the period of bid validity, (i) fail or refuse to execute the Contract, if required, (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB, or (iii) fail or refuse to furnish the Domestic Preference Security, if required.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) 28 days after the expiration of our Bid.

Signed: *[insert signature of person whose name and capacity are shown]*

In the capacity of *[insert legal capacity of person signing the Bid-Securing Declaration]*

Name: *[insert complete name of person signing the Bid-Securing Declaration]*

Duly authorized to sign the bid for and on behalf of *[insert complete name of the bidder]*

Dated on _____ day of _____, _____

Corporate Seal *[where appropriate]*

Technical Proposal

Personnel

Form PER – 1: Proposed Personnel

Bidder should provide the details of the proposed personnel and their experience record in the relevant Information Forms below for each candidate:

1.	Construction / Project Manager
	Name
2.	Site / Project Engineer
	Name
3.	Architectural Design Manager
	Name
4.	Architect (Architecture In-Charge of Construction)
	Name
5.	Structural Design Engineer
	Name
6.	Electrical Design Engineer
	Name
7.	Mechanical Engineer
	Name
8.	Quantity Surveyor
	Name
9.	Sanitary Engineer
	Name
10.	Environment Specialist
	Name
11.	Health and Safety Officer

	Name
12.	Quality Assurance and Quality Control Engineer
	Name
13.	CAD Operators (Draftsmen)
	Name

-- Note --

All titles of positions will be as listed in Section 6 (Employer's Requirements).

Form PER – 2: Resume of Proposed Personnel

The Bidder shall provide all the information requested below. Use one form for each position.

Position		
Personnel information	Full Legal Name	Date of birth
	Known as	Place of Birth
	Nationality	Citizenship
	Type of Government ID	ID number
	Attach a copy of ID to this form	
	Professional qualifications	
Present employment	Name of employer	
	Address of employer	
	Telephone	Contact (manager / personnel officer)
	Fax	E-mail
	Job title	Years with present employer

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company, Project, Position and Relevant Technical and Management Experience

Equipment

Form EQU: Equipment

The Bidder shall provide adequate information and details to demonstrate clearly that it has the capability to meet the equipment requirements indicated in Section 6 (Employer's Requirements), using the Form below.

Equipment Description	Proposed Quantity	Equipment Information	Source of Equipment	Current Status
1. Backhoe w/ Breaker	2	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>
2. Dump Truck	2	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>

			Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i>	
3. Plate Compactor	3	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>
4. Concrete Vibrator	4	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>

5. Bagger Mixer	3	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>
6. Welding Machine	3	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>
7. Water Pump	3	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when</i></p>

		Year of manufacture: <i>[insert information]</i>	Address of Owner: <i>[indicate street/number/town or city/country]</i> Contact Information: <i>[indicate street/number/town or city/country]</i> Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i>	<i>equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i>
8. Generator Set	2	Name of Manufacturer: <i>[indicate full name]</i> Model and power rating: <i>[insert information]</i> Capacity: <i>[indicate capacity]</i> Year of manufacture: <i>[insert information]</i>	Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i> Name of Owner / Lessor (if applicable): <i>[indicate full name]</i> Address of Owner: <i>[indicate street/number/town or city/country]</i> Contact Information: <i>[indicate street/number/town or city/country]</i> Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i>	Current location: <i>[provide specific location]</i> Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i>
9. Chain Saw	3	Name of Manufacturer: <i>[indicate full name]</i> Model and power rating: <i>[insert information]</i> Capacity: <i>[indicate capacity]</i> Year of manufacture: <i>[insert information]</i>	Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i> Name of Owner / Lessor (if applicable): <i>[indicate full name]</i> Address of Owner: <i>[indicate street/number/town or city/country]</i> Contact Information: <i>[indicate street/number/town or city/country]</i>	Current location: <i>[provide specific location]</i> Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i>

			Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i>	
10. Air Compressor with 2 Jackhammer	3	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>
11. Electric Jack Hammer	2	<p>Name of Manufacturer: <i>[indicate full name]</i></p> <p>Model and power rating: <i>[insert information]</i></p> <p>Capacity: <i>[indicate capacity]</i></p> <p>Year of manufacture: <i>[insert information]</i></p>	<p>Source: <i>[specify if owned, co-owned, leased, to-be-leased]</i></p> <p>Name of Owner / Lessor (if applicable): <i>[indicate full name]</i></p> <p>Address of Owner: <i>[indicate street/number/town or city/country]</i></p> <p>Contact Information: <i>[indicate street/number/town or city/country]</i></p> <p>Details of lease/ rent/ manufacturing agreement (if applicable): <i>[provide information]</i></p>	<p>Current location: <i>[provide specific location]</i></p> <p>Details of current commitments (if any): <i>[provide information where deployed, until when, and date when equipment is available, write "immediately available" if equipment is readily available if awarded the contract]</i></p>

Site Organization

The Bidder shall provide adequate information of its organization through a chart. The chart shall show the interrelationship of each team to one another. In case of a JV, the division of responsibilities among JV members must be clearly shown in the chart. The key personnel, their roles and names, must be reflected in the organizational charts.

Organization Chart – Design & Construction / Renovation Team

Bidder's response:

[insert chart; do not leave blank]

Method Statement

The method statement shall describe the Bidder's approach in undertaking the design and construction/ and management of the Works with consideration on the schedule of completion of the project.

Method Statement 1 The Bidder's Approach for Site Investigations and Detailed Design Works

The Method Statement 1, as a minimum, shall include the following:

<p>1. Site Investigations, surveys and studies</p> <ul style="list-style-type: none"> • Bidder to list down all site investigations, surveys and studies to be conducted, which must be consistent with Section 6 of this Bidding Documents. • Bidders to discuss timeline / schedule for each of the site investigations, surveys and studies.
<p>Bidder Response: <i>[insert response, do not leave blank]</i></p>
<p>2. Detailed Design Methodology</p> <ul style="list-style-type: none"> • Bidder to discuss approach on carrying out its detailed design methodology. • Bidders to discuss timeline / schedule which must be consistent with Section 6 of this Bidding Documents.
<p>Bidder Response: <i>[insert response, do not leave blank]</i></p>
<p>3. Anticipated challenges in site investigations and detailed design works</p> <ul style="list-style-type: none"> • Bidder to discuss foreseen challenges, issues or risks related to the conduct of site investigations and detailed design works. If the Bidder do not foresee any issue, please write "none". • Bidder to list down proposed prevention or mitigation plan to address the challenges and risks identified,
<p>Bidder Response: <i>[insert response, do not leave blank]</i></p>

Method Statement 2 The Bidder’s Approach and Method to Mitigate Noise and Vibration

The Method Statement 2, as a minimum, shall include the following:

- 4. Identification of Sources of Noises and Vibrations
 - Bidder to list down all equipment or/and construction activities which will have an effect in the site area and nearby surroundings for:
 - Construction of new building
 - Renovation / rehabilitation of existing facility

Bidder Response: *[insert response, do not leave blank]*

- 5. Method of Measurement
 - Bidder to discuss approach on how to measure noise and vibrations to comply with the OSHA standards.

Bidder Response: *[insert response, do not leave blank]*

- 6. Proposed Mitigations
 - Bidder to discuss proposed mitigation plan to lessen the effect and impact of noise and vibration
 - Bidder to discuss method of how to address adverse complaints arising from noise and vibration

Bidder Response: *[insert response, do not leave blank]*

Method Statement 3 The Bidder's Approach and Method in Temporary Traffic Management

The Method Statement 3, as a minimum, shall include the following:

<p>7. Traffic Management Plan</p> <ul style="list-style-type: none"> • Bidder to provide the proposed work zone layouts and strategy to control traffic during construction. / renovation. • Bidder should also consider mitigating measures for potential traffic generation as provided in the IEE Report
<p>Bidder Response: <i>[insert response, do not leave blank]</i></p>

Method Statement 4 The Bidder's Approach and Method in Renovation / Rehabilitation of Existing Facility

The Method Statement 4, as a minimum, shall include the following:

<p>8. Renovation / rehabilitation Approach</p> <ul style="list-style-type: none"> • Bidder to provide proposed approach to renovation/rehabilitation of the existing facility (i.e. sequence of works) • Bidder to discuss health, safety measures and environmental considerations to protect unaffected portions /part of the facility and the occupants of the existing building (i.e. protection from dust etc.)
<p>Bidder Response: <i>[insert response, do not leave blank]</i></p>

Method Statement 5 The Bidder's Approach and Method in Construction of New Facility

The Method Statement 5, as a minimum, shall include the following:

<p>9. Construction access</p> <ul style="list-style-type: none"> • Bidder to provide methodology on entry and exit of construction equipment and materials
<p>Bidder Response: <i>[insert response, do not leave blank]</i></p>

10. Construction of new building / facility <ul style="list-style-type: none">• Bidder to provide proposed approach to construction of new building / facility (i.e. sequence of works)• Bidder to discuss health, safety measures and environmental considerations
Bidder Response: <i>[insert response, do not leave blank]</i>

Mobilization Schedule

The Bidder shall submit a mobilization schedule which shall consists of, but not limited to the following:

1. Manpower schedule for 18 months

Sample format. Bidder may also use its preferred format.

Personnel List	Quantity to deployed on Site per Month																	
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18
1. Project Manager	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2. Architect																		
3																		
4																		
5																		
6. Foreman	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7. Unskilled Laborer	10	10	15															
...n																		
Total																		

2. Equipment schedule for 18months

Sample format. Bidder may also use its preferred format.

Equipment List	Quantity to deployed on Site per Month																	
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18
1. Backhoe w/ Breaker					2	2	2	2	2	2								
2. Dump Truck					1	1	1	1	1	1	1	1	1	1	1			
3																		
4																		
5																		
6																		
7																		
...n																		

3. Schedule for the construction / establishment of Temporary Facility including temporary utilities (water, electric, communication, internet etc.)

Bidder Response: [insert response, do not leave blank]

Construction Schedule

Bidder to submit a construction schedule in any format.

The construction schedule shall be divided into the following key milestones:

- Site mobilization
- Permitting Works
- Design Period
- Construction Period (for new facility)
- Renovation Period (for existing facility)
- Final Turnover of the facilities / Demobilization

Environmental Management

The requirements for Environmental Management during the construction of the Works are contained within Annex F (IEE Report) thereof. With reference to those documents, Bidders shall submit as part of the Technical Bid an **outline** Site Specific Environmental Management Plan (SSEMP) that demonstrates its full understanding of the Environmental Management requirements and sets out the Bidder's proposals for the mitigation and management of the impact that the Works may have upon the environment. The outline SSEMP shall commence with the Bidder's "Mission Statement" with respect to the environmental laws that are in place and the requirements of the Contract, and set down the Bidder's commitment to conduct all work on the basis of "Minimum Impact". The outline SSEMP shall also describe the policies and procedures that will be implemented throughout the course of the Works to ensure minimal impact on the environment and compliance with relevant environmental laws, rules and regulations. The outline SSEMP shall also identify those construction activities that potentially may adversely impact the environment and provide proposals for avoidance or mitigation of such impacts. The outline SSEMP shall also include the organizational structure for environmental management (including for the H&S). The information provided within the outline SSEMP shall form the basis for the Impacts Management Plan (EMP) and the Site-Specific Environmental Management and Monitoring Plan that are required within 45 days of the Commencement Date. If a generic Environmental Management Plan is submitted, the Bidder shall submit a schedule of changes necessary to the outline Environmental Management Plan that it intends to provide, to customize it for this project. The Bidder's attention is drawn to the Evaluation Criteria within Section 3 (Evaluation and Qualification Criteria) and the Employer's Requirements within Section 6 of the Bidding Documents.

Health, Safety, Labor Management Requirements

The Bidders' attention is directed to the Evaluation Criteria within Section 3 (Evaluation and Qualification Criteria) and the Employer's Requirements within Section 6 of the Bidding Documents, including requirements in DOLE Department Order No. 13 of 1998 and its procedural guidelines (as amended from time to time). As a part of the Technical Bid, Bidders shall provide an Outline Site Specific Health and Safety Management Plan (SHSMP) which is customized to this Project and shall demonstrate that it fully understands the objectives of those documents and has taken full cognizance of the requirements therein. The Outline of SHSMP shall include, but shall not be limited to the following: 1) Basic Policies for Health and Safety Management 2) Identification of specific accident risks in relation to the Works 3) Brief details of Safety Equipment and other provisions that will be available on Site, including proposals of Medical Facility 4) Outline Emergency Response Procedures which should include emergency drills/ preparedness plan 5) Organizational Structure for Health and Safety Management 6) Details of Health and Safety Monitoring and reporting system 7) Proposals for Safety Training and Education The Bidder shall also provide a specific COVID-19 risk management plan as a part of the Health and Safety Management Plan for pandemic situations in view of COVID-19 or other probable

similar conditions/restrictions that may arise. The Employer will take into account the quality of this specific plan attached to the Technical Proposal in its evaluation of the Adequacy of the Technical Proposal. This specific Plan shall cover the health and safety measures they will put in place on site in relation to COVID-19 prevention and controls or other probable similar pandemic situations, including but not limited to, PPE requirements, site set up, training, induction and mobilization of new personnel, equipment and plants cleaning and other hazard management measures while undertaking site work activities, site visitors health and safety protocols, as well as the approach to the monitoring and reporting of the Plan. This Plan shall be fit for purpose for the particular construction works of this contract and be aligned with any relevant government regulations and guidelines on COVID-19 prevention and controls, as well as workplace safety requirements, or in the absence thereof, to international good practice guidelines.

Environmental, Health and Safety Code of Conduct for Contractor's Personnel Form

Note to Bidder

The minimum content of the EHS Code of Conduct form as set out by the Employer shall not be substantially modified. However, the Bidder may add requirements as appropriate, including to take into account Contract-specific issues/risks.

The Bidder shall initial and submit the EHS Code of Conduct form as part of its bid.

ENVIRONMENTAL, HEALTH AND SAFETY CODE OF CONDUCT FOR CONTRACTOR'S PERSONNEL

We are the Contractor, [enter name of Contractor]. We have signed a contract with [enter name of Employer] for [enter description of the Works]. These Works will be carried out at [enter the Site and other locations where the Works will be carried out]. Our contract requires us to implement measures to address environmental, health and safety risks related to the Works.

This EHS Code of Conduct is part of our measures to deal with environmental, health and safety risks related to the Works. It applies to all our staff, labourers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as "**Contractor's Personnel**" and are subject to this EHS Code of Conduct.

This EHS Code of Conduct identifies the behavior that we require from all Contractor's Personnel.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

REQUIRED CONDUCT

Contractor's Personnel shall:

1. carry out his/her duties competently and diligently;
2. comply with this EHS Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
3. maintain a safe working environment including by:
 - (a) ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
 - (b) wearing required personal protective equipment;
 - (c) using appropriate measures relating to chemical, physical and biological substances and agents; and
 - (d) following applicable emergency operating procedures.
4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. report violations of this EHS Code of Conduct; and

7. not retaliate against any person who reports violations of this EHS Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel or the project's Grievance Redress Mechanism.

RAISING CONCERNS

If any person observes behavior that he/she believes may represent a violation of this EHS Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done by call [] to reach the Contractor's hotline (*if any*) and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

CONSEQUENCES OF VIOLATING THE ENVIRONMENTAL, HEALTH AND SAFETY CODE OF CONDUCT

Any violation of this EHS Code of Conduct by Contractor's Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR'S PERSONNEL:

I have received a copy of this EHS Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this EHS Code of Conduct, I can contact [*enter name of Contractor's contact person(s) with relevant experience*] requesting an explanation.

Name of Contractor's Personnel: [*insert name*]

Signature: _____

Date: [*day month year*]: _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: [*day month year*]: _____

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the following information requested in the corresponding Information Sheets.

Form ELI – 1: Bidder's Information Sheet

Bidder's Information		
	Information of the Bidder	If the Bidder is a subsidiary or branch, information of any parent company/companies
Names	Full legal name(s)	
	Full trading name(s) (if any)	
Addresses	Registered address(es)	
	Trading address(es)	
	Postal address(es) (if different from trading address)	
Type of organization		
Country of constitution/incorporation/registration		
Year of constitution/incorporation/registration		
Corporate or registration number		
In case of a Joint Venture, legal name of each partner		
Bidder's authorized representative (name, address, telephone number(s), fax number(s), e-mail address)		
Attached are copies of the following documents. <ol style="list-style-type: none"> 1) In case of a single entity, articles of incorporation or constitution and company incorporation/registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2. 2) Authorization to represent the firm or Joint Venture named above, in accordance with ITB 20.2. 3) In case of a Joint Venture, a letter of intent to form a Joint Venture or Joint Venture agreement, in accordance with ITB 4.1. 4) In case of a government-owned enterprise, any additional documents not covered under 1 above required to comply with ITB 4.5. 		

Form ELI - 2: Joint Venture Information Sheet

Each partner of the Joint Venture and Specialist Subcontractor must fill out this form separately.

Joint Venture / Specialist Subcontractor Information		
Bidder's legal name		
	Information of Joint Venture Partner or Specialist Subcontractor	If any Joint Venture Partner or Specialist Subcontractor is a subsidiary or branch, information of any parent company/companies
Names	Full legal name(s)	
	Full trading name(s) (if any)	
Addresses	Registered address(es)	
	Trading address (es)	
	Postal address (es) (if different from trading address)	
Type of organization		
Country of constitution/incorporation/ registration		
Year of constitution/incorporation/ registration		
Corporate or registration number		
Joint Venture Partner's or Specialist Subcontractor's authorized representative information <small>(name, address, telephone number(s), fax number(s), e-mail address)</small>		
<p>Attached are copies of the following documents.</p> <ol style="list-style-type: none"> 1) Articles of incorporation or constitution and company incorporation/registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2. 2) Authorization to represent the firm named above, in accordance with ITB 20.2. 3) In the case of a government-owned enterprise, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5. 		

Form CON - 1: Historical Contract Nonperformance

Each Bidder must fill out this form in accordance with Criteria 2.2.1 and 2.2.3 of Section 3 (Evaluation and Qualification Criteria) to describe any history of nonperforming contracts and pending litigation or arbitration formally commenced against it.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Table 1: History of Nonperforming Contracts			
<p>Choose one of the following:</p> <p><input type="checkbox"/> No nonperforming contracts.</p> <p><input type="checkbox"/> Below is a description of nonperforming contracts involving the Bidder (or each Joint Venture partner if Bidder is a Joint Venture).</p>			
Year	Description	Amount of Nonperformed Portion of Contract (PHP equivalent)	Total Contract Amount (PHP equivalent)
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>	<i>[insert amount]</i>
Table 2: Pending Litigation and Arbitration			
<p>Choose one of the following:</p> <p><input type="checkbox"/> No pending litigation, arbitration or any other material events impacting the net worth and/or liquidity of the bidder.</p> <p><input type="checkbox"/> Below is a description of all pending litigation, arbitration involving the Bidder or any other material events impacting the net worth and/or liquidity of the bidder (or each Joint Venture partner if Bidder is a Joint Venture).</p>			
Year	Matter in Dispute	Value of Pending Claim in PHP Equivalent	Value of Pending Claim as a Percentage of Net Worth
<i>[insert year]</i>	Contract Identification, as applicable: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer, parties involved in the material events impacting the net worth and/or liquidity of the bidder: <i>[insert full name]</i> Address of Employer, parties involved in the material events impacting the net worth and/or liquidity of the bidder: <i>[insert street/city/country]</i> Matter of Dispute: <i>[indicate full description of dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i> Status: <i>[indicate status of dispute]</i>	<i>[insert amount]</i>	<i>[insert amount]</i>

Form CON – 2: EHS Performance Declaration

Each Bidder must fill out this form in accordance with Criterion 2.2.4 of Section 3 (Evaluation and Qualification Criteria).

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

Joint Venture Partner: _____

In case of a Specialist Subcontractors, each Specialist Subcontractor must fill out this form and provide the Specialist Subcontractor’s name:

Specialist Subcontractor: _____

Environmental and Health and Safety Performance Declaration in accordance with Section 3 (Evaluation and Qualification Criteria)			
<input type="checkbox"/> No suspension or termination of contract: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental or Health and Safety performance since the date specified in Section 3 (Evaluation and Qualification Criteria), Criterion 2.5.			
<input type="checkbox"/> Declaration of suspension or termination of contract: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an employer(s) for reasons related to Environmental or Health and Safety performance since the date specified in Section 3 (Evaluation and Qualification Criteria), Criterion 2.5. Details are described below:			
<input type="checkbox"/> Declaration of request for replacement of Key Environment, Health and Safety Personnel: The following contract(s) has/have experienced a request by the Employer to replace Environmental, Health and Safety Personnel for reasons related to Environmental or Health and Safety performance since the date specified in Section 3 (Evaluation and Qualification Criteria), Criterion 2.5. Details are described below:			
<input type="checkbox"/> Declaration of past fatality resulted from EHS issues on site: The following contract(s) has/have experienced a fatality resulted from EHS issues on site since the date specified in Section 3 (Evaluation and Qualification Criteria), Criterion 2.5. Details are described below:			
Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and PHP equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g. discharge over environmental limit, workers did not have required health and safety permits to undertake high risk work, work carried out was not adhered to approved construction methodology and quality control plan]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i>	<i>[insert amount]</i>

	Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	
...	...	<i>[list all applicable contracts]</i>
Performance Security called by an employer(s) for reasons related to EHS performance		
Year	Contract Identification	Total Contract Amount (current value, currency, exchange rate and PHP equivalent)
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g. discharge over environmental limit, workers did not have required health and safety permits to undertake high risk work, work carried out was not adhered to approved construction methodology and quality control plan]</i>	<i>[insert amount]</i>
Key EHS personnel replacement requested by the Employer for reasons related to EHS performance		
Year	Contract Identification and Reasons	Personnel replacement action and results
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for requesting for replacement: <i>[indicate main reason(s)]</i>	<i>[insert description]</i>
<i>Fatality due to EHS issues on Site</i>		
Year	Contract Identification	Follow-on actions taken by the contractor
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Description of fatality event: Causation:	<i>[insert description]</i>

Form FIN - 1: Historical Financial Performance

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Financial Data for Previous three (3) Years [IN PHILIPPINE PESO]		
2021	2022	2023

Information from Balance Sheet

Total Assets (TA)			
Total Liabilities (TL)			
Net Worth =TA – TL			
Current Assets (CA)			
Current Liabilities (CL)			
Working Capital = CA - CL			

Most Recent Working Capital		To be obtained for most recent year and carried forward to FIN - 3 Line 1; in case of Joint Ventures, to the corresponding Joint Venture Partner's FIN - 3.
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Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last ____ years, as indicated above, complying with the following conditions.

- 1) Unless otherwise required by Section 3 of the Bidding Document, all such documents reflect the standalone financial situation of the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries, or affiliates.
- 2) Historical financial statements must be audited by a certified accountant.
- 3) Historical financial statements must be complete, including all notes to the financial statements.
- 4) Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

Form FIN - 2: Average Annual Construction Turnover

Each Bidder must fill out this form.

The information supplied should be the Annual Turnover of the Bidder or each partner of a Joint Venture for the total certified payments received from the clients for contracts in progress or completed, converted to US dollars at the rate of exchange at the end of the period reported.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Annual Turnover Data for the Last three (3) Years (Construction only)			
Year	Amount Currency	Exchange Rate	PHP Equivalent
2017			
2018			
2019			
2022			
2023			
Average Annual Construction Turnover			

Form FIN – 3: Availability of Financial Resources

Bidder must demonstrate sufficient financial resources, usually comprising of Working Capital supplemented by credit line statements or overdraft facilities and others to meet the Bidder's financial requirements for

- (a) its current contract commitments, and
- (b) the subject contract.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Financial Resources		
No.	Source of financing	Amount (PHP)
1	Working Capital (to be taken from FIN - 1)	
2	Credit Line ^a	
3	Other Financial Resources	
	Total Available Financial Resources	

^a To be substantiated by a letter from the bank issuing the line of credit.

Form FIN- 4: Financial Resources Requirement

Bidders (or each Joint Venture partner) should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

Current Contract Commitments						
No.	Name of Contract	Employer's Contact (Address, Tel, Fax)	Contract Completion Date	Outstanding Contract Value (X) ^a	Remaining Contract Period in months (Y) ^b	Monthly Financial Resources Requirement (X / Y)
1						
2						
3						
4						
Total Monthly Financial Requirements for Current Contract Commitments						PHP

^a Remaining outstanding contract values to be calculated from 28 days prior to the bid submission deadline (PHP equivalent based on the foreign exchange rate as of the same date).

^b Remaining contract period to be calculated from 28 days prior to bid submission deadline.

Form FIN - 5: Self-Assessment Tool for Bidder's Compliance to Financial Resources (Criterion 2.3.3 of Section 3)

This form requires the same information submitted in Forms FIN - 3 and FIN - 4. All conditions of "Available Financial Resources Net of CCC \geq Requirement for the Subject Contract" must be satisfied to qualify.

Form FIN - 5A: For Single Entities

For Single Entities: (A)	Total Available Financial Resources from FIN - 3 (B)	Total Monthly Financial Requirement for Current Contract Commitments (CCC) from FIN - 4 (C)	Available Financial Resources Net of CCC $D = (B - C)$	Requirement for the Subject Contract (E)	Results: Yes or No [D must be greater than or equal to E] (F)
_____				
(Name of Bidder)					

Form FIN - 5B: For Joint Ventures

For Joint Ventures: (A)	Total Available Financial Resources from FIN - 3 (B)	Total Monthly Financial Requirement for Current Contract Commitments (CCC) from FIN - 4 (C)	Available Financial Resources Net of CCC $D = (B - C)$	Requirement for the Subject Contract (E)	Results: Yes or No [D must be greater than or equal to E] (F)
One Partner:					
_____				
(Name of Partner)					
Each Partner:					
_____				
(Name of Partner 1)					
_____				
(Name of Partner 2)					
_____				
(Name of Partner 3)					
All partners combined	$\Sigma D =$ Sum of available financial resources net of current contract commitments for all partners		$\Sigma D =$ _____	

Note -

Form FIN - 5 is made available for use by the bidder as a self-assessment tool, and by the Employer as an evaluation work sheet, to determine compliance with the financial resources requirement as stated in 2.3.3. Failure to submit Form FIN - 5 by the Bidder shall not lead to bid rejection.

Form EXP – 1: Contracts of Similar Size and Nature

Fill up one (1) form per contract. Each contract shall be supported by documents such as Signed Contract Agreement or Certificate of Completion of the Works.

The exchange rate to be used to calculate the value of the contract for conversion to a specific currency shall be the selling rate of the Borrower’s Central bank on the date of the contract.

Contract of Similar Size and Nature		
Contract No of	Contract Identification	
Award Date	Completion Date	
Total Contract Amount	PHP	
If partner in a Joint Venture or Subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer’s Name Address Telephone/Fax Number E-mail		
Description of the Similarity in Accordance with Criterion 2.4.1 of Section 3 (Evaluation and Qualification Criteria)		

Form EXP - 2: Construction Experience in Key Activities

Fill up one (1) form per contract. Each contract shall be supported by documents such as Signed Contract Agreement or Certificate of Completion of the Works.

Each Bidder must fill out this form.

If complied by Specialist Subcontractor, each Specialist Subcontractor must fill out this form and provide the Specialist Subcontractor's name:

Specialist Subcontractor: _____

Contract with Similar Key Activities		
Contract No of	Contract Identification	
Award Date	Completion Date	
Total Contract Amount	PHP	
If partner in a Joint Venture or Subcontractor, specify participation of total contract amount	Percent of Total	Amount
Employer's Name Address Telephone Number Fax Number E-mail		
Description of the Key Activities in Accordance with Criterion 2.4.2 of Section 3 (Evaluation and Qualification Criteria)		

Form EXP – 3: Specific Experience in Managing Environmental, Health and Safety Aspects

Fill out one form per contract.

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name:

Joint Venture Partner: _____

1. Key Requirement no 1 in accordance with Criterion 2.4.3 of Section 3: _____

Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Subcontractor <input type="checkbox"/>
Total Contract Amount			US\$	
Details of relevant experience				

2. Key Requirement no 2 in accordance with Criterion 2.4.3 of Section 3: _____

3. Key Requirement no 3 in accordance with Criterion 2.4.3 of Section 3: _____

Form EXP – 4: Environmental, Health and Safety Certification

Please provide the following information:

Availability of the following valid ISO certification or internationally recognized equivalent (equivalency to be demonstrated by the Bidder), and applicable to the worksite:

- Environmental management certificate ISO 14001

Form EXP – 5: Environmental, Health and Safety Documentation

Please provide the following information:

Availability of in-house policies and procedures acceptable to the Employer for EHS management:

1. Existence of an Ethics Charter.
2. Existence of a system for monitoring compliance with EHS commitments for the Bidder's Subcontractors and all its partners.
3. Existence of official company procedures for the management of the following relevant points:
 - Health and Safety on worksites policy and related guidance;
 - Local recruitment and EHS trainings of local staff/subcontractors/local partners; and
 - Waste management practice;

Form EXP – 6: Environmental, Health and Safety Dedicated Personnel

Please provide CV [Form PER-2] of the in-house personnel of the main contractor/Joint Venture partners for the EHS positions specified in Section 6 (Employer's Requirements):

- Department of Labor and Employment (DOLE) Accredited Safety Officer
- Environmental Specialist

Section 5: Eligible Countries

This section contains the list of eligible countries.

1. Afghanistan
2. Armenia
3. Australia
4. Austria
5. Azerbaijan
6. Bangladesh
7. Belgium
8. Bhutan
9. Brunei Darussalam
10. Cambodia
11. Canada
12. People's Republic of China
13. Cook Island
14. Denmark
15. Fiji
16. Finland
17. France
18. Georgia
19. Germany
20. Hong Kong, China
21. India
22. Indonesia
23. Ireland
24. Italy
25. Japan
26. Kazakhstan
27. Kiribati
28. Republic of Korea
29. Kyrgyz Republic
30. Lao PDR
31. Luxembourg
32. Malaysia
33. Maldives
34. Marshall Islands
35. Federated States of Micronesia
36. Mongolia
37. Myanmar
38. Nauru
39. Nepal
40. Netherlands
41. New Zealand
42. Niue
43. Norway
44. Pakistan
45. Palau
46. Papua New Guinea
47. Philippines
48. Portugal
49. Samoa
50. Singapore
51. Solomon Islands
52. Spain
53. Sri Lanka
54. Sweden
55. Switzerland
56. Taipei, China
57. Tajikistan
58. Thailand
59. Timor-Leste
60. Tonga
61. Türkiye
62. Turkmenistan
63. Tuvalu
64. United Kingdom
65. United States
66. Uzbekistan
67. Vanuatu
68. Viet Nam

Section 6: Employer's Requirements

I. BACKGROUND/RATIONALE

The Asian Development Bank (ADB) has approved a \$ 100 million loan to the Government of the Philippines (GOP) to finance the Supporting Innovation in the Philippine Technical and Vocational Education and Training System (SIPTVETS) Project. The project will support the modernization of the Philippines technical and vocational education and training (TVET) system, so that it can respond effectively to an increasingly globalized, technology-and knowledge-driven market. It will improve the quality of skilling programs, upgrade training facilities and equipment, and build the capacity of trainers to impart the higher-level skills and competencies demanded by the job market. The project will help the Technical Education and Skills Development Authority (TESDA), the Philippine TVET agency, to undertake institutional reforms and forge stronger engagement between public TVET institutions and industry, thereby enhancing the employability of Filipino youth and workers.

The project is aligned with the following impacts: global competitiveness and readiness of the Filipino mid-level workforce strengthened, and TVET used more effectively as an instrument for social equity for workforce inclusion and poverty reduction. The project will have the following outcome: access to quality TVET programs and employability of TVET graduates improved. The project will achieve this outcome by supporting the following outputs: (i) The Philippines skills development ecosystem modernized; (ii) TVET training made more demand-driven and industry-led; (iii) selected TESDA Technology Institutions (TTIs) upgraded and modernized into industry-responsive innovation centers; and (iiii) TESDA's institutions capacity strengthened.

Under the SIPTVETS Project, seventeen (17) TTIs will be upgraded, one per region in the entire country. For Region XII, General Santos National School of Arts and Trades has been identified as one of the beneficiaries of the project based on demand and supply considerations. The City of General Santos is a 1st class highly urbanized city in the Region XII (SOCCSKSARGEN). The city is located geographically within South Cotabato but is autonomous with the province. According to the 2020 census, the City of General Santos has a population of 697,315. The focus area of innovation for General Santos National School of Arts and Trades is **Warehousing and Logistics Management**.

The procurement and implementation of the project will be undertaken by TESDA in accordance with ADB's updated Procurement Policy (Goods, Works, Non-consulting and Consulting Services) and ADB's Procurement Regulation for ADB Borrowers (Goods, Works, Non-consulting and Consulting Services).

II. OBJECTIVE

The project aims to upgrade and modernize the Regional TVET Innovation Center which adopt climate-smart, gender responsive and accessible design that will provide the platforms for learning innovation in technical education and training, technology research and experimentation, enterprise education and training for Region XII through **General Santos National School of Arts and Trades**.

III. EXPECTED OUTPUT

The project is expected to deliver the following:

1. Detailed design and construction of one (1) concrete two-storey Regional TVET Innovation Center (**RTIC**) constructed in accordance with the approved architectural and engineering

design drawings, technical and materials specifications, and design objectives of Output No. 3 under the SIPTVETS project; and,

2. Rehabilitation / renovation of the General Santos National School of Arts and Trades' existing selected building and facilities.

IV. PROJECT DESCRIPTION

The project refers to the design and construction of a Regional TVET Innovation Center (RTIC) for General Santos National School of Arts and Trades and the rehabilitation / renovation of its existing facilities / building / structures. The said innovation center is proposed to have two (2) floors and one (1) mezzanine with an approximate total floor area ranging from **2,670-3,000 square meters**. It shall be designed to meet the proposed requirements of the project. The building is expected to be structurally sound to have a long possible lifespan, able to withstand adverse weather conditions, have green and sustainable design features, and be architecturally attractive.

This RTIC beneficiary institution will offer higher level national certificate courses, diplomas, and joint programs with industry in emerging technologies, and to support applied research and development and business incubation.

The proposed facilities for this project include Applied Research, Showcase and Display Area, Intelligent Warehousing Work / Demonstration Area, Research Laboratory, Prototyping Area, Meeting Area, Multi-disciplinary Fabrication workshop, Multi-function Hall, Incubation Rooms, Processing and Packaging Facility, Robotics Area, Researcher's Lounge, Computer Room for Research and Development, Lecture Room, trainer's room, among others.

The facilities for utilities include Control Audio-Video Room, Telco Room, Electrical Room and CCTV/Security Room, Fire Control Center, Wash Room, among others. Other spaces include building Administration Office, Front Desk, Reception Area, Lobby, Archive/Supplies, Bar Café, etc.

The project scope also include the rehabilitation and renovation of existing structures / buildings within General Santos National School of Arts and Trades compound. The rehabilitation and renovation shall prioritize but shall not be limited to structural retrofitting and upgrading of electrical and auxiliary, fire safety and protection, utilities, improvement of air circulation / ventilation and refurbishment of interior and exterior finishes.

V. PROJECT SITE

1. Location

The proposed new building and rehabilitation works will be at General **Santos National School of Arts and Trades Region 12: Tiongson St., Lagao, General Santos City**

Address: Tiongson St., Lagao, General Santos City
Coordinates: 6°07'54 7"N 125°10'57 1"E (6.131858, 125.182514)

2. Preliminary Investigations

The Contractor shall conduct the necessary investigations as basis in the detailed design and rehabilitation/renovation works, to wit:

- a. Existing Boundaries
- b. Terrain, Line, and Grade Survey
- c. Location and Orientation of Facilities, Utilities

- d. Soil and Geotechnical Investigations
- e. Hydrological
- f. Hydraulic
- g. Seismic
- h. Existing Environmental Conditions
- i. Other Hazards

VI. PROJECT DEFINITION

The Contractor shall design and construct a new multi-story Innovation Center that is responsive to the needs of the end users, satisfies the requirements for the operations of TESDA, increases the staff and student productivity, and is aesthetically elegant which were based on the TESDA approved concept design.

The design and construction of the new building must adhere to the Philippines' national building and structural code/s and integrate climate change resilience and green building features, e.g., type of construction and materials, building orientation, elevation, drainage, roofing system, and windows.

It must also take into consideration climate factors such as the amount of rainfall, frequency and intensity of typhoons as well as wind and solar direction. In order to ensure sufficient natural light and ventilation to the building, adequate setbacks on all sides must be met. Owing to the necessity of providing vehicular access for material delivery, the setbacks must be in excess of those required by the law.

The Contractor shall also inspect the existing structures/building around the TESDA site, provide the as-built plans, and design and rehabilitate in accordance with the latest building codes and provisions to ensure the safety and comfort of the users.

The repair works of TTIs cover the improvement of dilapidated architectural members and major structural retrofitting or general rehabilitation works. The Contractor to investigate whether the upgrading of existing water supply system, drainage, and sewerage system to meet environmental, electrical, and safety requirements are necessary.

The Contractor is expected to complete the design and construction / renovation or rehabilitation works, that is ready for use, occupancy and compliant with the latest Philippine Codes and Laws. **The conceptual plans and initial site survey should act as a guide only for further site verification and detailing.**

All Bidders for this project shall first visit and examine the site, and verify and investigate the existing conditions that may affect the works to be carried out as described above. The Bidder is expected to submit proposed solutions of anticipated problems (if any) to the Employer and attach their certificate of appearance issued by the center administrator of the project site as part of its technical bid. The letter request for site inspection shall be submitted thru email at gnsat@tesda.gov.ph and copy furnished bacsecretariat_siptvets@tesda.gov.ph .

VII. PROJECT DURATION (DESIGN AND CONSTRUCTION AND REHABILITATION SCHEDULE)

The project shall be implemented within the duration specified below.

PARTICULARS	SCHEDULE
Surveys, Geotechnical Report, Site Inspections, Updated Schematic Design Phase	Ninety (90) Calendar Days upon the issuance of the Notice to Proceed (NTP)
Detailed Design Phase	Forty-five (45) Calendar Days
Application of Permits	Fifty (50) Calendar Days

Construction Phase (Innovation Center and Rehabilitation)	Three Hundred Thirty (330) Calendar Days
Post-Construction Phase	Thirty (30) Calendar Days
CONTRACT DURATION	545 Calendar Days (18 Months)

The estimated duration to complete the project is **545 Calendar Days**.

To ensure the completion of the project within the construction schedule, nightshift, overtime and holiday work are encouraged **subject to the request from the DESIGN AND BUILD CONTRACTOR and approval by TESDA.**

VIII. MODE OF PAYMENT

3. **The Payments process and procedure shall be in accordance with current and updated ADB's Loan Disbursement Handbook and other arrangements agreed upon between TESDA and ADB, and the Contract.**
4. TESDA, upon submission of a written request by the DESIGN AND BUILD CONTRACTOR, make an advance payment or mobilization fund not exceeding Fifteen Percent (15%) of the contract amount and shall be paid no later than sixty (60) calendar days upon submission of an advance payment security in the same amount and in the form of an irrevocable letter of credit or unconditional Bank Guarantee issued by a Universal or Commercial Bank.
5. The Advance Payment shall be subject to the following conditions:
 - a) 50% of the amount upon submission of an Advance Payment Guarantee in the form of Bank Guarantee; and
 - b) 50% of the amount upon submission of proof of mobilization of equipment and personnel into the project site.
6. Repayment of Advance Payments shall be 15% from each progress billing until fully recouped;
7. The DESIGN AND BUILD CONTRACTOR shall not claim additional payments or damages for any delay or extra expense caused by encountering construction or materials other than the anticipated of different from those indicated. Payment for such costs as specified in the contract document, provided that the cumulative amount of the variation order does not exceed ten percent (10%) of the original project cost.
8. In consideration of the works to be performed under this TOR, TESDA shall pay the DESIGN AND BUILD CONTRACTOR the contract amounts inclusive of all applicable taxes, subject to withholding tax as required by law.
9. Payments shall be made through submission of Progress Billings. Progress Billings shall be based on percentages of actual work accomplished as indicated in the Statement of Work Accomplished (SOWA), S-Curve, and photo documentation to be submitted by the DESIGN AND BUILD CONTRACTOR, verified and certified by TESDA's-Design and Build Committee:

No.	Activity / Milestone	Percentage of Payment	Remarks
1	Advance Payment / Mobilization (Notice to Proceed)	15%	Advance payment shall be made subject to the conditions stipulated in this TOR and the Contract
2	Final approval and issuance of Permits, and Approval of Plans	75% - payment for each milestone shall be based on actual percent accomplishment, and duly approved and validated progress billings	Approved Detailed Architectural and Engineering Design (DAED), Construction Plans, Specifications, Estimates (BOQ/BOM, DUPA), Technical and Material Specifications, Geotechnical Reports, Surveys, Permits, etc.
3	Site development, site access, for the rehabilitation/renovation		To be validated by TTI Administrator, Resident Engineer and PMO
4	Work completed based on Statement of Work Accomplished (SOWA) and S-Curve upon progress billings		To be validated by TTI Administrator, Resident Engineer and PMO
5	Completion of Architectural Finishes, conduct of initial testing, commissioning, and final energization of utilities.		To be validated by TTI Administrator, Resident Engineer and PMO
6	As-built Plans, Completion of areas for rehabilitation/renovation		To be validated by TTI Administrator, Resident Engineer and PMO
7	Completion of the Project subject to the satisfaction/approval of the PMO and Inspection and Acceptance Committee (IAC) of TESDA and final submission and acceptance of approved As-built Plans (Final Payment)		10% of the Total Project Cost

10. The Final Payment shall be released by the TESDA after the approval of the As-built Plan and the issuance of Certificate of Final Completion by the Project Director of TESDA's Project Management Office or its duly authorized representative.

The As-Built Plans must be submitted to the TESDA's Project Management Unit Office – Engineering Unit Section within Ten Calendar Days (10CD) after the release of the Certificate of Final Completion.

11. Progress Payments are subject to retention of Ten Percent (10%) referred to as “Retention Money”. Such retentions shall be based on the Amount Due in each Progress Billings prior to the recoupment of the advance payment. The release of Retention Money shall be made upon issuance of the Certificate of Final Acceptance.
12. Progress Payments shall be adjusted as follows:
 - a) Cumulative Value of the work previously certified and paid for;
 - b) Portion of the advance payment to be recouped for the period;
 - c) Retention Money;
 - d) Amount to cover third party liabilities if any; and,
 - e) Amount to cover uncorrected discovered defects in the works, if any.
13. Progress Billings shall be constantly supported by key plans of accomplishment claimed, photographs, summary of test results, and other supporting documents as may be required by TESDA or its duly authorized representative.
14. TESDA reserves the right to withhold payment in case TESDA has a claim against the DESIGN AND BUILD CONTRACTOR's works for poor workmanship.

IX. WARRANTY

15. **Defects Liability Period** which shall be **one (1) year** from the issuance of the Certificate of Final Completion up to the issuance of the Certificate of Final Acceptance:
 - i. The DESIGN AND BUILD CONTRACTOR shall undertake the repair works, at his own expense, of any defect or damage to the structure or any part thereof on account of the use of materials of inferior quality. The DESIGN AND BUILD CONTRACTOR must commence the repair works within seven (7) calendar days from the time TESDA issued an order to undertake repair. The period to complete, test and commission the repaired work will depend on the magnitude of the repair works to be done, but in no case shall exceed Ninety (90) days from issuance of the order to undertake repair. In case of failure or refusal to comply with the order, TESDA shall undertake such repair works and shall be entitled to full reimbursement of expenses incurred therein upon demand and the forfeiture of the Performance Security.
 - ii. TESDA may also offset any amount due to the DESIGN AND BUILD CONTRACTOR to recover the costs of the repair works described above.
16. **Warranty against Structural Defects and Failures** which shall take effect from the issuance of the Certificate of Final Acceptance
 - i. The DESIGN AND BUILD CONTRACTOR shall be liable for Permanent Structures: **Fifteen (15) years**; Building of types IV and V as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with the relevant structural codes;
 - ii. The DESIGN AND BUILD CONTRACTOR shall be held responsible for structural defects/failures that arise due to fault attributable to improper construction, use of inferior quality/substandard materials, and any violation of the construction plans and specifications;

- iii. The DESIGN AND BUILD CONTRACTOR shall guarantee or provide **warranty security** to TESDA effective for **one (1) year** from the date of issuance of Certificate of Final Acceptance for the completed works against structural defects and failure for its satisfactory performance vis-à-vis the prescribed minimum performance specifications during the structure's lifetime.
 - iv. In case of structural defects/failure occurring during the applicable warranty period, TESDA shall undertake the necessary restoration or reconstruction works and shall be entitled to full reimbursement of expenses incurred therein upon demand, without prejudice to the filing of appropriate civil, and/or criminal charges against the responsible persons of the DESIGN AND BUILD CONTRACTOR as well as the forfeiture of warranty securities posted in the favor of TESDA.
17. Construction materials with warranties above **two (2) years** must be itemized and completed with its specifications upon a written document separately to be submitted to TESDA;

X. QUALIFICATION OF DESIGN AND BUILD CONTRACTOR AND OTHER REQUIREMENTS

1. The DESIGN AND BUILD CONTRACTOR must have an active accreditation and certification from the Philippine Contractors Accreditation Board (PCAB) as a qualified DESIGN AND BUILD CONTRACTOR with at least **PCAB License Category "AA", Size Range "Medium B"**; and
2. The bidder's must proposed key personnel with the following minimum qualifications:

Key Personnel	Years of General Experience Required	Qualifications/ Documents Required
One (1) Construction / Project Manager	Seven (7) years	<ul style="list-style-type: none"> - Licensed Engineer / Architect - Curriculum Vitae - Valid and Current Professional Identification Card issued by the Professional Regulation Commission (PRC)
One (1) Site / Project Engineer	Five (5) years	<ul style="list-style-type: none"> - Licensed Civil Engineer - Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
One (1) Architectural Design Manager	Ten (10) years	<ul style="list-style-type: none"> - Licensed Architect - Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
One (1) Architect (Architecture In-Charge of Construction	Seven (7) years	<ul style="list-style-type: none"> - Licensed Architect - Curriculum Vitae, Valid, and Current Professional

		Identification Card issued by PRC.
One (1) Structural Design Engineer	Ten (10) years	<ul style="list-style-type: none"> - Licensed Structural Engineer - Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
One (1) Electrical Design Engineer	Ten (10) years	<ul style="list-style-type: none"> - Licensed Professional Electrical Engineer - Curriculum Vitae, Valid and Current Professional Identification Card issued by PRC.
One (1) Mechanical Engineer	Five (5) years	<ul style="list-style-type: none"> - Licensed Professional; Mechanical Engineer - Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
One (1) Quantity Surveyor	Five (5) years	<ul style="list-style-type: none"> - Licensed Engineer - Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
One (1) Sanitary Engineer	Five (5) years	<ul style="list-style-type: none"> - Licensed Sanitary Engineer - Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
One (1) Environmental Specialist	Five (5) years	<ul style="list-style-type: none"> - Curriculum Vitae, - With proof of relevant experience as an environmental specialist for construction projects (<i>preferably in building construction / renovation</i>)
One (1) Health, Safety and Environment Officer	Five (5) years	<ul style="list-style-type: none"> - Curriculum Vitae, - Valid Certificate in Occupational and Health Safety Course
One (1) Quality Assurance and	Five (5) years	<ul style="list-style-type: none"> - Licensed Civil Engineer

Quality Control Engineer		- Curriculum Vitae, Valid, and Current Professional Identification Card issued by PRC.
Two (2) CAD Operators (Draftsmen)	Three (3) years	- Curriculum Vitae, or TESDA National Certificate (NC II)

3. The DESIGN AND BUILD CONTRACTOR shall provide the following **minimum key** equipment.

Equipment	Capacity	Minimum No. of Units
Backhoe w/ breaker	0.80 cu.m.	2
Dump Truck	12 cu. Yard	2
Plate Compactor	3 Hp	3
Concrete Vibrator	Flexible shaft type 2" head ϕ with 5 amperes gasoline drive unit	4
Bagger Mixer	4-6 cu. Ft./min	3
Welding Machine	Electric driven/500 amp	3
Water Pump	100 mm suction ϕ 1800 lpm	3
Generator Set	150 - 200 kwA	2
Chainsaw	7' reach, 9" std. blade	3
Air Compressor w/ 2 jack hammer		3
Jack Hammer	Electric	2

While **not subject for evaluation**, the DESIGN AND BUILD CONTRACTOR shall also provide and ensure the availability of the following equipment and tools at the site **at all times**.

- a. Bulldozer
- b. Mobile Crane
- c. Material Hoist
- d. Motorized Road Grader
- e. Bar Bender
- f. Bar Cutter
- g. Cutting Outfit
- h. Scaffolding/H-frames and accessories
- i. Minor Tools for:
 - Excavation
 - Embankment
 - Doors and Windows
 - Steel Works
 - Concreting works
 - Masonry Works
 - Tile Works
 - Painting Works
 - Floor Finish
 - Ceiling Works

- Canopy works

And all other equipment and tools necessary for the construction development of the facility.

XI. SUBMITTALS AND DELIVERABLES

The DESIGN AND BUILD CONTRACTOR shall submit a Detailed Architectural Concept, Detailed Design and Construction Plans, and Structural Design Report. All submittals are subject for review in accordance with the provisions of this TOR.

A. GENERAL CODES AND STANDARDS

Install the work under this TOR according to the requirements of the latest Philippine Codes, Laws, and Ordinances. Nothing contained in these specifications, or shown in the conceptual drawings shall be construed as to conflict with the national and local ordinances or laws governing the installation of the Work/Project. **All such laws, codes, and ordinances are hereby made part of these Specifications.** The DESIGN AND BUILD CONTRACTOR is required to meet the requirements thereof.

The design, specifications and methodology shall conform to, but shall not be limited to the following standards set by the:

1. National Building Code of the Philippines (NBCP, PD 1096),
2. Philippine Green Building Code, June 2015 Edition (A referral code of NBCP)
3. National Structural Code of the Philippines, (NSCP), Latest Edition
With applicable US Standards, as applicable:
 - i. American Institute of Steel Corporation (AISC)
 - ii. American Concrete Institute (ACI)
 - iii. American Iron and Steel Institute (AISI)
 - iv. American Welding Society (AWS)
 - v. American Society for Testing and Materials (ASTM)
4. Revised Fire Code of the Philippines (RA 9514) Philippine Electrical Code, Latest Edition
5. Philippine Mechanical Code, Latest Edition
6. Revised Plumbing Code of the Philippines (RA 1378),
7. BP 344 or Accessibility Law and its Latest and Amended Implementing Rules and Regulation (IRR)
8. Sanitation Code of the Philippines, Latest Edition
9. Applicable National and Local Regulations and Ordinances
10. Republic Act 6716 about Rainwater Collection System
11. The Water Code of the Philippines (PD 1067)

B. SITE INVESTIGATIONS, SURVEYS, REPORTS PRIOR TO UPDATED SCHEMATIC DESIGN STAGE

1. Surveys and investigations of the site for the new Innovation Center includes boundaries of the property, elevations, existing trees and vegetation, contours (at 0.50m intervals) - Relocation / Lot Plan signed and sealed for Building Permit
2. Soil Test, Geotechnical Report – Signed and sealed for Building Permit
3. Actual Site Verification – location, As-built dimensions, floor elevations and other pertinent data on existing buildings and improvements (roads, parking areas, mature trees and existing utility lines (e.g., water, power, telephone, internet, drainage, sewer, etc.).

C. ARCHITECTURAL CONCEPT (Update Schematic)

The DESIGN AND BUILD CONTRACTOR shall submit to TESDA an Updated and Architectural Concept within (30) calendar days upon receipt of the Notice to Proceed (NTP) but not necessarily limited to the following:

1. Updated Site Development Plan
2. Rendered Exterior Perspectives (4 sides)
3. Updated Floor Plans (scaled, complete with dimensions)
4. Elevations
5. Rendered Cross and Longitudinal Sections
6. Rendered Interior Perspectives of the following:
 - a. Main Lobby and Main Building
 - b. Workshop Areas
 - c. Incubation Rooms
 - d. Display / Showcase Area
 - e. Mezzanine
 - f. Typical Meeting Room
 - g. Typical Rest Room
7. Aerial Perspective of the main Building
8. Tabulated Summary of Floor Area of the Proposed Project
9. Updated List of documentation of areas for rehabilitation / renovation of existing structures/building within the TTI proposed scope of work
10. Initial Cost Estimate
11. Soft Copies in CAD and Sketch Up file minimum 2017 version, JPG/PNG file for perspectives
12. Hard Copy in A3

D. DETAILED ENGINEERING DESIGN AND CONSTRUCTION PLANS FOR THE CONSTRUCTION OF RTIC AND REHABILITATION OF EXISTING STRUCTURES / BUILDINGS WITHIN THE TTI

The DESIGN AND BUILD CONTRACTOR shall submit the detailed engineering design and updated architectural plans following the value engineering or updated from engineering layout upon the approval of detailed architectural concept but not limited to the following minimum requirements and/or as prescribed by the Local Building Official of the Local Government Unit (LGU).

18. ARCHITECTURAL PLANS

- a) Site Development Plans
- b) Floor Plans with Furniture (as prescribed in the space matrix and equipment list)
- c) Elevations of All Sides
- d) Building Sections
- e) End Bay Sections
- f) Reflected Ceiling Plans
- g) Schedule of Doors and Windows
- h) Floor Covering Layout
- i) Finishes Schedule
- j) Elevator Elevation
- k) Elevator Shaft Details
- l) Stair Details
- m) Roof Slab Plan and Roof Plan (if applicable)
- n) Canopy Details
- o) Vehicle Driveway / Ramp Details

- p) Pedestrian Ramp Details
- q) Wall Façade Details
- r) Main Building Electrical-Mechanical-Auxiliary Plan
- s) Main Lobby Blow-up Plan including Ceiling Plan, Elevations, and Sections
- t) Conference Room, Meeting Room, Incubation Room Blow-up Plan Including Ceiling Plan, Elevations and Sections
- u) Main Building Furniture Layout Plan with Schedule of Office Furniture
- v) Comfort Rooms, Toilets and Pantry Blow-up detailed Plan
- w) Other Architectural Miscellaneous Details

19. STRUCTURAL AND CIVIL PLANS

- a) Foundation Plan and Details
- b) Slab on Grade Plans and Details
- c) Floor Framing Plan and Details
- d) Roof Deck Framing Plans
- e) Roof Framing Plans and Details
- f) Footing, Columns, Slab, Beams and Girder Details
- g) Shear Wall Details
- h) Schedule of Reinforcement
- i) Structural General Designs and General Notes
- j) Other Structural Details

20. ELECTRICAL PLANS

- a) Electrical General Notes, Legends/ Symbols and Specifications
- b) Lighting Layout Plans
- c) Power and Convenience Outlet Layout Plans
- d) Grounding System Layout Plans
- e) Schedule of Loads
- f) Single Line Diagram
- g) Short Circuit Analysis
- h) Power House Plans
- i) Service Entrance Plans
- j) Air-conditioning System Power Layout Plans
- k) Equipment and Machineries Power Layout Plan
- l) Other Electrical Miscellaneous Details

21. MECHANICAL PLANS

- a) Mechanical General Notes and Specifications
- b) Elevator Plan, Sections and Elevations
- c) Elevator Details
- d) Pumps and Motor Layout Plans
- e) Pump and Motor Details
- f) Air-conditioning System Layout Plan
- g) Air-conditioning System Details
- h) Fire Sprinkler System Layout Plans
- i) Fire Sprinkler System Details
- j) Smoke Detection and Fire Alarm Layout Plans
- k) Smoke Detection and Fire Alarm Details
- l) Mechanical Room Plans and Details
- m) Other Mechanical Miscellaneous Details

22. SANITARY AND PLUMBING

- a) Sanitary and Plumbing General Notes, Legends/ Symbols and Specifications
- b) Water Line Layout Plans
- c) Sanitary and Plumbing Layout Plans
- d) Plumbing System Isometric Diagram
- e) Tank and Cistern Plans and Details
- f) Toilet and Comfort Room Fixture Layout Plans
- g) Other Sanitary and Plumbing Miscellaneous Details

23. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) PLANS

- a) ICT General Notes and Specifications
- b) Data (LAN) Layout Plans
- c) CCTV Layout Plans
- d) Public Address Layout Plans
- e) Telephone System Layout Plans
- f) Server Room Details
- g) Audio and Video System for Conference/Training/Meeting Rooms
- h) Other ICT Miscellaneous Details

24. REPAIR WORKS OF TESDA TECHNOLOGY INSTITUTIONS (TTIs)

The repair works of TTIs cover the improvement of dilapidated architectural members, major structural retrofitting, or general rehabilitation works. Works include upgrading of existing water supply system, drainage, and sewerage system to meet environmental, electrical, and safety requirements. Attached is the initial assessment of the rehabilitation and renovation works marked as Annex G and H.

E. DETAILED CONSTRUCTION REPORTS

The DESIGN AND BUILD CONTRACTOR shall submit the following Reports as part of the construction documents for the construction and rehabilitation.

- 1. Structural
 - 1.1. Design Analysis
 - 1.2. Structural Stability Certificate
- 2. Electrical Design Analysis
- 3. Detailed Bill of Materials and Cost Estimates
- 4. Construction PERT-CPM and Bar Chart, S-Curve
- 5. Detailed Materials Specifications and Finishes
- 6. Environmental Management Plan
- 7. Fire and Safety Compliance and Commissioning Report and Fire Safety Maintenance Report
- 8. All other documents necessary in line with the construction and rehabilitation as maybe required by TESDA

All detailed reports shall be prepared on a Legal-size bond paper soft bounded document, signed and sealed. Soft copies such as but not limited to Word File, Excel File, CAD, and PDF shall be submitted as well.

F. AS-BUILT PLANS

The DESIGN AND BUILD CONTRACTOR shall prepare and submit signed and sealed As-built Plans based on the actual construction accomplishments and emplacement of

materials, equipment, furnishings, utilities and other information that is necessary for the operations and maintenance of the buildings.

The DESIGN AND BUILD CONTRACTOR shall also submit operation and maintenance manuals of the emplaced equipment and machineries for the operations and maintenance personnel.

G. DETAILS OF SUBMITTALS AND DELIVERABLES (SIGNED AND SEALED PLANS)

1. Pre-detailed Design Phase:
 - Detailed Architectural Concept:
 - a) Number of Copies - 5 copies/sets
 - b) Document Size - A3 Sheets
 - c) Soft Copy - CAD, SKP, PDF, PNG

2. Detailed Design and Construction Plans
 - a) Number of Copies - 10 copies/sets
 - b) Document Size - 24" x 36" White/Blue Print Copy
 - c) Soft Copy - CAD 2017, SKP, PNG, PDF

3. Detailed Reports
 - a) Structural Design Report
 1. No. of Copies - 5copies/sets
 2. Document Size - 8.5" x 14" Legal Size
 3. Specifications - Book bound
 4. Soft Copy - Word, PDF

 - b) Detailed Bill and Materials and Cost Estimates
 1. No. of Copies - 5copies/sets
 2. Document Size - 8.5" x 14" Legal Size
 3. Specifications - Book Bound
 4. Soft Copy - Excel and PDF

 - c) PERT – CPM
 1. No. of Copies - 5copies/sets
 2. Document Size - 8.5" x 14" Legal Size
 3. Soft Copy - Applicable Software

 - d) Detailed Estimates, DUPA, Material Specifications and Finishes, Environmental
 1. No. of Copies - 5copies/sets
 2. Document Size - 8.5" x 14" Legal Size
 3. Specifications - Book Bound
 4. Soft Copy - Excel, Word and PDF

 - e) Occupancy Permit (As-built, Testing and Certifications)
 1. No. of Copies - 10copies/sets
 2. Document Size - 24" x 36" White/Blue Copies
 3. Soft Copy - CAD 2017, PDF

Schematic / conceptual floor drawings showing the overall dimensions and sizes, materials specifications, and space matrix, in relation to the Works are supplied in this TOR. The General Description of the Works is provided for the guidance and information of the DESIGN AND BUILD CONTRACTOR and shall not be construed as the final and definitive description of the full scope of the Works to be carried out under this TOR.

XII. DESIGN CONCEPT

1. Site Development

Site development conceptual design shall be responsive to the natural environment and infrastructure and land developments shall blend to the existing ecological built-in environment.

Site development shall include driveway pavements, perimeter lights, green and landscaping, storm drainage, loading and unloading bay, sidewalk. Vehicle and traffic flow should be considered in the design. Ornamental plants and trees shall be carefully selected for the landscaping and green designs.

2. Architectural Design Concept

Green designs and sustainable materials are the top advocacies in architectural practice, which shall be incorporated in this particular project. Proper building and spatial orientation, strategic building envelop designs, lighting and acoustics and natural lighting and ventilation shall be considered in the designs.

Spatial allocations shall be in accordance to the minimum space requirements as indicated in **Annex B**. Spatial designs shall conform to the operations and organizational set up of General Santos National School of Arts and Trades / TESDA. Architectural interior shall include floor covering design, wall finishes, ceiling finishes, lighting, acoustic considerations and built-in furniture. Interior space should be conducive for working and shall enhance productivity.

The building shall have a tempered glass façade design. The rooms' front wall partitions shall be glass with frameless glass doors. Attached are the Schematic / Conceptual plans and material finishes marked as **Annexes A, and C**.

The Intent of the Conceptual Plans and initial materials specifications is to prescribe a guide and basis to which the DESIGN AND BUILD CONTRACTOR intend to do in full compliance with the contract documents.

3. Structural Design Concept

Structural design shall include foundation, columns, beams, roof framing, roof deck design, floor framing, slab, stairs and shear walls. Likewise, designers shall adopt conservative and economical design without compromising the safety factor and structural integrity. Conventional structural methodology shall be applied with the integration of contemporary approach for the conceptualization of structural design. Use at least 150mm and/or 200mm thick for slabs to ensure the capacity for heavy live load and equipment load.

4. Electrical Design Concept

Electrical design shall include lighting design, power requirements, back-up power requirements, and power house/room. The use of power saving fixtures is recommended. Also, electrical design should consider provisions for future expansions.

5. Mechanical Design Concept

Mechanical design shall include elevator, fire protection and suppression system, pumps and motors, and air-conditioning. The use of power saving equipment is recommended. Elevator capacity should be considered and shall conforms to the operation of General

Santos National School of Arts and Trades / TESDA. Elevator unit must be machine room less. Consider appropriate ventilation and temperature requirements especially for the cold storage and processing/packaging rooms.

6. Information and Communication Technology (ICT) Design Concept

Information and communication technology design concept shall conform to the operations of TESDA and availability within the area/region.

7. Plumbing and Sanitary Design Concept

Plumbing and sanitary design concept shall include water and sanitary line, storm drainage system, septic tank design, sewage treatment plant (STP) system, rain water harvesting system, and comfort room design. The use of low flow furniture and power-saving equipment is recommended. Provisions for future expansion shall be considered.

8. Green Building Concept

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The principle shall be applied during design stage of buildings and site. Sustainable development is simply the design of buildings and sites using sustainable materials and systems, which do not deplete the earth's natural resources, are renewable, usually recyclable, easily maintained and long-lasting or those that continue to capably function during the entire life-cycle of a building.

Energy Efficiency

The minimization of energy consumption shall be incorporated in the buildings electrical design. The following are methods, as applicable, shall be incorporated in the design. Further, the DESIGN AND BUILD CONTRACTOR is encouraged to introduce more alternative and innovative ways to reduce energy consumption.

- a) Passive Cooling Techniques – prevent heat gain of interior and exterior spaces to reduce mechanical cooling loads, by proper orientation of the building, material specifications, use of sun shading devices (louvers), green roofs and others. Induce sufficient airflow to public areas and spaces that do not require mechanical cooling (lobbies, corridors, etc.)
- b) Daylighting Techniques – Reliance on daylight to achieve ideal lighting conditions for spaces at daytime by maximizing window openings and minimizing lighting fixtures. Provide proper switching layout and locations of fixtures to reduce electrical load. Specify lighting fixtures with energy-saving features.
- c) Solar Panels – an alternative power source, to be placed on roof decks. Solar energy will be harnessed by the building by installing panels on the roof. A maximum capacity of 25kw can be generated, which will be used for lighting the building and perimeter. Adequate access from the second/third floor to the roof area will be provided to allow the maintenance of solar panels and the roofing system. Rainwater harvesting shall also be done through collection tanks, and after filtration shall be used for irrigation and flushing.

Water Conservation

The minimization of water consumption shall be incorporated in the buildings mechanical design. The following are methods, as applicable, shall be incorporated in the design. Further, the DESIGN AND BUILD CONTRACTOR is encouraged to introduce more alternative and innovative ways to reduce water consumption.

- a) Waste Water Recycling – reuse wastewater from lavatories and kitchen sinks as gray water for flushing and watering of plants.
- b) Efficient Toilet Fixtures – specify toilet fixtures (water closets, urinals, faucets, shower fixtures etc.) that consumes less water than conventional standards.
- c) Rainwater Collection – encourage the collection of rainwater at cisterns for non-potable consumption of water such as flushing and watering of plants.
- d) Resilient Greenery – specify hardy plants for the site development that requires minimal watering and maintenance.

Green Building Materials

As much as possible, green-building materials shall be specified in the design. Green-building materials are environmentally responsible materials whose minimal impacts are considered over the life of the product. Green building materials have the following desirable quantities:

- a) Containing recycled content
- b) Raw materials from natural, renewable and plentiful sources
- c) Recyclable and reusable including its packaging material
- d) Durable and does not require frequent replacement or reapplication
- e) Efficiently manufactured in terms of energy, water, and by-products
- f) Non-toxic to its intended users and its manufacturing and construction process
- g) Locally available or requires only a short distance for procurement

9. Materials and Equipment Approval

All materials, finishes and equipment to be installed shall be upon the approval of the PMO and/or TEDSA's authorized representative through **Request for Approval (RFA)**. These shall conform to the latest standards.

The DESIGN AND BUILD CONTRACTOR is required to submit 2 – 3 actual samples, quotations with brands, specifications and brochures attached to the RFA.

10. Design Life

Any new structure shall have a design life of at least fifty (50) years.

Before proceeding with the Architectural and Engineering conceptual / detailed design, the DESIGN AND BUILD CONTRACTOR should arrange a detailed kick-off meeting involving the PMO, TESDA authorized representatives, and/or consultants in order to clarify and agree upon the design requirements and methodology keeping in mind the contract period, and in coordination with other services and architectural and engineering design.

XIII. DETAILED DESIGN WORKS

The DESIGN AND BUILD CONTRACTOR must complete and submit the following:

- 25. Architectural Design
- 26. Floor Layout
- 27. Civil and Engineering Design
- 28. Structural Design

29. Electrical Design
30. Sanitary and Plumbing Design
31. Hydrological and Hydraulic Studies
32. Mechanical Design
33. Information Technology and Computer Network Cabling Design
34. Fire Protection and Suppression Design
35. Materials and Finishing Schedule

1. Architectural Design Works

The DESIGN AND BUILD CONTRACTOR shall have the responsibility to understand the operations and organizational structure of General Santos National. Space allocations and arrangement shall conform to the operations and transaction flow of General Santos National School of Arts and Trades.

Building façade design shall adopt modern contemporary design. Architectural design and finishes shall conform but not limited to the following:

- a) Exterior wall and building envelop, shall be a combination of concrete, pre-fabricated / pre-cast walls, masonry, tempered glass, aluminum composite cladding and steel;
- b) Partitions shall be preferably made of pre-fabricated / pre-cast walls with acoustic and thermal insulation properties, as alternative to concrete hollow blocks (CHB), glass walls, dry-walls, and acoustic engineered walls. Interior and exterior walls shall be autoclaved aerated concrete (AAC) panels;
- c) Roof deck slab shall be plain concrete topping finish with specified waterproofing system;
- d) Use of high-pressure phenolic panels with hard plastic accessories and hardware for toilet and urinal with partitions;
- e) Use acoustic ceiling panels for general office space area;
- f) All furniture shall be modern and functional. Office furniture shall be designed and installed based on the minimum requirements of the office area.
- g) Acoustic and house lighting should be considered in A/V Rooms, meeting rooms, and conference room.
- h) Final window and door locations to be determined after integration of engineering design; and,
- i) Proposed Material Specifications is marked as **Annex C**.

2. Structural Design Works

The DESIGN AND BUILD CONTRACTOR shall perform structural design investigation and analysis and other structural design study for foundation, columns, beams, slabs, shear walls, and other structural member of the project in accordance with the National Structural Code of the Philippines and other prevailing codes. To consider the proposed number of occupants, equipment and use as prescribed in the space matrix and equipment list.

The DESIGN AND BUILD CONTRACTOR shall prepare structural design reports and structural plans based on the design investigation and analysis. The following are the preliminary data to be used for the structural design analysis:

- a) Preliminary Survey and Mapping
- b) Soil Bearing Capacity
- c) Utility Location
- d) Preliminary Noise Level Consideration Factors

The prospective DESIGN AND BUILD CONTRACTOR shall perform necessary preliminary survey, investigations and analysis for the initial structural considerations such as Soil Penetration Test and Analysis, Site Survey and Site Relocation Survey. These preliminary studies shall be the basis in the structural design of the project.

Construction methodology must ensure a monolithic structure for early occupancy. Admixtures shall be used to achieve high early strength of concrete and shall be subject to prior approval by the DESIGN AND BUILD CONTRACTOR Project Manager/Owner, Designer and PMO or TESDA's authorized representative. It shall be shown capable of maintaining essentially the same composition and performance throughout the work as the product used in establishing concrete proportions.

Concrete surface shall be free of defects and smooth finish ready for painting.

The prospective DESIGN AND BUILD CONTRACTOR has to investigate and analyze noise levels near the building in order to properly design insulation and acoustics for studios, A/V Rooms and production rooms.

3. Mechanical Design Works

Mechanical design works shall include air-conditioning system and ventilation system, fire protection and suppression system and machine room less elevator system.

a) Air-conditioning and Ventilation System

The air-conditioning system requirement for the project shall be Variable Refrigerant Flow direct-expansion inverter type system. ACCU units shall be located in an ACU ledge area or roof deck for maintenance.

Comfort rooms, pantries and active storage rooms, electrical, IT, mechanical and equipment rooms shall be provided with exhaust fan ventilating system. Air ventilation shaft shall be galvanized iron and installed above ceiling lines.

ACU units shall be air-cooled, split type, multi system air conditioner consisting of one (1) outdoor unit with multiple indoor units. Indoor units can be controlled systematically and individually. Refrigerant capacity should be considered. All units are subject to testing and commissioning.

b) Fire Protection and Suppression System

Fire protection design shall include the alarm system and smoke detection system, fire hose cabinets, portable fire extinguishers, fire hydrant and fire department connection system. Fire protection and suppression system must be addressable type.

Fire protection and suppression system shall conform to the following standards. Whichever is more stringent and shall pass the local Bureau of

Fire Protection plan review and inspection after construction and rehabilitation.

- i. ASHRAE Handbook
- ii. NFPA 101 – Life Safety Code
- iii. NFPA 10 – Portable Fire Extinguisher
- iv. NFPA 14 – Standard for the Installation of Standpipe and Hose System
- v. Fire Code of the Philippines latest edition

Pump and motor system shall be incorporated in the design. It should accommodate the minimum requirements of the operation. All pumps, jockey and fire pumps should be UL listed and FM approved. Fire protection suppression system is subject for testing and commissioning.

4. Sanitary and Plumbing Design Works

Sanitary and plumbing design shall conform to the following codes and standards, whichever is more stringent and shall pass the plan review of the local building official / LGU.

- i. Revised National Plumbing Code of the Philippines
- ii. Sanitation Code of the Philippines
- iii. ASHRAE Handbook

The DESIGN AND BUILD CONTRACTOR shall design complete plumbing system including potable water line, sewer line, and sanitary system. Storm drain system including fixtures, piping system, fittings and appurtenances, equipment and machinery, facilities and other facility that is necessary for the project. The use of low-flow efficient fixtures and equipment is recommended. Technical drawings and specifications shall be clearly and properly defined.

Sanitary and plumbing design shall conform but not limited to the following:

- i. Sanitary and waste shall be drained by gravity to the sewer line system
- ii. All drainage and sewer line shall be concealed, unexposed covered type system
- iii. Drainage plan shall be properly presented including flow, Access hole, distance, pipe and fitting sizes, invert elevations and other necessary information for the construction
- iv. Catch basin and culvert design shall be in accordance to the design requirements
- v. Waste water from kitchen sink shall be provided with grease trap under the sink
- vi. Septic vault shall be 3-chamber system
- vii. Storm drainage design shall be adequate
- viii. All fixtures shall be individually vented
- ix. Minimum slope for pipes shall not be lesser than 1.5%
- x. All roof gutter drain shall be provided with strainer
- xi. Storm drainage system for floors above grade level shall be drained by gravity to the drainage line at ground level
- xii. Provide hose for site green areas, machine rooms, generator room, pump room, parking area and other utility rooms which requires water supply
- xiii. Water tank / cistern shall be water proofed, subject for leak testing and disinfected

- xiv. Booster pump and pressure tank, if any, shall be provided to meet the required pressure
- xv. Operating of fixtures shall be considered
- xvi. Occupant water demand as per code requirement
- xvii. Provide water pressure gauge per floor
- xviii. Provide isolation gate valve per floor
- xix. Group fixtures shall be provided with isolation gate valve. The design shall be on the basis of the source and volume of water supply, water consumption, piping network, and conveyance in accordance with the applicable laws, rules and regulations governing health, safety and sanitation
- xx. Water storage tank and cistern shall be designed to accommodate fire and domestic uses where the number and size shall be supported with design computations
- xxi. Issuance of water potability

5. Electrical Design Works

The electrical design shall conform to the minimum requirements of the Philippine Electrical Code, Green Building Code and Fire Code of the Philippines, whichever is more stringent and shall pass the plan review of the local building official. The DESIGN AND BUILD CONTRACTOR shall design lighting and power systems including but not limited to the following:

- i. General Lighting
- ii. Convenience Outlet
- iii. Grounding System
- iv. Lightning Arrester
- v. Generator Set and with Room/Enclosure (which include concrete pad, exhaust and fuel day tank provision)
- vi. Circuits and Breakers
- vii. Power Supply System
- viii. Back-up Power System
- ix. Other Facilities that are necessary for the project

The use of energy efficient and energy saving lights are mandatory (i.e., occupancy sensors). Power outlets are strategically located for easy access and convenience based on the proposed furniture/equipment layout. Electrical load design should consider future expansion of the operation.

The lighting design shall be practical, energy efficient, easy to maintain, appropriate for the intended function of the space. Lighting of interior areas shall preferably utilize LED lighting sources. Incandescent sources shall not be used. Provide emergency lighting for each room and corridors. Provide a lighted exit sign for stairs and fire exit doors.

6. Information and Communication Technology (ICT) Design Works

ICT design for this project shall conform to the minimum requirements of General Santos National School of Arts and Trades / TESDA for its operations and performance. The design shall include IT communication system, internet/data system, WIFI, CCTV and monitoring system, audio and video operation system and internal IT operations.

Basic IT requirements shall be incorporated to the design. The CCTV, Air-conditioning, fire protection and suppression, RFIDs or Security Access and smoke detection system shall be incorporated in the IT system.

The DESIGN AND BUILD CONTRACTOR shall provide communication system to meet operation and maintenance needs of General Santos National School of Arts and Trades / TESDA including but not limited to the following subsystems:

- i. Communication Lines
- ii. Transmission System
- iii. Data Communication Network System
- iv. Telephone Switching System
- v. Mobile Communication System
- vi. Wire Dispatching Communication System
- vii. Video Conferencing System
- viii. Private Emergency Communication System
- ix. Clock Synchronization and Time Synchronization System
- x. Power Supply Equipment System
- xi. Power Supply and Equipment Room Environment Monitoring
- xii. Equipment Lightning Protection and Earthing
- xiii. Integrated Network Management System

The DESIGN AND BUILD CONTRACTOR shall take full responsibility for design, supply, factory testing, installation, testing and commissioning, training, defects and liabilities for the communication system. The DESIGN AND BUILD CONTRACTOR shall provide all necessary equipment, wiring and cabling as required to fit each sub-systems as part of the communication scope.

7. Site-Specific Environmental Management Plan (SSEMP) and Site Health and Safety Management Plan (SHSMP)

The DESIGN AND BUILD CONTRACTOR shall address environmental and rehabilitation requirements and ensure that the DESIGN AND BUILD CONTRACTOR is accountable for preventing or mitigating any environmental impacts. The General Santos National School of Arts and Trades / TESDA's authorized representative shall communicate the required measures from time to time through an EHSMP attached to the Bid Documents.

Upon finalization of detailed design, a detailed SSEMP and SHSMP would be prepared prior to the commencement of civil works and suitable variation order, upon the validation and approval of the PMO, shall accommodate this. These plans would indicate the details as to how various measures are proposed to be taken, and the cost of such measures which shall be treated as an integral component of the project cost. During the preparation of these plans, it should be understood that the contractors are highly involved in the operation of the Grievance Redress Mechanism (GRM), as member and focal at the project site, together with the PMU and RTIC.

XIV. CONSTRUCTION WORKS

The DESIGN AND BUILD CONTRACTOR shall perform construction works based on the approved and signed plans by TESDA's Authorized Representative/s and Local Building Official, materials specifications and contract documents including the updated Construction Estimates, Detailed Unit Price Analysis from the balancing cost or due to design revisions and improvements of the existing structures/buildings within the General Santos National School of Arts and Trades compound.

A. Pre-construction Phase:

1. Submission of DOLE Construction Safety and Health Plan, Updated Construction Methodology and Traffic Management
2. Final Submission of the following:
 - 2.1 Final Bill of Quantities (BOQ)
 - 2.2 PERT / CPM
 - 2.3 Detailed Unit Price Analysis
 - 2.4 Manpower Schedule
 - 2.5 Equipment Schedule
 - 2.6 Cost Schedule
 - 2.7 S-Curve
3. Pre-construction Meeting with BUILD AND DESIGN CONTRACTOR'S Designers and Engineers, PMO Engineering Unit, and TESDA's Authorized Representative/s and Consultants (including focals of Safeguards, Gender, and GMR)
4. Secure all necessary Building Permits, Fees, and Clearances prior to construction (also refer to Annex F for the IEE Report).

B. Construction Phase

General Requirements:

1. Permit to Construct (Building Permit) from the Building Official.
2. Approved Permits (Building Permit, Electrical Permit, Sanitary Permit, Mechanical Permit, Zoning Permit, Fire Safety Permit, Tree Cutting and Transfer Permit, etc.);
3. Bonds and Taxes;
4. Project Billboard;
5. Temporary Facilities and Facilities of Consultants Team and the Construction Management Team;
6. Mobilization, including involvement to the implementation and maintenance of a Grievance Redress Mechanism (GRM);
7. Health and Safety Requirements during Construction;
8. Earthworks, Cutting, Filling, and Grading;
9. Transfer and Cutting of Trees as per DENR (with permit from DENR); and
10. Hauling and transportation of unused debris to areas outside the Project Site Premises.

The DESIGN AND BUILD CONTRACTOR shall perform the construction activities, but not limited to the following:

1. Mobilization / Demobilization
2. Site Clearing
3. Construction of Temporary Facilities
4. Excavation and Backfilling
5. Foundation Works
6. Structural Works
7. Architectural Works
8. Electrical Works
9. Mechanical Works
10. Sanitary and Plumbing Works
11. Fire Protection and Suspension Works
12. IT Works
13. Interior Finishes
14. Built-in Furniture (Restroom and Pantry Counters, Reception Counters)
15. Specialty Works
16. Site Development and Landscaping
17. Rehabilitation and Renovation of Existing Structures / Buildings
18. Other works stipulated in the construction plans and contract documents.

II. Materials and Equipment Approval

1. All materials, finishes and equipment to be installed shall be upon the approval of the PMO and/or TESDA's authorized representative/s thru Request for Approval (RFA).
2. These shall conform to the latest standards. The DESIGN AND BUILD CONTRACTOR is hereby required to submit 2 – 3 actual samples, quotations with brands, specifications and brochures attached to the RFA.
3. The Contractor is also required to submit shop drawings and mock-ups of all finishes and specialty works before fabrication and installation.
4. Unless otherwise specified, all materials shall be new and of the best grade. Apparent silence in the Specifications, as to any detail or description concerning any point shall be regarded as meaning that only the best general practice is to prevail and that only materials and workmanship of first-class quality are to be used.

XV. Design Revisions

1. All revisions and deviations from the approved plans, especially if it shall affect the overall cost of the project, shall be subject for approval via Request for Information (RFI) and Request for Approval (RFA) via email and letter using a prescribed and approved format. Queries via text and online message (ex. *Viber, WhatsApp, Messenger, etc.*) shall **not** be entertained and considered official. This will be subject for balancing of cost within the contract amount or variation order upon confirmation and approval of the PMO and/or TESDA's authorized representative/s.
2. All queries and clarifications regarding the spaces, layout and use shall be submitted thru Request for Information (RFI) via email and letter using the prescribed and approved format. Queries via text and online message (ex. *Viber, WhatsApp, Messenger*) shall **not** be entertained and considered official.
3. The DESIGN AND BUILD CONTRACTOR is expected to provide all the necessary proposals to complete the design, ready for use, occupancy and complying with the latest Philippine Codes, Laws, Ordinances and issuance of permits (Construct, Occupancy, Operate elevator etc). The conceptual plans and initial site survey should act as a guide only for further site verification and detailing.
4. The DESIGN AND BUILD CONTRACTOR shall prepare Daily Accomplishment Report, supported with progress photographs and S-Curves to monitor the actual progress status of the project. The Daily Accomplishment Reports shall be consolidated weekly and submitted monthly to the PMO and/or TESDA's authorized representative/s. Such reports will form part of the requirements for the progress payment.
5. The DESIGN AND BUILD CONTRACTOR shall adhere to the submitted and approved Material Testing Plan.
6. Hauling and fees of the unused materials (debris) outside of the TESDA project site shall be the responsibility of the DESIGN AND BUILD CONTRACTOR including payment/fees.

XVI. Demolished Items

All demolished/removed materials that are still usable will not be allowed to be used and shall be properly stocked, inventoried, hauled, and turned over with the supervision of PMO and/or TESDA's authorized representative's approval.

XVII. POST CONSTRUCTION WORKS

36. Post Construction works include testing and commissioning of the following:
- a) Electrical System including Stand-by-Generator
 - b) Elevator
 - c) Pumps and Motors
 - d) Plumbing and Sanitation System
 - e) IT System
 - f) Signed and Sealed As-Built Plans
 - g) Operations and Maintenance Manuals
 - h) Occupancy Permit and Clearances from LGU (Building Official)
 - i) Permanent Utilities Connection / Energization (Power, Water, Sewer, etc.)
37. The DESIGN AND BUILD CONTRACTOR shall submit testing and commissioning program and schedule. Likewise, the DESIGN AND BUILD CONTRACTOR shall submit the operations and maintenance manuals of all the equipment and machineries installed, incorporating the technical literature as designed and as actually installed, together with brochures, contact number of vendors, sub-Contractors, suppliers and installers, and warranty certificates.
38. Waterline and water tank cistern shall be leak tested. Disinfection shall follow after passing the hydrostatic and pressure leak test in accordance with the standards of the Philippine National Standard for Drinking Water (PNSDW).
39. The date by which "As-Built Drawings" are required is fourteen (14) calendar days before the issuance of the Certificate of Completion. However, the DESIGN AND BUILD CONTRACTOR shall supply to the PMO through its Project Manager and/or TESDA's authorized the draft As-Built Drawings upon reaching ninety-five percent (95%) accomplishment to give ample time for review and checking. After which, the said As-Built drawings shall be finalized by the DESIGN AND BUILD CONTRACTOR upon reaching 100% completion and shall be submitted to the PMO through its Project Manager and/or TESDA's authorized representative for approval two weeks before the submission of the DESIGN AND BUILD CONTRACTOR's request for final payment.
40. Demobilize, dismantle, and remove all temporary facilities, including workers' living spaces, construction equipment, tools, personnel, and debris out of the project site and/or TESDA premises. Restore all temporary utility connections.

XVIII. MINIMUM REQUIREMENTS FOR CONSTRUCTION OCCUPATIONAL SAFETY AND HEALTH (COSH) PROGRAM

The DESIGN AND BUILD CONTRACTOR shall have the responsibility to observe and implement the minimum requirements for COSH set by the Department of Labor and Employment (DOLE) but not limited to the following:

A. Construction Safety and Health Committee

a.1 Composition

- i. Construction-In-Charge as Chairperson Ex-Officio
- ii. General Construction Safety and Health Officers
- iii. Construction Safety and Health Officers
- iv. Safety Representative Officer
- v. Doctors, Nurses, and other Health Personnel pursuant to the requirements stated in Rule 1042 of the Occupational Safety and Health Services (OSHS)
- vi. Workers' Representative

A.2 Duties and Responsibilities

- i. The Construction-In-Charge shall act as the Chairperson
- ii. The Committee shall conduct safety meetings at least once a month
- iii. The persons constituting the Safety and Health Committee shall as far as practicable, be at the construction site whenever construction work is being undertaken
- iv. The committee shall continually plan and develop accident prevention programs
- v. The committee shall review reports of inspection, accident investigation and monitor implementation of the safety programs
- vi. The committee shall provide necessary assistance to government authorities authorized to conduct inspection in the proper conduct of their activities
- vii. The committee shall initiate and supervise safety trainings for its employees
- viii. The committee shall conduct safety inspection at least once a month and shall conduct investigation of work accidents and shall submit a regular report to DOLE
- ix. The committee shall also check, on a regular basis, the labor working conditions of their employees and subcontractors (if applicable)
- x. The committee shall initiate and supervise the conduct of daily brief committee meetings
- xi. The committee shall prepare and submit to DOLE, reports on said committee meetings
- xii. The committee shall develop disaster contingency plan and organize such emergency service units as may be necessary to handle disaster situations.

B. General Safety within Construction Premises

Provisions for the following shall be provided by the DESIGN AND BUILD CONTRACTOR

- B.1 Personnel Protective Equipment
- B.2 Safety Personnel
- B.3 Emergency Occupational Health Personnel and Facilities
- B.4 Construction Safety Signages and Barricades
- B.5 Safety on Construction Heavy Equipment
- B.6 Safety and Health Information
- B.7 Construction Safety and Health Reports
- B.8 Workers' Welfare Facilities

XIX. GENERAL REQUIREMENTS

1. The DESIGN AND BUILD CONTRACTOR shall conduct the following:
 - a. Site inspection of the Proposed Site for the RTIC and Areas to be Rehabilitated / Renovated;
 - b. Survey, Soil Test, Geotechnical Report – all duly signed and sealed;
 - c. Survey on hazards present of the proposed site (seismic, hydrological, etc.);
 - d. Confirmation of utility tapping points or outlets;
 - e. Existing Environmental Conditions;
 - f. Participation as project focal and member in the GRM
 - g. Traffic and access planning; and
 - h. Consultation with stakeholders and securing of clearances from government agencies.
2. All materials, finishes, and equipment to be installed shall be upon the approval of the PMO and/or TESDA's authorized representatives via Request for Approval (RFA). These shall conform to the latest standards. The DESIGN AND BUILD CONTRACTOR is hereby

required to submit 2-3 actual samples, and quotations, with brands, specifications, and brochures attached to the RFA. The DESIGN AND BUILD CONTRACTOR is also required to submit shop drawings and mock-ups of all finishes and specialty works before fabrication and installation.

3. The DESIGN AND BUILD CONTRACTOR, with the written approval of PMO Engineering Unit or its authorized representatives can improve and revise the initial conceptual plans to be code compliant and due to actual or updated site investigation reports (surveys, soil test, etc.) but shall work within the approved and minimum Approved Budget for the Contract;
4. The DESIGN AND BUILD CONTRACTOR shall observe the intent of the conceptual plans, initial material specifications, and space matrix to recommend a guide and basis for the DESIGN AND BUILD CONTRACTOR. It is not intended that the conceptual drawings shall show every detail.
5. The DESIGN AND BUILD CONTRACTOR shall submit the following Minimum Required Construction Plans / Drawings such as Building Permit Plans (Construction Drawings) Scaled – 24" x 36" Signed and Sealed Plans (10 Sets blue print / white print), Minimum 1:100 scale for architectural plans. Other details shall follow the standard scale for permit application, AutoCAD / DWG files.

a) ARCHITECTURAL DESIGN

- a) Front Page
- b) Site Development Plan
- c) Floor Plans
- d) Roof Plan / Roof Deck Plan
- e) Elevations
- f) Sections
- g) Bay Sections
- h) Reflected Ceiling Plan (Exterior)
- i) Wall Elevations
- j) Door and Windows Schedule (Exterior)
- k) Schedule of Finishes (Exterior)
- l) Toilet Details
- m) Stair Details
- n) Railing Details
- o) Miscellaneous Details
- p) Technical Specifications

b) ARCHITECTURAL INTERIORS / INTERIOR DESIGN

- a) Proposed Furniture Layout or Floor Plan
- b) Floor Pattern and Wall Finishes Plan
- c) Reflected Ceiling Plan (Interior)
- d) Wall Elevations
- e) Section Details (For Accent Walls)
- f) Built-in Furniture Details
- g) Toilet Details
- h) Miscellaneous Details
- i) Doors and Windows Schedule (Interior)
- j) Technical Specifications (Materials)
- k) Interior Perspectives

c) SITE DEVELOPMENT PLAN

- a) Reference Plan
- b) Setting out Plan
- c) Levels Plan
- d) Materials Plan
- e) Drainage Plan
- f) Irrigation Plan
- g) Lighting Plan
- h) Tree Planting Plan
- i) Shrub Planting Plan
- j) Softscape Details
- k) Softscape Palette
- l) Tile Setting out Plan

d) ENGINEERING DESIGN

- a) Structural (S- Complete Plan)
 - i. Construction Notes
 - ii. Foundation Plan
 - iii. Floor Framing Plans
 - iv. Roof Framing Plan
 - v. Sections
 - vi. Typical Detail of Footing
 - vii. Schedule of Footing
 - viii. Typical Detail of Beams and Girders
 - ix. Schedule of Beams and Girders
 - x. Schedule of Columns
 - xi. Typical Detail / Elevations of Columns
 - xii. Schedule of Steel Column, Beams, Girders
 - xiii. Cistern Tank
 - xiv. Septic Tank
 - xv. Elevator / Escalator Pit
 - xvi. Miscellaneous Details
- b) Plumbing and Sanitary (P – Complete Plan)
 - i. General Notes, Legend, Vicinity Map, Miscellaneous Details
 - ii. Water Distribution Layout
 - iii. Sanitary and Vent Layout
 - iv. Storm Drainage for Water Distribution
 - v. Isometric Diagram for Water Distribution
 - vi. Isometric Diagram for Sanitary and Vent
 - vii. Isometric for Storm Drainage
 - viii. Site Development Plan Water Distribution
 - ix. Site Development Plan Storm Drainage
- c) Mechanical (M – Complete Design)
 - i. Mechanical
 - ii. General Notes, Legend
 - iii. Equipment Schedule
 - iv. A/C and Ventilation System Layout
 - v. Miscellaneous Details
 - vi. Sections
 - vii. Generator Plan
 - viii. ACCU/FCU Schematic Riser Diagram
 - ix. Mounting Details

- d) Fire Protection (FP – Complete Plans)
 - i. General Notes, Legend
 - ii. Equipment Schedule
 - iii. Fire Hose Cabinet and Fire Extinguisher
 - iv. Sprinkler Head Tabulation
 - v. Fire Protection System Riser Diagram
 - vi. Fire Pump and Jockey Pump Location and Elevation
 - vii. Fire Protection System Layout
 - viii. Miscellaneous Details

- e) Electrical (EE – Complete Plans)
 - i. General Notes, Specifications
 - ii. Site Development Plan
 - iii. One Line Diagram
 - iv. Load Schedule
 - v. Power Layout
 - vi. Lighting Layout
 - vii. Equipment Layout
 - viii. Design Analysis, Short Circuit Calculation, Voltage Drop Calculation
 - ix. Miscellaneous Details
 - x. Permanent Power Application Requirements (Local)

- f) Electronics / Auxiliary (EA – Complete Plans)
 - i. Fire Detection and Alarm System
 - General Notes, Specifications
 - Fire Detection and Alarm System Layout
 - Riser Diagram
 - Miscellaneous Details
 - ii. Closed Circuit TV (CCTV)
 - General Notes, Specifications
 - CCTV Layout
 - CCTV Riser Diagram
 - Miscellaneous Details
 - iii. Structured Cabling
 - General Notes, Specifications
 - Structured Cabling Layout
 - Riser Diagram
 - iv. Public Address (PA)
 - General Notes, Specifications
 - PA Layout
 - PA Riser Diagram
 - Miscellaneous Details
 - v. Door Access
 - General Notes, Specifications
 - Door Access Layout
 - Door Access Riser Diagram
 - Miscellaneous Details

e) STANDARD ENGINEERING CALCULATIONS

a) Structural

- i. Structural Analysis

- ii. Structure
 - i. Load Diagrams (SLD, Live Load, Line Load)
 - ii. Structural Framing showing frame size (Beam, Columns, Slabs, and Shear Wall if any)
- iii. Concrete Design
 - i. Column Design (PMM Ratio, Ties Requirement)
 - ii. Beam Design (Flexural Requirement, Shear Check and Deflection)
 - iii. Slab Design (Flexural Requirement, Deflection)
 - iv. Foundation Design (Punching Check, Flexural Requirement)
 - v. Shear Wall (DC Ratio, Shear Check)
- iv. Specifications and Calculations – Design Parameters (Material Specifications, Loading, Seismic Parameters)

b) Plumbing

- i. Equipment Schedule – Included in plan for Building Permit
- ii. Water Demand Calculation – For Utility Application
- iii. Elevated Tank Sizing (Internal Reference)
- iv. Cistern Tank Sizing (Internal Reference)
- v. Pump Calculation (Internal Reference)
 - i. Transfer Pump (GPM, TDH, HP Rating Calculation)
 - ii. Booster Pump (GPM, TDH, HP Rating Calculation)
 - iii. Hot Water Circulation Pump (GPM, TDH and HP Rating Calculation)
- vi. Hot Water Storage Tank Sizing (Internal Reference)
- vii. Grease Interceptor
- viii. Septic Tank

c) Mechanical

- i. Cooling Load Calculation (As reference for FCU Sizing)
- ii. Ventilation / Airflow Calculation (As reference for Sizing of Supply/Exhaust Fans, Pressurization blowers)
- iii. Generator Design Details, if any (Required for Building Permit Application)

d) Fire Protection

- i. Sprinkler System Hydraulic Calculation (As Reference, Used for Sizing of Pumps, Fire Tank, Piping)
- ii. Fire Pump Sizing (GPM, TDH, HP Calculation)
- iii. Fire Tank Sizing

e) Electrical

- i. Load Schedule – Included in the Plans
 - i. Riser Diagram (As Reference for Load Schedule)
 - ii. Protective Device Sizing
 - iii. Wire Sizing
 - iv. Conduit Sizing
- ii. Short Circuit Calculation – For Building Permit
- iii. Voltage Drop Calculation – For Building Permit
- iv. Design Analysis – For Building Permit
- v. Generator Sizing (KW/KVA) – Internal Reference

- vi. Protection Coordination – Internal Reference
- vii. Load Flow Analysis – Internal Reference
- viii. Ard Flash Analysis – Internal Reference

f) Electronics / Auxiliary

Fire Detection and Alarm System

- i. Battery and Voltage Drop Calculation – For Internal Reference (If Necessary)
 - i. 24 Hours of Standby Power
 - ii. 5 Minutes General Alarm
 - iii. 15 Minutes Voice Systems of Partial Initial Notification
 - iv. For a Number of Years, Table 14.4.3.2 In NFPA 72 stated that batteries had to be replaced within five (5) years of the manufacture date. "Replace batteries in accordance with the recommendations of the alarm equipment manufacturer or when the recharged battery voltage or current fails below the manufacturer's recommendations".
 - v. Add all no alarm current draw (from the control unit, annunciators, detectors, addressable control modules, etc.) x 24hours
- ii. Add all Alarm Current (from the Control Unit, Annunciators)

f) BILL OF QUANTITIES, DETAILED UNIT PRICE ANALYSIS, UPDATED SPECIFICATIONS

- a) All documents, plans, calculations shall be signed and sealed, with valid PRC ID and PTRs up to Building Permit Application, applicable and renewed for Occupancy Permit
 - b) Check with local Office of the Building Official for minimum number of sets for Building Permit, Permanent Power and Occupancy Permit and other requirements such as Logbook, etc.
 - c) All drawings, per design stage, Construction Drawings, Bill of Quantities, DUPA and Updated Specifications by the DESIGN AND BUILD CONTRACTOR shall undergo the review and approval of the PMO or TESDA's authorized representative
6. The DESIGN AND BUILD CONTRACTOR has the responsibility to process, apply, pay, and secure necessary construction and operations permits and fees as required by the authorities for the preparation, implementation, completion, and occupation of the project. Permits and Fees are to be processed and secured by the Contractor, but are not limited to the following:
- a) Barangay Clearance
 - b) Zoning, Locational Clearance including necessary surveys
 - c) Civil Aviation Authority of the Philippines (CAAP) Permit

- d) Building Permit
 - e) Fire Safety Evacuation Clearance and Inspection Fencing Permit
 - f) Excavation and Ground Preparation Permit
 - g) Certificate of Final Electrical Inspection
 - h) Building Occupancy Permit
 - i) Contractor's Tax
 - j) Fire Inspection / Fire Safety Inspection Certificate
 - k) Green Building Certificate/s
 - l) Temporary and Permanent Power Connection (Service Provider)
 - m) Temporary and Permanent Water and Sewer Connection (Service Provider)
 - n) Other Necessary Permits and Fees, Testing and Commissioning
7. The DESIGN AND BUILD CONTRACTOR shall be responsible for the completion of all works stated in the scope of works, drawings/plans, and technical specifications at the scheduled timeline with the highest level of workmanship and in compliance with the latest edition of the DPWH Standard Specifications for Public Work Structures and other pertinent laws and standards both local and international as may be necessary;
 8. The DESIGN AND BUILD CONTRACTOR shall manage, supervise, and finish the Project to its satisfactory completion in accordance with the technical plans and specifications and contract approved by the Head of Procuring Entity, TESDA, or any duly authorized representatives with first-class workmanship;
 9. The DESIGN AND BUILD CONTRACTOR shall complete the project within the approved construction schedule including weekdays (after office hours), holidays, Saturdays, and Sunday/s upon issuance of the Notice to Proceed from TESDA;
 10. If deemed necessary and in order to shorten the completion of the project, the DESIGN AND BUILD CONTRACTOR may resort also to night shift on regular working days including holidays;
 11. The DESIGN AND BUILD CONTRACTOR shall visit the site and thoroughly inspect existing facilities and properly consider, in the preparation of the supply and installation, how such conditions will affect the work indicated in the Plans, Specifications, and Contract. Failure to do so will in no way relieve the DESIGN AND BUILD CONTRACTOR of the responsibility for furnishing labor, materials, and equipment required;
 12. The DESIGN AND BUILD CONTRACTOR shall be responsible for any loss or damage that may be incurred upon the properties of TESDA during the performance of the work service or for injury to any person caused by the unreasonable or negligent act or omission of the CONTRACTOR or its workers, whether such action is intentional or not;
 13. The DESIGN AND BUILD CONTRACTOR shall coordinate with the TESDA regarding the scheduling of delivery and installation of all owner-furnished materials and equipment during construction;
 14. The DESIGN AND BUILD CONTRACTOR shall ensure that the materials to be used for the construction are of good quality and subject to inspection by TESDA;
 15. The DESIGN AND BUILD CONTRACTOR shall only use materials in accordance to the standards of the Bureau of Research and Standards of the Department of Public Works and Highways (DPWH) and the Department of Trade and Industry (DTI);
 16. The DESIGN AND BUILD CONTRACTOR shall provide soil filling, grading and other soil protection measures of the building and other elements of the site, in response to the results of soil testing and materials testing;

17. The DESIGN AND BUILD CONTRACTOR shall construct sidewalks and curb cutouts, paving, driveways, parking slots, and, walkways within the project site;
18. The DESIGN AND BUILD CONTRACTOR shall provide protection or relocation of existing trees affected by construction, if any;
19. The DESIGN AND BUILD CONTRACTOR shall adopt a procedure to mitigate the effects to the environment due to demolition, repair, painting, and other activities;
20. The DESIGN AND BUILD CONTRACTOR shall follow guidelines related to the fight against COVID-19 issued by the Inter-Agency Task Force, DPWH, City/Municipal Government, and other offices, agencies, and departments of the Republic of the Philippines;
21. The DESIGN AND BUILD CONTRACTOR shall test and commission all mechanical, electrical, electronics, and plumbing/sanitary systems that have been installed to provide the TESDA a high level of assurance that all systems are installed in a prescribed manner and in accordance with DPWH guidelines on testing equipment and procedures;
22. The DESIGN AND BUILD CONTRACTOR shall provide all necessary equipment personnel, instruments, documents, and others to carry out specified tests and shall submit to TESDA such results;
23. The PMO and/or TESDA's authorized representative shall be entitled, during the manufacture, fabrication, or preparation of materials to be used in the project, to inspect and test these materials and the plant or plants where these materials are being manufactured, fabricated, and/or prepared;
24. If the materials are being manufactured, fabricated, or prepared in workshops or places other than those of the DESIGN AND BUILD CONTRACTOR, the DESIGN AND BUILD CONTRACTOR must obtain permission for the TESDA's representative to carry out inspection and testing in those workshops or places. Such inspection or testing will not release the DESIGN AND BUILD CONTRACTOR from any obligation under the contract;
25. The DESIGN AND BUILD CONTRACTOR shall turn-over of all manuals, certificates, and the warranties of installed materials, equipment, tools, appurtenances, or related items as necessary;
26. The DESIGN AND BUILD CONTRACTOR shall follow the quality control procedures defined by the PROJECT for the construction in accordance with the PROJECT guidelines and shall receive the proper certificates of acceptance for sections of the works or whole of the works as provided for in the contract documents as issued by TESDA;
27. The DESIGN AND BUILD CONTRACTOR shall prepare and implement a Construction Safety and Health Program including Personal Protective Equipment (PPE) and Traffic Management Plan at all times;
28. TESDA shall in no manner be answerable or accountable for any accident and injury which may occur to any worker or personnel of the DESIGN AND BUILD CONTRACTOR during the performance of the work services mentioned herein whether the injuries or accidents occurred inside or outside the premises of the TESDA, or any loss or damage whatsoever and shall save the TESDA harmless therefrom;
29. The DESIGN AND BUILD CONTRACTOR shall supply and submit the following documents to TESDA prior to the commencement of the PROJECT:

- 23.1 Gantt Chart;
 - 23.2 S-Curve;
 - 23.3 Construction Logistic Plan;
 - 23.4 Critical Path Method and Program Evaluation Review Technique (CPM/PERT);
 - 23.5 Manpower Utilization Schedule;
 - 23.6 Equipment Utilization Schedule;
 - 23.7 Construction Logistics Plan;
 - 23.8 Daywork Labor Schedule;
 - 23.9 Daywork Plan/Equipment Schedule;
 - 23.10 Daywork Materials Schedule;
 - 23.11 Organizational Chart;
 - 23.12 Construction Method;
 - 23.13 Construction Safety and Health program approved by DOLE;
 - 23.14 Other necessary documents as requested by TESDA;
30. The DESIGN AND BUILD CONTRACTOR, as part of the requirements, must submit pictures taken before, ongoing, and after the construction during progress billing and final billing;
31. The DESIGN AND BUILD CONTRACTOR shall prepare and submit as-built plans upon the completion of the PROJECT or as required by TESDA;
32. The DESIGN AND BUILD CONTRACTOR shall submit every last day of every last week of each month a Monthly Status Report composed of the following attachments and shall be addressed to the duly authorized representative of TESDA:
- 31.1 Statement of Work Accomplished;
 - 31.2 S-Curve; and
 - 31.3 Progress Photos
33. The Construction Manager and/or Project Engineer of the DESIGN AND BUILD CONTRACTOR shall coordinate closely with the authorized representative of TESDA to mitigate risks related to the works to be undertaken;
34. The DESIGN AND BUILD CONTRACTOR shall hold at least two (2) coordination meetings in a month to ensure that works are undertaken properly and on time. Any special meeting requested by TESDA or any its duly authorized representatives shall be hosted by the DESIGN AND BUILD CONTRACTOR;
35. The DESIGN AND BUILD CONTRACTOR shall route the construction log book for reference;
36. The DESIGN AND BUILD CONTRACTOR shall prepare shop drawings for approval only, if necessary, in actual construction, also such shop drawings with form part of the requirements for progress payments if considered as additional work;
37. If the DESIGN AND BUILD CONTRACTOR identifies errors or discrepancies in the design or document which has been previously submitted, reviewed and approved, the DESIGN AND BUILD CONTRACTOR shall immediately notify TESDA or its duly authorized personnel;
38. The DESIGN AND BUILD CONTRACTOR shall prepare and submit a proposed cost estimate for the additional works due to the changes, errors, and discrepancies in the design within a reasonable period of time;

39. Under no circumstances shall a DESIGN AND BUILD CONTRACTOR proceed to commence work under any Change Order or Extra Work Order unless it has been approved by the PMO – Engineering Unit or TESDA's authorized representative;
40. TESDA shall check/inspect the DESIGN AND BUILD CONTRACTOR's works upon every submission of Statement of Work Accomplishment (SOWA), and shall notify the DESIGN AND BUILD CONTRACTOR of any defects that are found;
41. The DESIGN AND BUILD CONTRACTOR shall immediately correct/repair the notified defect/s at the DESIGN AND BUILD CONTRACTOR's expense and without additional costs to the original contract amount;
42. TESDA shall have the authority to suspend the work wholly or partly by written order or such period as may be deemed necessary due to *force majeure* or any fortuitous events or for failure on the part of the DESIGN AND BUILD CONTRACTOR to carry out valid orders given by TESDA or to perform any provisions of the contract or due to adjustment of plans to suit office conditions as found necessary during construction;
43. No employer-employee relationship shall arise between the DESIGN AND BUILD CONTRACTOR and/or its workers on one hand and TESDA on the other; and

XX. OTHER REQUIREMENTS

41. The DESIGN AND BUILD CONTRACTOR shall consider incorporating green designs and sustainable materials in this particular project. Proper building and spatial orientation, strategic building envelop designs, lighting and acoustics and natural lighting and ventilation shall be considered in the design;
42. The DESIGN AND BUILD CONTRACTOR shall take into considerations of climate factors such as amount of rainfall, frequency and intensity of typhoons as well as wind and solar direction. To ensure sufficient natural light and ventilation to the building, adequate setbacks on all sides shall be met;
43. The DESIGN AND BUILD CONTRACTOR shall conform with the Environment Management System (EMS) being practiced by government agencies in accordance with ISO 14001-2015 by providing the following:
 - a) A list of pre-identified Environmental Aspects and Impacts and the corresponding operational control or crisis response procedures in cases of emergency situations shall be submitted to TESDA or its duly authorized representative three (3) days after the receipt of the Notice to Proceed;
 - b) All supplies and materials to be brought inside TESDA premises shall be environment friendly (if applicable) and bear the corresponding Material Safety Data Sheet (MSDS);
 - c) All toxic hazardous materials necessary for the completion of the project shall be properly labeled with MSDS and placed in secondary containment which shall be located at the safest place in the working area;
 - d) All toxic and hazardous waste generated shall be properly turnover to the Materials Recovery Facility (MRF) of the project site for the inventory and subsequent disposition enlisting the services of authorized treater/transporter.

44. The DESIGN AND BUILD CONTRACTOR shall take into account the following environmental aspects at various stages of the project;

a) Liquid Effluents

- i. Effluents should be treated well to the standards prescribed by the various national codes, water pollution control and the LGU;
- ii. Soil permeability studies should be made prior to effluents being discharged and steps taken to prevent percolation and ground water contamination;
- iii. Deep well burial of toxic effluents should not be resorted to as it can result in re-surfacing and ground water contamination. Conservation and re-use of water must be implemented;
- iv. Effective management of storm water quantity and quality during construction to avoid erosion and contamination of water bodies;

b) Air Pollution

- i. The emission levels of pollutants should conform to the pollution control standards and adequate control equipment should be installed for minimizing emission;
- ii. Dusty areas, building material stacks will be sprayed with water, particularly during hot windy weather;
- iii. Combustion engine vehicles must have official valid emission certifications

c) Solid Wastes

- i. The site for waste disposal should be checked to verify permeability so that leachates do not percolate into the ground water or water bodies
- ii. Waste materials such as packaging etc. shall be removed by truck (covered and/or watered) to LGU official disposal site

d) Noise Pollution

- i. Adequate measure should be taken for control or noise and vibration so that it remains under permissible limit

e) Occupational Safety and Health

- i. Proper precautionary measures for adopting occupational safety and health standards should be taken
- ii. Proper housekeeping and cleanliness should be maintained
- iii. Workers will be required to wear filter mask, eye protection, and earmuffs whenever necessary

f) Transport System

- i. Proper parking spaces should be provided for the trucks and other vehicles to avoid any congestions or blocking of roads
- ii. Care has to be taken to avoid spillage of chemicals or substance on roads or inside the site. Proper road safety signs both inside and outside the site should be displayed for avoiding road accidents

g) Vegetal Cover

- i. Care should be taken to maintain existing trees and vegetation and plant new trees as per the landscape design at strategic locations
- ii. Steep slopes will have minimal clearance of vegetation and replanted as a priority

h) Disaster Planning

Disaster planning should be done to meet any emergency situation arising due to fire, explosion, sudden leakage of gas, etc. Firefighting equipment and other safety appliances should be kept ready for use during such emergencies. The DESIGN AND BUILD CONTRACTOR must also have proper facility for the first aid and should have tie-up with hospital in case of emergencies

i) Unanticipated Environmental Impacts

- i. Where unanticipated environmental risks or impacts become apparent during the Contract, the Contractor is required to update the SSEMP/CEMP/DAED IEE to outline the potential impacts to site works and associated mitigation measures for the Project Manager's approval. The unanticipated impacts shall be reported to TESDA in writing.

45. The DESIGN AND BUILD CONTRACTOR shall, upon completion and approval of the DAED, submit a detailed Site Specific Environmental Management Plan (SSEMP) for the Employer's designated Project Manager's no objection showing how he/she intends to comply with environmental laws and regulations and other specific requirements prescribed in the Contract, addressing all the monitoring and mitigation measures set forth in the IEE Report (see Annex F) and the Environmental Management Plan ("EMP"). Work shall not commence on the Site until the no objection of SSEMP and IEE has been obtained from the Project Manager and is being implemented. Such acceptance by the Project Manager shall not relive the Contractor of any of his obligations or responsibilities under the Contract.

46. The DESIGN AND BUILD CONTRACTOR shall (a) establish an operational system for managing environmental impacts, (b) comply with the approved SSEMP and IEE and any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor the implementation of the project EMP through the SSEMP/CEMP/DED IEE, (c) allocate the budget required to ensure that such measures, requirements and actions are carried out, (d) submit monthly progress reports on the SSEMP's implementation the compliance to the Employer

47. The DESIGN AND BUILD CONTRACTOR shall ensure and take all the necessary precautions for the public safety of his employees and workers in site. The CONTRACTOR shall at all times require his workers to wear Personal Protective Equipment (PPEs) such as hard hats, safety boots and goggles, uniforms or other safety gear and identification cards to prevent accidents and for proper identification;

48. The DESIGN AND BUILD CONTRACTOR shall ensure that its employees and subcontractors observe the highest ethical standards and refrain from any form of bullying, discrimination, misconduct and harassment, including sexual harassment. The DESIGN AND BUILD CONTRACTOR shall take appropriate action against any employees or subcontractors, including suspension or termination of employment or sub-contract, if any form of unethical or inappropriate behavior is identified;

49. The DESIGN AND BUILD CONTRACTOR shall conduct training programs for its employees and subcontractors to raise awareness on and prevent any form of bullying,

- discrimination, misconduct, and harassment including sexual harassment, and to promote a respectful work environment;
50. The DESIGN AND BUILD CONTRACTOR shall keep an up-to-date record of its employees and subcontractors who have attended and completed such training programs and provide such records to the PMO – Engineering Unit or TESDA's authorized representative at their first written request;
 51. The DESIGN AND BUILD CONTRACTOR shall provide all the necessary safeguards, warning signs, and all safety precautions for all workers and third parties during progress of the work;
 52. The DESIGN AND BUILD CONTRACTOR shall strictly prohibit the use of polystyrene foam, such as Styrofoam, and plastic in the working area;
 53. The DESIGN AND BUILD CONTRACTOR shall put up and maintain adequate protection of all its works from damages and shall protect the property and equipment whether owned or rented by TESDA, as well as all materials furnished and delivered to it by TESDA from damage. Injury, or loss arising in connection with this TOR until final acceptance of the Project by TESDA;
 54. The DESIGN AND BUILD CONTRACTOR shall take all adequate and necessary measures to protect the Project, TESDA's property and personnel, and other TESDA Contractors and agents at the site and, at inconvenience to owners/occupiers of land, and the general public at or adjacent to the site when performing the Project;
 55. The DESIGN AND BUILD CONTRACTOR shall comply with all existing laws, decrees, ordinances, acts, and regulations of the Philippines that may affect the contract in any way, including express and implied warrantless and liabilities which may be found therein; and,
 56. The DESIGN AND BUILD CONTRACTOR shall comply with all existing laws and pertinent local legislation, executive and administrative orders, together with all implementing rules and regulations issued by the Department of Labor and Employment (DOLE) and other relevant governmental authorities.

II. SITE VISIT AND SITE CONDITION

The DESIGN AND BUILD CONTRACTOR shall visit, inspect and examine the Site and allow for all cost and expenditures arising out of and/or in connection with the Site surroundings and restrictions including but without limitation to the following:

1. Nature, character, and conditions of the Site and the existing and adjoining buildings including the sub-soil conditions and the site levels upon which the works are to be carried out;
2. Access and ingress and/or egress available to the Site;
3. Local conditions which may affect the Works;
4. Tidal floods, local and site drainage;
5. Extent of storage space and working space available;
6. Storage of Materials, the position of stores, site office, and Plant;
7. Location of existing services;
8. Nearest point from which electricity and water supplies can be connected;
9. Risk of damage to existing buildings and adjacent to or abutting the Site, or risk of injury to the occupiers, users of, or persons employed on such property whether or not it is in the ownership of TESDA;
10. Ground conditions, the sub-soil thereunder, and the water level;

11. Obtaining all necessary information as to all risks and contingencies relating to the carrying out of the Works on the Site; and,
12. Any other Site conditions and restrictions which may affect labor and materials, and the extent and practicability of safety provisions and temporary works in connection with the Works.

III. SITE INVESTIGATION REPORT

It shall be at the DESIGN AND BUILD CONTRACTOR's sole obligation and responsibility to conduct and assess the topographical, soil, and other requirements as stipulated in this TOR.

All costs arising out of or in connection with such investigations shall be borne by the DESIGN AND BUILD CONTRACTOR. When the DESIGN AND BUILD CONTRACTOR undertakes such Site Investigation, the DESIGN AND BUILD CONTRACTOR shall notify the PMO and/or TESDA's authorized representative and provide the PMO with two (2) copies of the results without charge.

IV. APPROVAL OF SITE OFFICE AND TEMPORARY BUILDING

1. **Upon receipt of the Notice to Proceed (NTP),**
2. The temporary buildings, with their contents, shall be maintained in clean and neat condition.
3. The DESIGN AND BUILD CONTRACTOR's proposal for the design, construction, and location of the site offices and temporary buildings inside the vicinity of TESDA shall be submitted within seven (7) calendar days upon the issuance of the Notice to Proceed (NTP) to the assigned Resident Engineer for approval.
4. The DESIGN AND BUILD CONTRACTOR shall allow for the altering, shifting, and adapting of the temporary buildings from time to time as required by the Resident/Project Engineer.
5. All temporary buildings shall be dismantled and removed by the DESIGN AND BUILD CONTRACTOR from the Site, leaving the Site clean and tidy condition within fourteen (14) calendar days upon receipt of an instruction from the Resident Engineer for the removal of the said buildings.

V. TEMPORARY HOARDING, PROJECT SIGNBOARDS AND THE LIKE

1. The DESIGN AND BUILD CONTRACTOR shall design, supply, and construct and maintain any signage, signboards, temporary hoardings, and gates around the site boundaries including mandatory signage, signboards, protective hoardings required by relevant Authorities, all to the requirements of the Resident Engineer.
2. The DESIGN AND BUILD CONTRACTOR shall hoard up areas where incomplete works remain in progress, including putting up barricades, warning signs, painting, and directional signs to prevent the public from entering the "Work Areas";
3. The DESIGN AND BUILD CONTRACTOR shall provide and allow adequate lighting to all the covered walkways, project signboard, and hoardings between 7:00 PM to 7:00 AM daily;
4. The DESIGN AND BUILD CONTRACTOR shall include all costs and expenses in this connection including payment of fees and charges to the relevant Authorities, opening of utilities account, and the transfer of an existing account to his own name, where applicable;
5. From time to time as may be necessary, alter, shift, and adapt all or any of the abovementioned works and clear away on completion.

VI. TEMPORARY LIGHTING, POWER, WATER AND OTHER CLEARANCES

1. The DESIGN AND BUILD CONTRACTOR shall provide at his own expense all necessary temporary lighting, electrical power, and water supply required for the Works;
2. The DESIGN AND BUILD CONTRACTOR shall employ a licensed and/or registered electrician and /or licensed/registered plumber to install and maintain all temporary lighting, power, and water utilities respectively on the Site;
3. All temporary lighting, electrical power, and water supplies shall be obtained from an approved source and shall comply with relevant standards and codes of practice for the respective installations;
4. The DESIGN AND BUILD CONTRACTOR shall provide necessary clearances or fencing protection, and warning precautions to avoid damages for the installed temporary utilities;
5. The DESIGN AND BUILD CONTRACTOR shall alter, adapt, and remove all temporary installation as and when directed by the Resident Engineer and make good thereafter;
6. Where water is likely to be discharged into roadsides drains, the DESIGN AND BUILD CONTRACTOR shall construct silt-traps or settling tanks, or other means of removing sediments;
7. The DESIGN AND BUILD CONTRACTOR shall pay all fees and charges to the relevant Authorities as required.

VII. VIOLATIONS OF THE TERMS AND CONDITIONS

1. The DESIGN AND BUILD CONTRACTOR shall hold TESDA free from any and all claims, liabilities, losses, and suits arising from the DESIGN AND BUILD CONTRACTOR's services, or the acts, omissions, or conduct of all persons employed or allowed by the DESIGN AND BUILD CONTRACTOR to participate or assist in the performance or its obligations under this TOR;
2. TESDA shall have the right to declare this agreement rescinded and terminated after due notice upon failure of the DESIGN AND BUILD CONTRACTOR as may be warranted by the circumstances, including forfeiture of the performance bond and/or the filing of appropriate civil, or criminal charges against responsible persons; and,

VIII. IMPLEMENTATION ARRANGEMENT

1. TESDA PROJECT MANAGEMENT OFFICE- ENGINEERING SECTION

DESIGN AND BUILD COMMITTEE

1. Provide overall monitoring of the project construction status;
2. Prepare for approval/disapproval of variations such as extra work order and change order/ supplemental information/contract time extension based on their technical evaluation and for further review and recommendation of DandB Committee for the Director General's approval prior to endorsement to ADB;
3. Evaluate the processing of payments for mobilization, progress, and final billings endorsed by the Regional Office prior for review of DandB Committee for the Director General's approval prior for endorsement to ADB ;
4. Monitor implementation of the project according to approved technical plans and specifications;
5. Act on request for inspection;
6. Coordinate closely with the TESDA's Resident Engineers;

7. Prepare evaluation of Final Completion Report prior for DandB Committee's review and recommendation;
8. Conduct spot inspection and monitoring as needed; and
9. Perform other tasks and functions relevant to the projects.

2. REGIONAL DIRECTOR

1. Monitor the on-site implementation of the project;
2. Provides recommendations to the PMO issues and concerns that may arise during construction implementation;
3. Endorses to the PMO Request for Approval (RFAs) / Information (RFIs) / Clarifications on Detailed Architectural and Engineering Plans / Variation Orders such as Change Orders and Extra Work Orders / Contract Time Extension;
4. Endorses to the PMO processing of payments for progress and final billings; and
5. Perform other tasks and functions relevant to the project.

3. TTI PROJECT SITE ADMINISTRATORS

1. Facilitate/assist in site for labor huts, temporary facility area for the DESIGN AND BUILD CONTRACTOR's labor;
2. Facilitate/assist in free access to materials and labor at the site of work;
3. Facilitate/assist in temporary utilities connection for the execution of work. Payment of all charges shall be the responsibility of the DESIGN AND BUILD CONTRACTOR;
4. Assist in the application and permission from the local offices. DESIGN AND BUILD CONTRACTOR to facilitate process and secure payments;
5. Supervise and direct the TTI Resident Engineer;
6. Monitor and evaluate the following reports as submitted by the Designated TTI Resident Engineer;
 - 6.1 Monthly Progress;
 - 6.2 Weekly Status;
 - 6.3 Billing;
 - 6.4 Request for variation/change/extra works;
 - 6.5 Inspection and Acceptance;
 - 6.6 Final Completion; and
 - 6.7 Other related reports.
7. Attend to concerns by the CONTRACTOR that facilitates implementation of the project such as but not limited to requirements of the building permit application, clearances, and others;
8. Recommend request for inspection on billing to PMO;
9. Conduct coordinated meetings with the CONTRACTORS as required; and
10. Perform other tasks and functions relevant to the projects.

4. DESIGNATED TTI RESIDENT ENGINEERS

1. Monitor the day-to-day implementation and progress of the project;
2. Assist the DESIGN AND BUILD CONTRACTOR in securing permits and clearances;
3. Check compliance of the DESIGN AND BUILD CONTRACTOR to technical plans and specifications;
4. Monitor the DESIGN AND BUILD CONTRACTOR's adherence to Construction Safety, Health Program, and respectful site working environment;
5. Coordinate with the Project Site Administrator and the PMO – Engineering Unit on the technical aspect of the project that needs action;
6. Evaluate the billing progress report prepared by the DESIGN AND BUILD CONTRACTOR;

7. Conduct inspection with the TESDA inspection team;
8. Prepare Statement of Work of Accomplished (SOWA) and all required attachments for billing purposes;
9. Prepare and submit the following reports to PMO – Engineering Unit copy furnished to the TTI Project Site Administrator and the Regional Office (RO):
 - ✓ Monthly Progress;
 - ✓ Weekly Status;
 - ✓ Billing;
 - ✓ Request for variation/change/extra works;
 - ✓ Inspection and Acceptance;
 - ✓ Final Completion; and
 - ✓ Other related reports.
10. Perform other related tasks and functions relevant to the projects.

IX. ANNEXES

1. Annex A – Schematic Perspective
2. Annex B – Space Matrix
3. Annex C - Branding
4. Annex D – Schematic Floor Plans
5. Annex E – RTIC Focal Area Showcase
6. Annex F – Initial Environmental Examination
7. Annex G - Minimum requirements for rehabilitation / renovation works

SCHEMATIC PERSPECTIVE

RTIC -GENERAL SANTOS CITY-NSAT REGION XII



RTIC-GENERAL SANTOS (REGION 12)

LOBBY



RTIC-GENERAL SANTOS (REGION 12)

INTELLIGENT WORK / DEMO AREA &
MULTI-DISCIPLINARY FABRICATION WORKSHOP



RTIC-GENERAL SANTOS (REGION 12)

CO-WORKING SPACE / EVENTS SPACE & INCUBATION ROOMS



RTIC-GENERAL SANTOS (REGION 12)

INCUBATION ROOMS



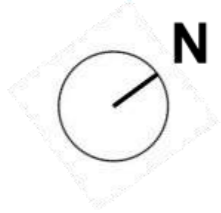
SITE PHOTO

RTIC-GENERAL SANTOS (REGION 12)



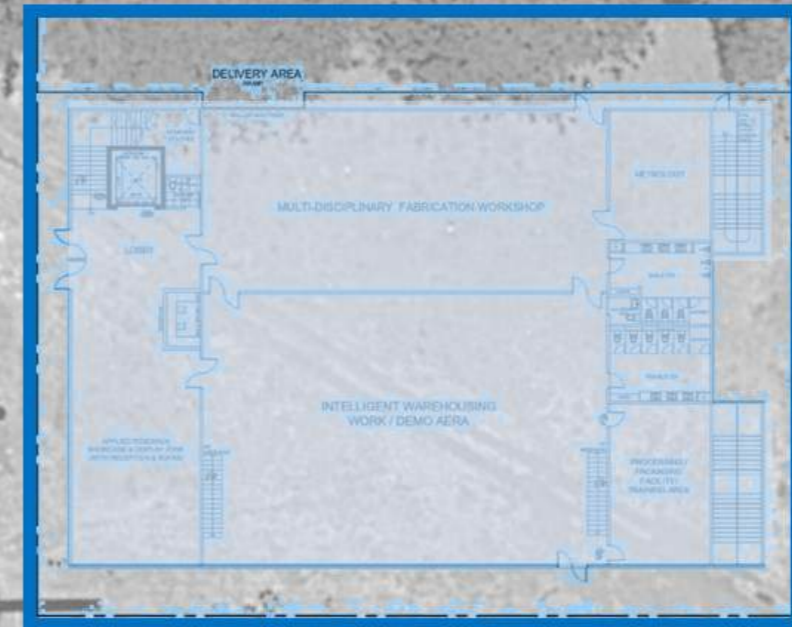
SITE DEVELOPMENT PLAN

RTIC-GENERAL SANTOS (REGION 12)



TESDA - General Santos National School of Arts & Trades

ADMIN.
BUILDING



SITE

SPACE MATRIX

RTIC-GENERAL SANTOS, REGION 12

APPROX. SITE AREA: ± 1,768.12 SQ.M*Subject for detailed survey, site clearing / intervention, tree cutting, embankment*

	SPACE	APPROX. AREA (±) SQ.M	PRIMARY USE	PROPOSED VERTICAL ROOM CLEARANCE / HEIGHT (Meters);	GENERAL CONSIDERATIONS
GROUND FLOOR					
1	APPLIED RESEARCH SHOWCASE & DISPLAY ZONE	136.65	Reception area, lounge chairs/sofa, tables and kiosks, display area	6.00	Convenience and Data Outlets, Wi-Fi
2	INTELLIGENT WAREHOUSING WORK / DEMO AREA	422.66	Maker Space, 3D Printers, Work Benches, Staff Work Area, Laser Cutter, Stairs for Mezzanine Floor	6.00	Convenience and Data Outlets, Wi-Fi, Cold Chain Equipment, Exhaust, Emergency Eye Wash, See Equipment List, Large Fans, Heavy Floor Load Capacity, Air-Conditioned
3	MULTI-DISCIPLINARY FABRICATION WORKSHOP	313.41	Staging Area, Workshop Area, Arc Welding Booth, Compressor Vacuum, Lathe, CNC, Hand Tool and Work Bench, Drill Press, Metal Bender, Router, Milter Saw, Delivery Area with Roller Shutters	6.00	Convenience and Data Outlets, Wi-Fi, Cold Chain Equipment, Exhaust, Emergency Eye Wash, See Equipment List, Large Fans, Heavy Floor Load Capacity
4	UTILITIES / STORAGE (Within Fabrication Workshop)	22.00	General requirements for the competence of testing and calibration laboratories; work areas of the laboratory to comply with the technical requirements established for the equipment and the performance of the activities	6.00	Electrical, Auxiliary, Mechanical and Plumbing;
5	PROCESSING/ PACKAGING FACILITY	60.00	Working Tables, Processing and Packaging Equipment	6.00	Convenience and Data Outlets, Wi-Fi, Air-Conditioned, Exhaust, Plumbing Fixtures (Sink, Drainage)
6	UTILITIES/ STORAGE (Under Stairs)	25.60	Storage Area, Utility Room for Electrical/ Auxiliary, Plumbing	3.00	Electrical, Auxiliary, Mechanical and Plumbing
7	PWD/ ALL-GENDER RESTROOM @ LOBBY	3.96	PWD / All-Gender Restroom	3.00	Waterclosets, Lavatory, Grab bar for PWD, Dryer, Mirror, Infant Changing Table (Foldable)
8	RESTROOMS	62.00	Male, Female, PWD / All-Gender Restroom	3.00	Waterclosets, Urinal, Lavatory, Grab bar for PWD, Dryer, Mirror, Slop sink
MEZZANINE - Ground Floor					
9	ELECTRONICS, IOT AND ROBOTICS LAB	113.67	Work Tables, Chairs, Laser Cutter, Glass Boards	3.00	See Equipment List, Convenience and Data Outlets, Air-Conditioned, Convenience and Data Outlets, Wi-Fi
10	MEETING ROOM / WORKING AREA	38.00	12-15 pax	3.00	Convenience and Data Outlets, Wi-Fi, Air-Conditioned, Mobile and Fixed TV/Smart Screen, Glass Boards
11	PROCESSING/ PACKAGING FACILITY OR TRAINING AREA	87.60	Working Tables, Processing and Packaging Equipment	3.00	Convenience and Data Outlets, Wi-Fi, Air-Conditioned, Exhaust, Plumbing Fixtures (Sink, Drainage)
SECOND FLOOR					
12	CO-WORKING SPACE	564.75	Shared pantry with collaboration spaces, movable furniture (modular working tables and chairs), small meeting/phone call booths	6.00	Convenience and Data Outlets, Wi-Fi, Mobile TV, Glass Boards, Air-Conditioned, Heavy Floor Load Capacity
13	INCUBATION ROOMS	193.86	7-small incubation rooms; 1- Large incubation room	4.50	Convenience and Data Outlets, Wi-Fi, Mobile TV, Glass Boards, Air-Conditioned
14	SHOWCASE / DISPLAY AREA	83.15	Open space for kiosks, tables, lounge	6.00	Convenience and Data Outlets, Wi-Fi, Air-Conditioned
15	CAFÉ	73.20	Mini-Kitchen, Counters, Tables and Chairs	6.00	Convenience and Data Outlets, Wi-Fi, Mini-Kitchen, Air-Conditioned
16	MEETING ROOM	37.00	10-12 pax	4.50	Convenience and Data Outlets, Wi-Fi, Air-Conditioned, Mobile and Fixed TV/Smart Screen, Glass Boards
17	RESTROOMS	62.00	Male, Female, PWD / All-Gender Restroom	3.00	Waterclosets, Urinal, Lavatory, Grab bar for PWD, Dryer, Mirror, Slop sink, Waterproofing
CIRCULATION SPACES, MISC					
18	STAIRS, ELEVATOR/LIFT, ELEVATOR LOBBY, FIRE EXITS, WALLS	374.34		-	Machine Room-less Elevator for lift, see material specifications
ROOF					
19	DECK	Varies	Space for Utilities, Waterproofing (check general specifications), Other Areas shall be with roof	-	Solar Panels, Additional Utility Rooms, Area for ACU Outdoor Units / Condenser Units, Roof Garden
APPROX. TOTAL (±)		2,673.85			

Note: To follow Standard Philippine Codes on Design, Construction, Accessibility Fire Protection & Utilities
Spaces shall be ready for use and occupancy of employer/ TESDA, Refer to Equipment List for other information

Section 6 - ANNEX C
BRANDING
EXTERIOR AND INTERIOR

GENERAL NOTE: The images provided serve solely for reference purposes, and it is essential to clarify that there is no intention to claim ownership or authorship of the design depicted in these visuals. Their inclusion is solely for informative or illustrative purposes, aiming to provide additional context, elucidate concepts, or offer visual examples to enhance comprehension. This disclaimer is crucial to prevent any misunderstanding regarding the origin or proprietary rights associated with the showcased design elements. Rest assured, the use of these images is strictly for reference, and no claim is made regarding their design or intellectual property.

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
TESDA logo	<p>To be placed at the façade, main lobby and elevator lobbies</p> 	<p>Variations / Creative incorporation of TESDA logo. For Approval of TESDA</p>
Graphic Walls	<p>Interior lobby. Science and Technology Theme. Abstract or Silhouettes</p> 	<p>Combination of Blue, White, Gray</p>
Carpet Tiles		<p>Combination of Blue, White, Gray</p>
Typography, Signages / Wayfindng		<p>Example of Fonts: Helvetica, Arial or minimalist. Accent colors on walls and floors thru heavy duty paint. Directional signs and room labels on glass frostings.</p>

Contractor to submit samples and shop drawings for approval

GENERAL MATERIAL SPECIFICATIONS

EXTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Cladding / Façade Treatment	Aluminum Composite Cladding 	Structural performance: provide exterior/interior wall cladding assemblies capable of withstanding the effects of load and stresses from dead loads, wind loads, and normal thermal movement without evidence of permanent defects and stains of assemblies or components. Sealed joints shall allow free and silent movement of panels during expansion and contraction while preventing uncontrolled penetration of moisture. Submit shop drawings and samples for approval.
Walls (Interior and Exterior)	Combination of Cement finish with masonry coating/sealer and Acrylic Solvent-based paint on colored areas. 	Walls shall be made of pre-cast / pre-fabricated walls. Lightweight, higher compressive strength, sound insulation, fire, water and moisture resistant. Finishes shall be a combination of limewash and wall paint (acrylic solvent-based coating). Accent walls should be combination of colors blue and wood veneers. Employer/ TESDA approved color for other areas.
Waterproofing for roof decks and canopies	Two or multiple component, flexible cementitious waterproofing membrane. Proved concrete topping as additional layer. Torch-membrane application is not recommended and allowed.	Contractor to conduct a demo before actual application and/or approval. Minimum warranty of five (5) years.
Curtain Walls, Windows and Glass	As per manufacturer/suppliers' recommended specifications given the height. Use of 12mm thk. Clear, Tempered Glass for glass doors. Powder-coated aluminum framing; Employer-approved color / shade. For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmission and 47% glare reduction. 	Contractor to submit shop drawings and samples for approval of employer / TESDA.
Roofing (for selected areas)	Ga. 24 Pre-Painted Rib-type/corrugated roofing with double sided roof insulation (polyethylene foam): Gauge of Sheeting Spacing of Laths 26 450 mm – 600 mm 25 600 mm – 750 mm 24 600 for nails, 900 mm for screws	Can withstand Signal 4-5 typhoons.
Exterior Flooring	Non-Skid Cement tiles (80cmx80cm or larger) and pavers 	Contractor to submit samples for approval. 2.0mm max grouting width should and match the color of the tiles..
PWD Ramp	Refer to BP 344	Stainless Steel Railiig, Tactile Blocks
Canopies (Glass)	High Impact, wind load resistant and translucent glass canopies with structural framing. Complete with structural framing and sealants	Toughened, laminated glass, shatter proof and has a high tensile strength to protect against cracking and breaking.
Louvers (Sun-Shading)	Aluminum Louvers 	Can withstand Signal 4-5 typhoons. Complete with framing and accessories. Check angle and position with the building orientation.





Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Lobby, Lounge, Hallway / Corridors, Stairs (General Circulation)**
 Location: **Ground Floor; Upper Floors**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	<i>Refer to schematic floor plan / tabulation</i>	
Flooring	Polished Concrete 	5- 7 steps process. Employer/ TESDA to approved final color, size of aggregates. Check final floor elevation. Avoid topping less than standard height (50mm or above); Satin Finish / Sheen, Non Slip
Ceiling	Exposed Structural members and utilities with drop ceiling made of acoustic panels, 12mm thk.gypsum board (white) 	White color for all utilities. Provide proper tagging / marking for utilities (ex. Fire protection).
Walls	Light-colored limewash and combination of white 	Use of pre-fabricated or modular walls/blocks. Combination of limewash and wall paint (acrylic solvent-based coating). Accent walls should be combination of colors blue and wood veneers.
Lighting	-Fixture type -Color temperature(Kelvins) *cool/natural white: 4000-4500K *warm white for accent lighting (if applicable): 3000-3500K LED lighting,(Power-saving) Combination of drop light and recessed	Employer/ TESDA to approve design and colors of casing
Curtain Walls, Windows and Glass	As per manufacturer/suppliers' recommended specifications given the height Use of 12mm thk. Clear, Tempered Glass for glass doors. Powder-coated aluminum framing; Employer-approved color / shade. For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmittance and 47% glare reduction. 	Contractor to submit shop drawings and samples for approval of employer / TESDA
Handrails	Wood (preferred to be locally sourced) with stain/color on steel framing/accessories	Employer/ TESDA to approve design and colors of casing





Contractor to submit samples and shop drawings for approval

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: Workshop Area; Multi-Disciplinary Fabrication Area; Maker Space;

Location: All Floors; Mostly for Ground Floor

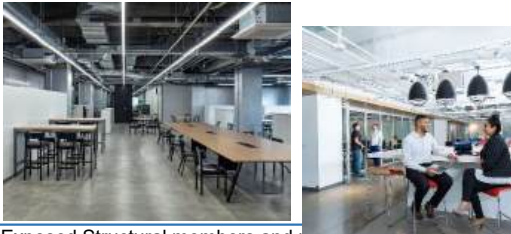



PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	Refer to schematic floor plan / tabulation	
Flooring	Epoxy Flooring (2-coat, heavy traffic, heavy duty) 	Excellent Chemical Resistant, Self Leveling, Anti-slip, Antiskid, Antistatic, Fire Resistant, Oil, Stain & water resistant, Require little or no major maintenance). Heavy Loading Requirement for Equipment
Ceiling	Exposed structural members and utilities with drop ceiling made of acoustic panels, gypsum board (white) flat latex paint finish 	White color for all utilities. Provide proper tagging / marking for utilities (ex. Fire protection). Acoustic Ceiling Clouds colors will be subject for approval of employer/TESDA. Preferably shades of blue
Walls	Light-colored limewash and combination of white 	Use of pre-fabricated or modular walls/blocks. Combination of limewash and wall paint . Paint finishes: Use low VOC, semi-gloss or satin sheen latex/water-based paint finish. Minimum of 2 coats of paint color. Apply proper surface preparation and primer prior to application of paint color.
Lighting	1500-2000 Lux LED lighting,(Power-saving) Combination of drop light, recessed and task lighting	Employer/ TESDA to approve design and colors of casing. -Fixture type -Color temperature(Kelvins) *cool/natural white: 4000-4500K *warm white for accent lighting (if applicable): 3000-3500K
Curtain Walls, Windows and Glass Doors	As per manufacturer/suppliers' recommended specifications given the height Use of 12mm thk. Clear, Tempered Glass for glass doors. Powder-coated aluminum framing; Employer-approved color / shade. For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmittance and 47% glare reduction. 	Contractor to submit shop drawings and samples for approval of employer / TESDA
Window Treatment (Roller Blinds)	Single-colored (cream or light gray), PVC sunscreen-type roller blinds with 5% openness factor Contractor to submit samples and shop drawings for approval	Employer/ TESDA to approved-color

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Co-Working Spaces, Showcase Area, Cafe, Pantry (Open Plan)**
 Location: **Upper Floors**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	Refer to schematic floor plan / tabulation	
Flooring	Polished Concrete 	5- 7 steps process. Employer/ TESDA to approved final color, size of aggregates. Check final floor elevation. Avoid topping less than standard height (50mm or above); Satin Finish / Sheen, Non Slip
Ceiling	Exposed Structural members and (cloud ceiling) made of acoustic panels, gypsum board (white) 	White color for all utilities. Provide proper tagging / marking for utilities (ex. Fire protection).
Walls	Light-colored limewash and combination of white 	Use of pre-fabricated or modular walls/blocks. Combination of limewash and wall paint (acrylic solvent-based coating). For Accent Walls (Veneer): Use skin-type 0.5-0.6mm thickness veneer sheet. On concrete and on drywall applications: provide 1/2" thk plywood substrate. Ensure substrate is smoothened and free from dust and moisture prior to application. Adhesive must be polyvinyl acetate(PVA) glue or contact cement, or as per manufacturer/supplier's standard. Apply sheets with wood grains oriented vertically and in random match pattern. Heat press veneer sheet following application.
Lighting	500-1000 Lux LED lighting,(Power-saving) Combination of drop light and recessed	Employer/ TESDA to approve design and colors of casing. -Fixture type -Color temperature(Kelvins) *cool/natural white: 4000-4500K *warm white for accent lighting (if applicable): 3000-3500K
Curtain Walls, Windows and Glass Doors	As per manufacturer/suppliers' recommended specifications given the height Use of 12mm thk. Clear, Tempered Glass for glass doors. Powder-coated aluminum framing; Employer-approved color / shade. For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmittion and 47% glare reduction. 	Contractor to submit shop drawings and samples for approval of employer / TESDA
Window Treament (Roller Blinds)	Single-colored (cream or light gray), PVC sunscreen-type roller blinds with 5% openness factor	Employer/ TESDA to approved-color

Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Meeting Room / Conference Room**
 Location: **Upper Floor**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	Refer to schematic floor plan / tabulation	
Flooring	Carpet Tiles 	At least 6mm thick, 50x50cm or 60x60cm (preferred); Employer/TESDA-approved colors and pattern. Preferably Blue and Gray combination
Ceiling	Acoustic Ceiling Panels / Tiles 	NRC - 1.00; Concealed Edges/Runners; White, 60cm x 60cm or 120cm x 60cm
Walls	Tempered Glass Walls and Doors. 	12mm thick Clear Tempered Glass Walls with frosting decal.; Walls (Masonry) Pre-fabricated; Pre-Cast Wall with acoustic and insulation partitions between other rooms; One side should be installed with smart TV and finished with accent wall (colored or wood veneer). Veneer accent wall: Use skin-type 0.5-0.6mm thickness veneer sheet. On concrete and on drywall applications: provide 1/2" thk plywood substrate. Ensure substrate is smoothed and free from dust and moisture prior to application. Adhesive must be polyvinyl acetate(PVA) glue or contact cement, or as per manufacturer/supplier's standard. Apply sheets with wood grains oriented vertically and in random match pattern. Heat press veneer sheet following application.
Lighting	400-750 Lux LED lighting,(Power-saving) Combination of drop light, recessed and task lighting	Employer/ TESDA to approve design and colors of casing. -Fixture type -Color temperature(Kelvins) *cool/natural white: 4000-4500K *warm white for accent lighting (if applicable): 3000-3500K
Curtain Walls, Windows and Glass Doors	As per manufacturer/suppliers' recommended specifications given the height Use of 12mm thk. Clear, Tempered Glass for glass doors. For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmittance and 47% glare reduction. Powder-coated aluminum framing; Employer-approved color / shade.	Contractor to submit shop drawings and samples for approval of employer / TESDA
Glass Writing Board	Frameless, magnetic, "write-on" and project screen glass board. 	Locate on on side of meeting room/ conference area





Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Incubation Rooms**
 Location: **Upper Floors**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	Refer to schematic floor plan / tabulation	
Flooring	Polished Concrete 	5- 7 steps process. Employer/ TESDA to approved final color, size of aggregates. Check final floor elevation. Avoid topping less than standard height (50mm or above); Satin Finish / Sheen, Non Slip
Ceiling	Acoustic Ceiling Panels / Tiles 	NRC - 1.00; Concelaed Edges/Runners; White, 60cm x 60cm or 120cm x 60cm
Walls	Tempered Glass Walls and Doors and Operable wall 	1.Fronting Co-Working Space: Tempered Glass Walls with Frosting Decal (Cuts and Design for approval) 2. Between rooms: Movable or Operable Partition with Acoustic properties
Lighting	400-750 Lux LED lighting,(Power-saving) Recessed Lighting	Employer/ TESDA to approve design and colors of casing
Curtain Walls, Windows and Glass Doors	As per manufacturer/suppliers' recommended specifications given the height Use of 12mm thk. Clear, Tempered Glass for glass doors. For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmittance and 47% glare reduction. Powder-coated aluminum framing; Employer-approved color / shade. 	Contractor to submit shop drawings and samples for approval of employer / TESDA
Window Treatments (Roller Blinds)	Single-colored (cream or light gray), PVC sunscreen-type roller blinds with 5% openness factor	Employer/ TESDA to approved-color




Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Packaging, Processing Facility; Cold Storage Facility**
 Location: **All Floors**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	Refer to schematic floor plan / tabulation	
Flooring	Polyurethane Flooring 	4-component polyurethane self-levelling system. Slip-resistant mortar system; mixture of high-grade polyurethane resin base with hardener and fillers; 6mm-25mm total thickness application Cures to a sturdy flooring system with a smooth matte-colored finish. For Cold Storage facility /storage; High-Impact, Chemical- and Water Resistant, Anti-Slip, Anti-bacterial;
Ceiling and Walls	Option 1: Insulated Metal Panels or PVC Panels  Option 2: Expanded polystyrene (EPS) wall panels Lightweight, non-load bearing precast wall panel; Compressive strength of 400-700 PSI; with fireproof rating of 4hrs against 1000 deg. C; 100-150mm thickness; water and moisture resistant; Painting- Water based paint (acrylic or latex); non-solvent type; apply as per EPS wall manufacturer's standard	Contractor to submit samples for approval of employer / TESDA. Food Grade, Moisture Resistant. Anti-Bacterial
Lighting	500-1000 Lux LED lighting,(Power-saving) Combination of drop light, recessed and task lighting	Employer/ TESDA to approve design and colors of casing. -Fixture type -Color temperature(Kelvins) *cool/natural white: 4000-4500K *warm white for accent lighting (if applicable): 3000-3500K
Doors and Windows	Steel/ Aluminum (Food Grade); Air Seal, View Panel, Self and Quick Closing, PWD-Friendly, Kick-Plates 	Contractor to submit shop drawings and samples for approval of employer / TESDA; RFID/ Security Access
Ventilation, Exhaust and Air-Conditioning	Verify with Standars for Cold Storage and Processing Facilities	







Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Restrooms; PWD CR/ All-Gender Toilet**
 Location: **All Floors**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	<i>Refer to schematic floor plan / tabulation</i>	
Flooring	60x60cm Homogenous, Non-Slip Tiles 	Homogenous Rectified Non-Slip Tiles. Employer/TESDA-approved colors. 2.0mm max grouting width should and match the color of the tiles. Provide waterproofing for upper floors.
Ceiling	12mm thk. Moisture-Resistant Gypsum Boards 	Ceiling Height at Ground Floor: 2.70 meters, for Upper Floors: 2.50 meters. White Color, provide shadow gap, cornice and accent colors.
Walls	30x60cm Homogenous Tiles and Phenolic Board Partition 	Homogenous Rectified, 2.0mm max grouting width. Phenolic Board Partitions should have stainless steel hardware. Employer / TESDA to approved colors.
Lighting	100-300 Lux (Warm White); LED lighting, (Power-saving) Recessed Lighting (General), Strip Lights and Sconce at Mirror/Lavatory	Employer/ TESDA to approve design and colors of casing
Windows	Aluminum Powder Coated Frame, Awning.	Refer to Exterior/ Co-Working Area Specifications
Urinal	Water-less type / water-saving 	At least 300mm wide and the lip of the collection area shall project from the wall at least 300mm. Should not be set closer than 450mm from its center to any side wall partition. A ledge or should be installed in the cubicles for putting personal items.
Water Closet	Flush valves, single flush; water-saving 	Concealed Sensor Toilet Flush Valve with Manual Override. Preferably be wall hung, without leg support, so as to facilitate cleaning. A ledge should be installed in the cubicles for putting personal items.
Lavatory and Counters	Semi-Counter Type Lavatory on Quartz Countertop 	Hands-free / touch less faucet; Countertop color for approval of employer/TESDA
PWD-Fixtures	Refer to BP 344 standards for handrail and heights	Stainless steel
Accessories	Hand dryer and automatic paper towel dispenser Infant changing table	








Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

Space / Function: **Storage / Utilities, Fire Exit Access, Special Equipment**
 Location: **All Floors**

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Size / Floor Area	<i>Refer to schematic floor plan / tabulation</i>	
Flooring	Polished Concrete 	5- 7 steps process. Employer/ TESDA to approved final color, size of aggregates. Check final floor elevation. Avoid topping less than standard height (50mm or above); Satin Finish / Sheen, Non Slip
Ceiling	Exposed Structural members and utilities. Soffit Painted White 	Provide proper tagging / marking for utilities (ex. Fire protection).
Walls	White, Semi Gloss Latex 	Use of pre-fabricated or modular walls/blocks. Semi Gloss Latex (White)
Lighting	500-1000 Lux LED lighting,(Power-saving) Combination of drop light and recessed	Employer/ TESDA to approve design and colors of casing. -Fixture type -Color temperature(Kelvins) *cool/natural white: 4000-4500K *warm white for accent lighting (if applicable): 3000-3500K
Large Ceiling Fans	Industrial Ceiling Fans 	For Workshop Areas and Optional for Co-Working Spaces / Events Space
Gondola Lift	Provide suspended lift at roof decks for gondola access   	For maintenance and transport of materials

Contractor to submit samples and shop drawings for approval

Section 6 - ANNEX C

GENERAL MATERIAL SPECIFICATIONS

INTERIOR FINISHES STANDARD/ MINIMUM REQUIREMENTS

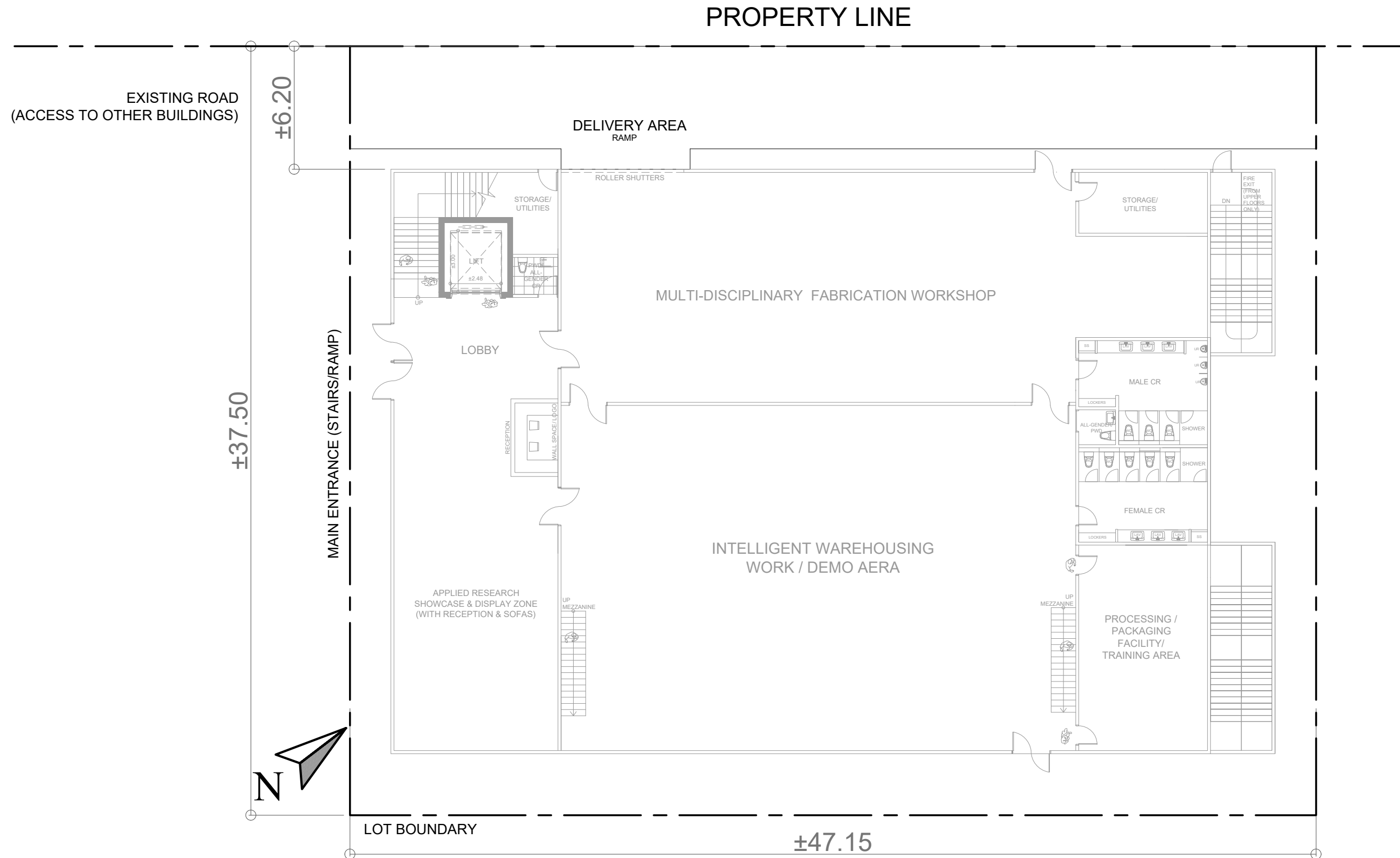
Space / Function: Doors, Windows and Railings
Location: All Floors

PARAMETER	REQUIREMENTS / PREFERRED	REMARKS
Curtain Walls, Windows and Glass Doors	<p>As per manufacturer/suppliers' recommended specifications given the height</p> <p>Use of 12mm thk. Clear, Tempered Glass for glass doors. Powder-coated aluminum framing; Employer-approved color / shade.</p> <p>For areas facing South and West, apply Clear Glass Coating with 0.61 Solar Heat Gain Coefficient and an 86% Ultraviolet (UV) Deflection. 76% visible light transmission and 47% glare reduction.</p> 	<p>Contractor to submit shop drawings and samples for approval of employer / TESDA</p>
Doors (Glass) Room locations: Meeting Rooms, Mezzanine Floors, Incubation Rooms.	<p>12mm thk. Tempered Glass, Frameless Panel with glass frosting</p> 	<p>At least 2.4 meters in high. 0.80m wide for single door, 1.60m wide for double doors. Complete with hardware, locskets and accessories. Ready to received RFID/Security Access. Whole door/s can be framed with Aluminum (Powder Coated) but panels should be frameless. Install decorative frosting (typogrphahy/room labels). Contractor to submit samples and shop drawings</p>
Doors (Steel) Room locations: Workshop Areas, Maker Space, Co-Working Spaces, Fire Exits	<p>Double Leaf Swing Door, Double Action</p> 	<p>At least 2.40meters high and 1.50m width (Clear Opening; Fire Rated. View Glass panel should be made of tempered glass. With Aluminum Kickplates, Complete with hardware and accessories. Owner Approved Color/s. Fire Exit Signs (illuminated)</p>
Doors (Steel) Single Door Fire Exits		<p>Fire Rated. View Glass panel should be made of tempered glass. With Aluminum Kickplates, Complete with hardware and accessories. Fire Exit Signs (illuminated)</p>
Roller Shutter	<p>For Workshop Area. Automatic/Remote Controlled with Manual Override. At least 4.50m high</p> 	<p>with wicket door or personnel (pedestrian access) at least 1.0 meter width for the door</p>
Restroom Doors	<p>Self-closing. Solid Wood, with heavy duty, aluminum fittings.</p> 	<p>With labels and typography. Self-closing. At least 2.4m high. Finsih can be stained or high pressure laminate with aluminum kick-plates.</p>
Railings	<p>Combination of Steel and Glass (Clear,Tempered) Railings</p> 	<p>Preferably Black or Gray</p>

Contractor to submit samples and shop drawings for approval

ANNEX D- SCHEMATIC FLOOR PLANS GENERAL SANTOS

WAREHOUSE AND LOGISTICS MANAGEMENT

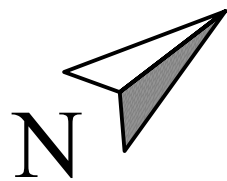
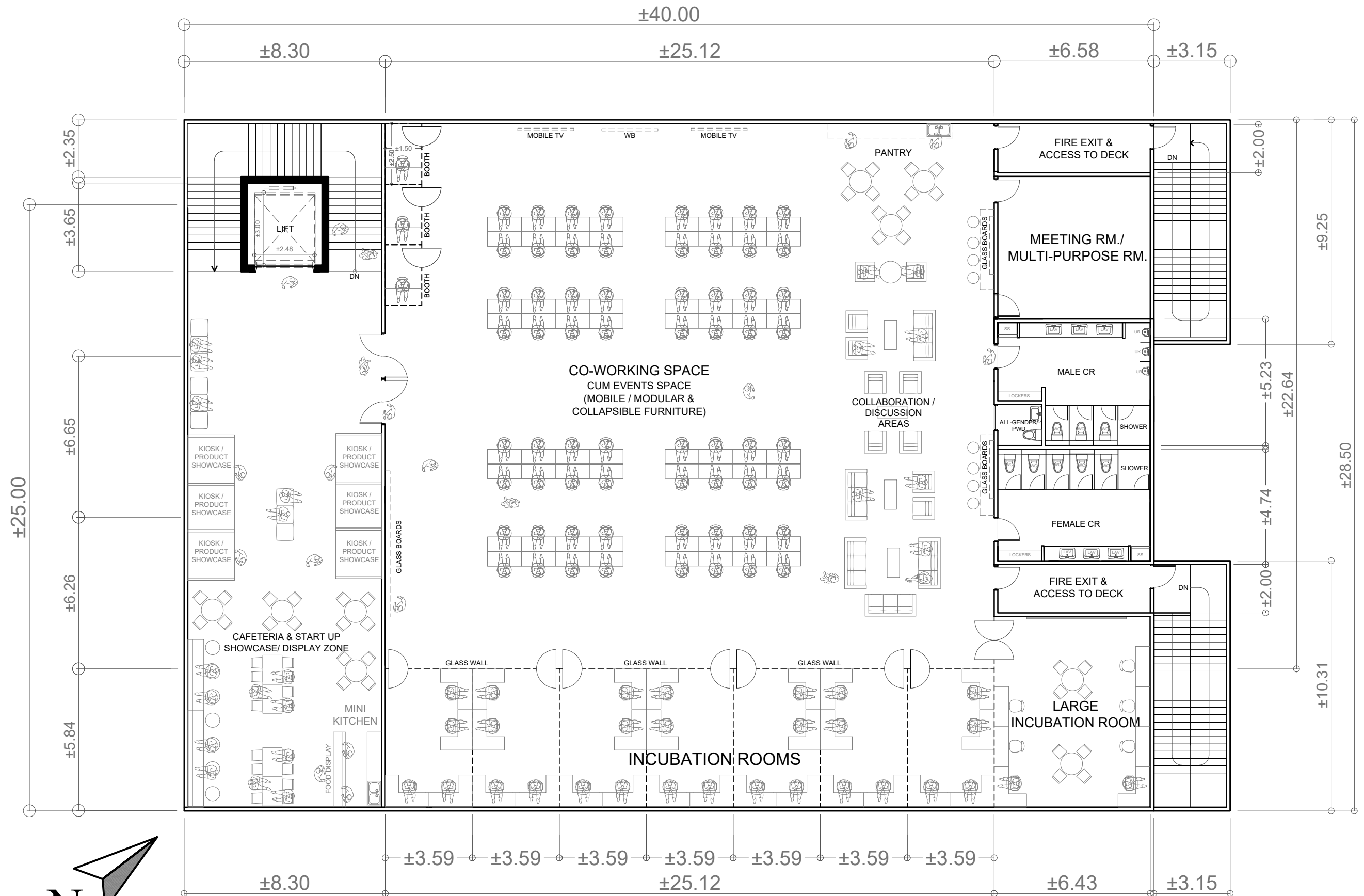


SCHEMATIC / CONCEPTUAL SITE DEVELOPMENT PLAN

LOT PLAN BASED ON SITE MEASUREMENTS ONLY
NO SURVEY / LOT PLAN AVAILABLE DURING SITE INSPECTION

ANNEX D- SCHEMATIC FLOOR PLANS GENERAL SANTOS

WAREHOUSE AND LOGISTICS MANAGEMENT



SCHEMATIC / CONCEPTUAL SECOND FLOOR PLAN

LOT PLAN BASED ON SITE MEASUREMENTS ONLY
NO SURVEY / LOT PLAN AVAILABLE DURING SITE INSPECTION

ANNEX E:

RTIC Focal Area Showcase Components and Innovation Makerspace Specifications

Components of Intelligent Warehouse Showcase @ RTIC GENERAL SANTOS

- **Automated Guided Vehicles (AGVs):** Mobile robots used in warehouses for transport and material handling. They can navigate without human intervention within the warehouse.
- **Autonomous Mobile Robots (AMRs):** Advanced version of AGVs and can navigate autonomously in dynamic environments.
- **Automated Storage and Retrieval Systems (AS/RS):** Large automated systems designed to store items effectively, and to retrieve them as needed.
- **Pick-to-Light Systems:** Light-directed picking and putting system that provides an efficient method of picking, putting, or sorting operations.
- **Sortation Systems:** Automatically divert a product from one conveyor line to another.
- **Voice-directed Picking Systems:** Use voice direction and speech recognition software to instruct warehouse workers on picking orders.
- **Palletizing Robots:** Robots are used for loading and unloading boxes or products on pallets.
- **Conveyor Belt Systems:** Transporting goods from one part of the warehouse to another.
- **Warehouse Management System (WMS) Software:** Software that helps manage operations in the warehouse like inventory management, picking processes, and auditing.
- **Drone technology for Inventory Management:** Drones used for performing inventory checks, scanning barcodes and QR codes of goods in high shelves without human intervention.
- **RFID Technology:** Radio-Frequency Identification (RFID) tags used to track the movement of goods within the warehouse.
- **Internet of Things (IoT) Devices:** Various sensors and devices connected to the internet for real-time tracking and data collection.
- **Smart Shelves and Bins:** Shelves or bins are equipped with weight sensors, light indicators, or other technology to monitor stock levels and trigger restocks or alarms if necessary.
- **Goods-to-Person (G2P) Technology:** These are technologies that bring items to operators for picking, instead of operators going to the items. Includes technologies like vertical lift modules, horizontal carousels, and robotic arms.
- **3D Printers:** For on-demand production or customization of certain parts or products.
- **Artificial Intelligence (AI) and Machine Learning (ML) tools:** For predictive analytics, demand forecasting, and other intelligent decision-making processes.



AS/RS



AGV

RFID



General Specification for Makerspace @ RTICs

Parameter	Norm	Remarks
Electrical Loading Requirement	3-phase power supply for conventional mill, turn, grinder Each mill, turn, grind 15 KVA and each machine assembly project station 2 KVA 16A electrical socket outlet should be provided for general use in the workshop All electrical installation should comply with local regulations	
Floor Requirement	Project work and storage area: 12 KN 300 mm concrete 2 coats epoxy industrial paint Raised floor at least 350 kg/m ² Vinyl composition to reduce dust and improve electrical insulation	
Lighting Requirement (Lumen)	Standard ceiling flourescent lightings at 25 W/m ² Emergency lights	
Building Safety Code Requirement	Comply with national safety code requirements	
Door Width	At least 1.5 m wide	

A = ampere, D = dimensional, kg/m² = kilogram per square meter, KN = kilonewton, kVA = kilo volt ampere, m = meter, mm = millimeter, W/m² = watt per square meter.

GENERAL SANTOS RTIC



Equipment, Furniture and Electricals

Recommendations

For Intelligent Warehousing Focus

1. Multi-Disciplinary Heavy Fabrication Workshop

Equipment Category	Detailed Equipment	Equipment Description	Quantity
1. CNC Equipment	CNC Milling Machine	Computer controlled milling machine for precise cutting and shaping	1
2. Lathes	Metal/Wood Lathe	Machine for shaping metal	1
3. Router	Metal/Wood Router	Used for hollowing out an area in a piece of wood	1
4. Welding Equipment	<ul style="list-style-type: none"> • <i>MIG Welder</i> • <i>Welding Helmet</i> • <i>Welding Gloves</i> • <i>Welding Apron</i> • <i>Welding Wire</i> • <i>Welding Clamps</i> 	Comprehensive welding station	1
5. Hand Tools	<ul style="list-style-type: none"> • <i>Screwdrivers Set Variety of sizes and types (Phillips, flathead, etc.)</i> • <i>Pliers Set Variety of types (needle-nose, slip-joint, etc.)</i> • <i>Wire Cutters For cutting and stripping wire</i> • <i>Precision Knife For fine cutting and trimming tasks</i> • <i>Hammers Various types for different tasks (claw hammer, ball-peen hammer, etc.)</i> • <i>Saws</i> 	Basic set of hand tools for various tasks	1
6. Drilling Tools	Bench Drill Press	Stationary drill for precise hole placement	1
	Bandsaw	For cutting wood or metal	1
	Circular Saw	Portable saw for cutting wood	1
	Jigsaw	Portable saw for cutting curves	1
	Metal Shear	For cutting sheet metal	1
7. Bending Tools	Metal Bender	For bending metal rods and bars	1
	Sheet Metal Brake	For bending sheet metal	1

8. Measurement Tools	<ul style="list-style-type: none"> • <i>Calipers</i> • <i>Micrometer</i> • <i>Ruler</i> • <i>Square</i> • <i>Protractor</i> • <i>Tape Measure</i> 	Comprehensive measurement tools set	2
9. Safety Equipment	<ul style="list-style-type: none"> • <i>Eye Protection</i> • <i>Ear Protection</i> • <i>Dust Masks</i> • <i>Fire Extinguisher</i> 	Safety equipment for various tasks	10 sets
10. Other Tools	Sanding Machine	For smoothing and finishing wood and metal	1
	Bench Grinder	For sharpening tools and grinding metal	1
	Belt Sander	For smoothing and finishing large surfaces	1
	Clamping Tools Set (C-clamps, Bar Clamps, Bench Vise)	For securely holding workpieces	1
11. Compressor/Vacuum	Industrial Air Compressor	An air compressor capable of providing the needed air pressure and flow for a CNC machine.	
	Industrial Vacuum System	A vacuum system designed for use with a CNC machine.	
12. Consumables	CNC Milling Bits	For use with the CNC machine	10
	Lathe Cutting Tools	For use with the lathes	10
	Router Bits	For use with the router	10
	Drill Bits	For use with the drill press	20
	Bandsaw Blades	For use with the bandsaw	5
	Circular Saw Blades	For use with the circular saw	5
	Jigsaw Blades	For use with the jigsaw	10
	Sandpaper	For use with the sanding machine and belt sander	50
	Grinding Wheels	For use with the bench grinder	5
	Screws, Nails, Fasteners	Assorted sizes and types for various projects	100

Furniture

Category	Detailed Equipment	Equipment Description	Quantity
13. Furniture	Workbenches	Heavy-duty tables for performing work	4
	Storage Cabinets	For securely storing tools and materials	2
	Chairs	For sitting while working	20
	Tool Chests	For organizing and storing small tools	2
	Shelving (3D Printers)	For 3D Printers	2

Electrical Outlet Points

Equipment Category	Detailed Equipment	Equipment Description	Quantity
Electrical Outlets	240V Single Phase Outlet	Standard wall outlets for various tools and machines	16
Electrical Outlets	415V Three Phase Outlet	High-capacity outlets for heavy machinery like the CNC machine and welder	5
Electrical Outlets	240V GFCI Single Phase Outlet	Ground fault circuit interrupter outlets for safety for CNC, Milling, Lathe and Router	4
Total Outlets			24

2. Logistics Processing Area

Category	Item	Description	Quantity
14. Conveyor System	Roller Conveyor	Used for moving packages and goods efficiently along the showcase area	1
	Belt Conveyor	For automated transport of items, suitable for loading/unloading processes	1
15. Packaging	Box Sealing Machine	Automatically seals boxes for efficient and secure packaging	1
	Strapping Machine	For bundling and securing packages or pallets with strapping materials	1
	Stretch Wrapping Machine	Wraps pallets or large items with stretch film for stability and protection	1
	Heat Shrink Machine	Shrinks plastic film around packages using heat for a tight and secure wrap	1

	Weighing Scale	Accurate weighing of packages for logistics and shipping purposes	1
	Label Printer	Prints labels with important information for identification and tracking	1
	Pallet Jack	Helps in moving and lifting heavy pallets for efficient warehouse operations	1
16. Storage	Shelving Units	Provides organized storage space for products and packaging materials	1
	Storage Bins	Containers for storing and organizing smaller items	2
17. Workstations	Workbenches	Work surfaces for packaging and processing activities	2
	Packaging Tools and Supplies	Includes tape dispensers, cutters, scissors, markers, and other packaging tools	2 Sets
	Packaging Materials	Boxes, bubble wrap, cushioning materials, tapes, and other packaging supplies	5 Sets

Electrical Outlet Points

Equipment Description	Power Specification	Outlets Required
Roller Conveyor	240V 1P	2
Belt Conveyor	415V 3P	2
Box Sealing Machine	240V 1P	2
Strapping Machine	240V 1P	2
Stretch Wrapping Machine	240V 1P	2
Heat Shrink Machine	240V 1P	2
Weighing Scale	240V 1P	1
Label Printer	240V 1P	1

3. Intelligent Warehousing Showcase and Demonstration Area

Demonstrational Equipment for Showcase

Category	Description
18. Automated Guided Vehicles (AGVs)	Mobile robots for transport and material handling
19. Autonomous Mobile Robots (AMRs)	Advanced version of AGVs for autonomous navigation
20. Automated Storage and Retrieval Systems (AS/RS)	Large automated systems for effective item storage and retrieval
21. Pick-to-Light Systems	Light-directed picking and putting system
22. Sortation Systems	Automatically divert products to different conveyor lines
23. Voice-directed Picking Systems	Voice-guided picking instructions for warehouse workers
24. Palletizing Robots	Robots for loading and unloading boxes on pallets
25. Conveyor Belt Systems	Transport goods within the warehouse
26. Warehouse Management System (WMS) Software	Software for managing warehouse operations
27. Drone technology for Inventory Management	Drones for inventory checks and scanning
28. RFID Technology	Radio-Frequency Identification tags for tracking goods

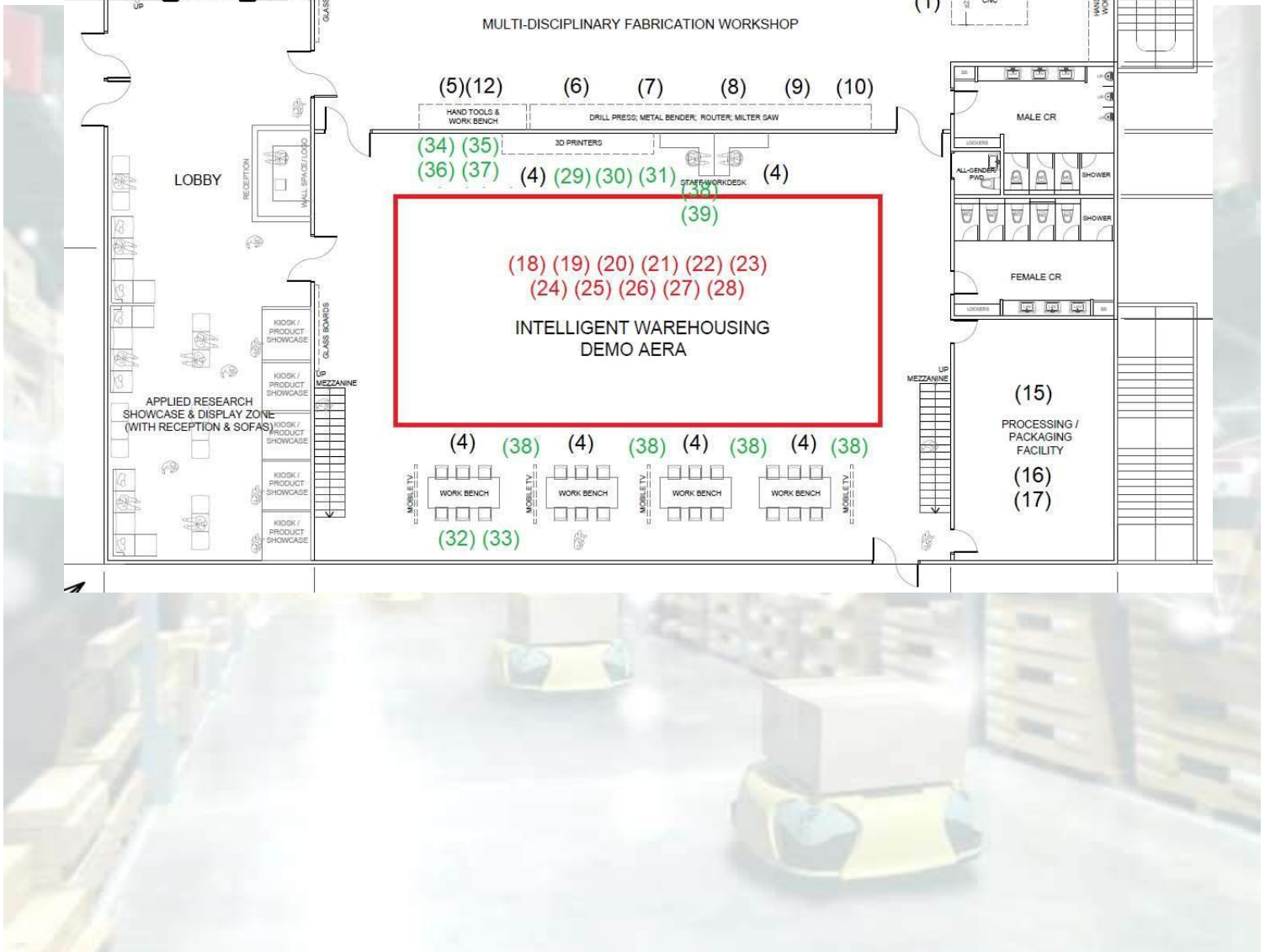
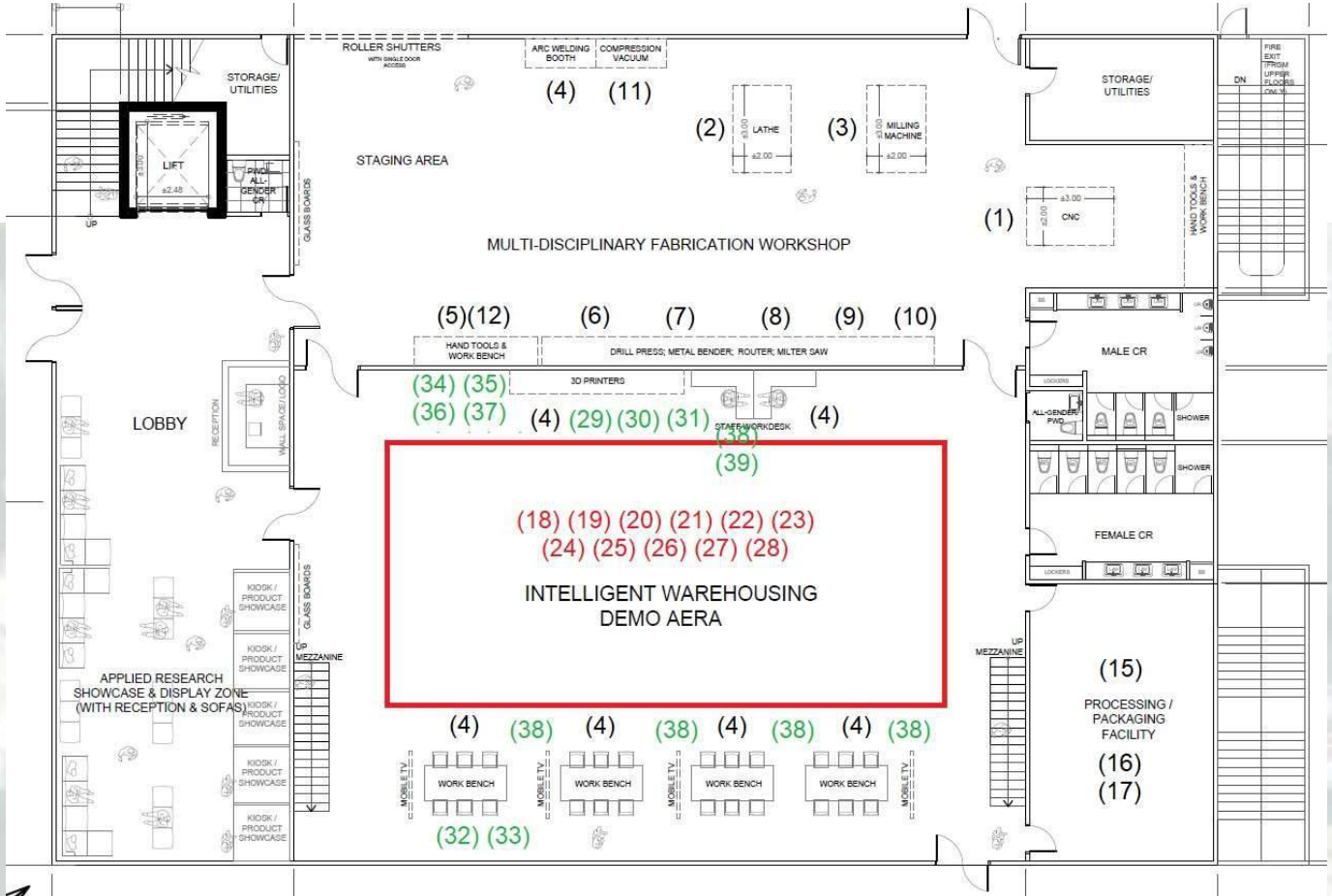
Equipment Category	Equipment Description	Quantity
29. 3D Printers	High-Resolution 3D Printers (For prototyping and model creation)	5
30. Filament	PLA Filament (standard for most general-purpose printing)	10
	PLA Filament (standard for most general-purpose printing)	10
	Specialty Filament (flexible, wood-infused, metal-infused, etc.)	10
31. Printer Maintenance	Print Bed Surface	2
	Replacement Nozzles	5
	Cleaning and Scraping Tools	2
32. Design Software	CAD Software License (like Tinkercad, Fusion 360)	
33. Computers	Computers (For 3D modeling, research, etc.)	2
34. Post-processing	Deburring Tools	2 sets

	Sandpaper Assortment	2 sets
35. Safety Equipment	Fire Extinguisher	1
	Fume Extractor (particularly for ABS or other noxious materials)	1
36. Measurement Tools	Calipers (For precise measurements)	5
	Level (For ensuring proper alignment)	5
37. Safety Equipment	Safety Glasses (Eye protection)	20
	First Aid Kits (Emergency treatment)	2
38. Workshop Furniture	Workbenches (Workstation for users)	3
	Drafting Chairs (Adjustable seating for users)	18
	Computer Desks (Workstation for staff)	2
	Office Chairs (Seating for staff)	2
	3D Printer Stands/Cabinets (Dedicated housing for 3D printers)	5
39. Storage	Filament Storage Boxes	5
	Tool Storage Box	1

Electrical Outlet Points

Equipment Description	Power Specification	Outlets Required
AGVs	240V 1P	2
AMRs	240V 1P	2
AS/RS	415V 3P	2
Pick-to-Light Systems	240V 1P	2
Sortation Systems	240V 1P	2
Voice-directed Picking Systems	240V 1P	2
Palletizing Robots	240V 1P	2
Conveyor Belt Systems	240V 1P	2
WMS Software	240V 1P	2
Drone technology	240V 1P	2
RFID Technology	240V 1P	2
Smart Shelves and Bins	240V 1P	2
Goods-to-Person Technology	240V 1P	2
3D Printers	240V 1P	2
Design Software	240V 1P	1
Computers	240V 1P	2
Post-processing	240V 1P	2
Total		33

Indicative Equipment Layout – Level 1



4. Equipment for Electronics, Robotics and IOT Workshop (Mezzanine Level)

Equipment Category	Equipment Description	Quantity	Details
40. Microcontrollers	Arduino Uno	8	Open-source electronic prototyping platform enabling users to create interactive electronic objects.
41. Microcontrollers	Raspberry Pi 4	8	Compact computer board used for a variety of applications and projects.
42. Microcontrollers	ESP32	8	A series of low-cost, low-power system on a chip microcontrollers with integrated Wi-Fi and dual-mode Bluetooth.
43. Microcontrollers	ESP8266	8	A low-cost Wi-Fi chip with full TCP/IP stack and MCU capability.
44. Sensors	Various Sensors	8 (sets)	<p>Sensor kits for a variety of IoT projects or equivalent:</p> <ul style="list-style-type: none"> • <i>DHT22 (Temperature & Humidity Sensor)</i> • <i>PIR Motion Sensor</i> • <i>HC-SR04 (Ultrasonic Distance Sensor)</i> • <i>Photocell (Light Sensor)</i> • <i>MPU6050 (Gyroscope & Accelerometer)</i> • <i>Reed Switch (Magnetic Sensor)</i> • <i>Soil Moisture Sensor</i> • <i>MQ-2 Gas Sensor</i> • <i>Load Cell & HX711 Amplifier (Weight Sensor)</i> • <i>Sound Sensor (Microphone Module)</i> • <i>Infrared Obstacle Avoidance Sensor</i> • <i>LDR (Light Dependent Resistor)</i> • <i>Hall Effect Sensor (Magnetic Field)</i> • <i>Pulse Rate Sensor</i>
45. Actuators	Various Actuators (Servo Motors, DC Motors, LEDs)	8 (sets)	<p>Actuator kits for robotics and IoT projects or equivalent:</p> <ul style="list-style-type: none"> • <i>Servo Motor (SG90)</i> • <i>DC Motors</i> • <i>Stepper Motor (28BYJ-48 with ULN2003 Driver)</i> • <i>Brushless DC Motor</i> • <i>Solenoid</i> • <i>Piezoelectric Actuator</i> • <i>Linear Actuator</i> • <i>Relay Module</i> • <i>LED Light Strip</i> • <i>Speaker/Buzzer</i>
46. IoT Modules	Various IoT Modules	8 (sets)	IoT module kits for various connectivity options or equivalent:

			<ul style="list-style-type: none"> • <i>ESP8266 WiFi Module</i> • <i>HC-05 Bluetooth Module</i> • <i>SIM800L GSM Module</i> • <i>NEO-6M GPS Module</i> • <i>RAKWireless LoRa Module</i> • <i>XBee Pro S2C</i> • <i>RFID reader and tags</i>
47. Circuit Components	Basic Electronics Components Kit (Resistors, Capacitors, Diodes, Transistors, ICs, Breadboards, Jumper wires, Power supplies)	8	<p>Basic electronics kits for building and testing circuits.</p> <ul style="list-style-type: none"> • <i>Resistors (Assorted)</i> • <i>Capacitors (Assorted)</i> • <i>Diodes</i> • <i>Transistors (Assorted)</i> • <i>Integrated Circuits (Assorted)</i> • <i>Breadboards</i> • <i>Jumper Wires (Assorted)</i> • <i>DC Power Supply</i> • <i>LED (Assorted)</i> • <i>Switches (Assorted)</i> • <i>Relays</i> • <i>Stepper Motors</i> • <i>Motor Driver ICs</i> • <i>FPGA Development Boards</i> • <i>Function Generator</i>
48. Displays	Various Displays	8 (sets)	<p>Variety of display types for different project needs.</p> <ul style="list-style-type: none"> • <i>7" TFT LCD Display</i> • <i>OLED Display Module</i> • <i>32x8 LED Matrix Panel</i>
49. Computers	Laptop Computers	6	<p>Following specification or aboe:</p> <ul style="list-style-type: none"> • <i>i5 or Ryzen 5</i> • <i>16 GB RAM</i> • <i>500GB SSD</i> • <i>FHD screen</i> • <i>USB and HDMI ports</i> • <i>Battery life of more than 5 hours</i>
50. Robotic Arms	ABB's GoFa or UFactory 850 collaborative robot	2	High-speed, high-precision collaborative industrial robotic arm.
51. Soldering Tools	Soldering Tools Set	8	<p>Essential tools for assembling electronic components.</p> <ul style="list-style-type: none"> • <i>High-Precision Soldering Station</i> • <i>Lead-Free Solder Wire</i> • <i>Desoldering Pump</i> • <i>Soldering Tips (Variety pack)</i> • <i>Solder Wick</i>

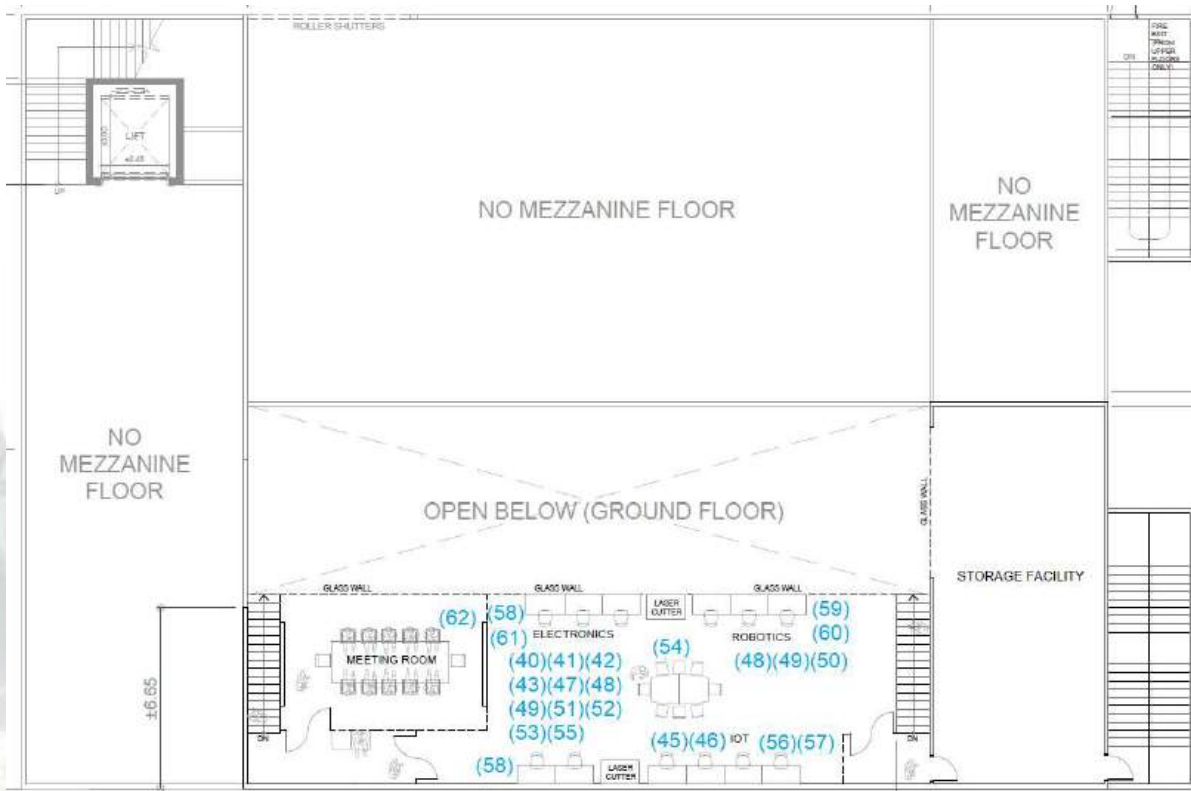
			<ul style="list-style-type: none"> • Flux Pen • Tip Tinner • Helping Hands with Magnifying Glass • Safety Glasses • Soldering Mat
52. Measurement Tools	Multimeter	8	Instrument for testing electrical connections and activity.
	Oscilloscope	2	Instrument for observing varying signal voltages.
53. Hand Tools	Hand Tools Set (Screwdrivers, Pliers, Wire Cutters, Precision knife)	8	Essential tools for manual work on projects. <ul style="list-style-type: none"> • Set of pliers • Set of screw drivers • Set of wire markers • Wire strippers • Digital multi-meter • Wire crimpers • Clamp ammeter • Mobile tool trolley • Plastic cable tray 1 m × 1.5" × 1.5"
54. Laser Cutter	High Resolution Laser Cutter	1	For laser cutting of patterns and parts
55. Other Tools	Other Tools Set	8	Additional tools for constructing and securing electronic projects. <ul style="list-style-type: none"> • Heat shrink tubing • Adhesive tapes • Heat gun • PCBs • PCB Etching solution • Heat shrink tubing (assorted sizes) • PCBs and PCB Etching solution • Precision Knife Set
56. 3D Printing Tools	3D Printer	2	For fabricating custom parts and components.
57. Safety Equipment	Safety Equipment Set	8	Safety equipment to ensure user safety during hands-on work. <ul style="list-style-type: none"> • Safety Glasses • Fume Extractor for Soldering • Antistatic Mat • Antistatic Wrist Strap • Ear Plugs • First Aid Kit • Fire Extinguisher (special for electrical fires)

			<ul style="list-style-type: none"> • <i>Safety Gloves (for handling hot or sharp objects)</i> • <i>Ear Protection (if using noisy tools)</i> • <i>Emergency Exit Signage</i>
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Furniture

Category	Furniture	Quantity	Description
58. Workstations	Workbenches/Tables	10	Sturdy workbenches for hands-on work.
	Comfortable Chairs	8	Comfortable chairs for extended work periods.
	Computer Desks	6	Desks for computers and electronics work.
	Computers for Design/Coding	6	Computers for design and coding tasks.
59. Storage	Storage Cabinets for Tools	2	Cabinets for storing tools and equipment.
	Storage Cabinets for Components	2	Cabinets for storing electronic components.
	Shelves for Projects/Robots	2	Shelves for displaying projects and robots.
	Rolling Tool Chests	2	Mobile tool chests for flexible workspace.
	Filing Cabinet for Documentation	1	Cabinet for storing documentation and records.
60. Safety & Cleanup	Soldering/Hot Work Station	1	Dedicated station for soldering and hot work.
	Safety Equipment Storage	1	Storage for safety equipment like goggles and gloves.
	Trash/Recycling Bins	2	Bins for waste management.
	First Aid Kit	1	First aid kit for minor injuries.
	Fire Extinguisher	1	Fire extinguisher for safety.
61. Teaching & Presentation	Large Whiteboards	4	Whiteboards for teaching and brainstorming.
	Large Screen TVs	2	TV for presentations and media display.
62. Meeting Room	Conference Table	1	Large conference room table
	Large Screen TV	1	TV for presentations and media display
	Conference Room Chairs	12	Comfortable chairs for the conference table

Indicative Layout – Level 1 Mezzanine Level



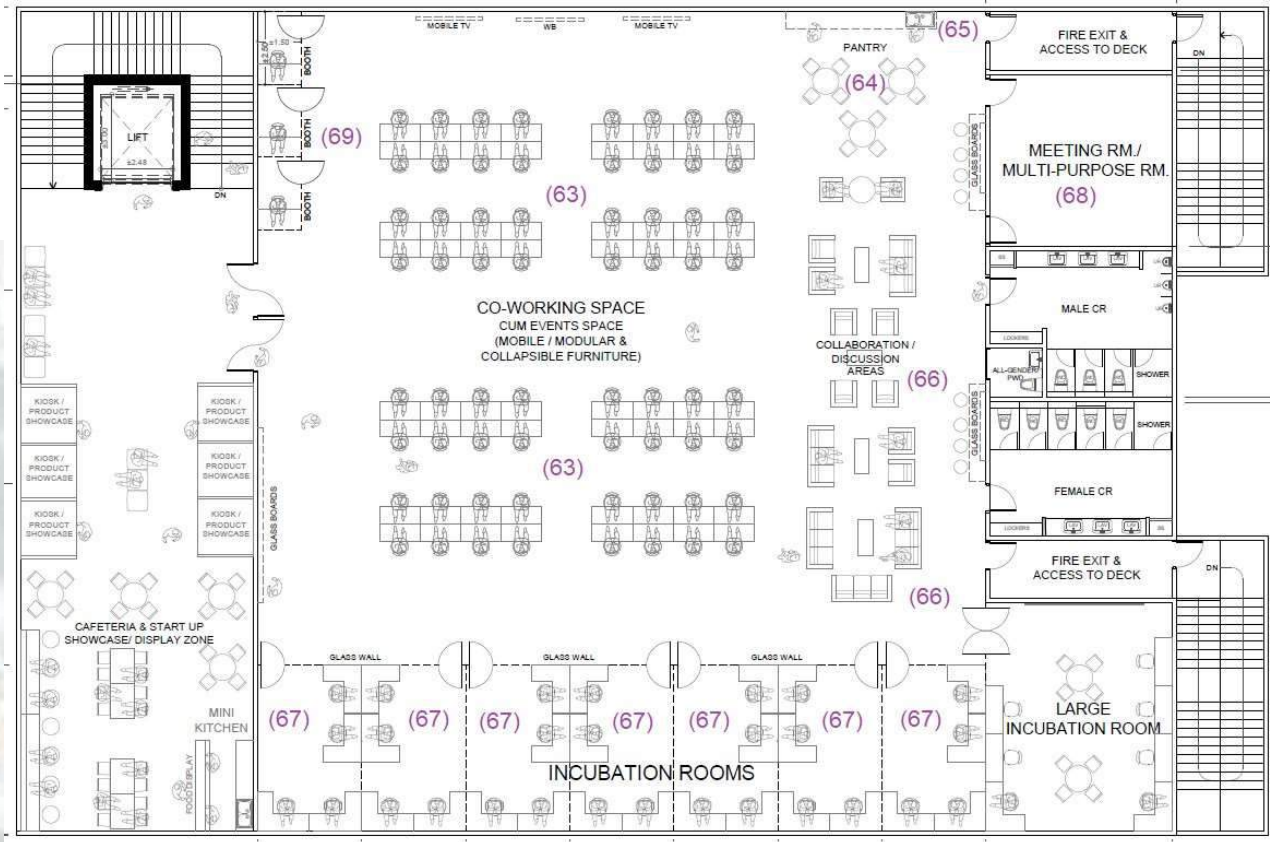
Electrical Outlet Points (240V – Single Phase)

Electrical Outlet to Support Equipment/Furniture	Quantity	Electrical Points per Unit	Total Electrical Points
Desks (Workbenches/Tables + Computer Desks)	16	4	64
3D Printers	2	2	4
Computers for Design/Coding	6	2	12
Large Screen TVs	3	2	6
Meeting Room Conference Table	6	2	12
Total Electrical Outlets			98

5. Incubation, Co-Working and Event Space (Level 2)

Category	Item	Quantity
63. Co-working Space	Office chairs on rollers	64
	Foldable tables on rollers	64
64. Dining Area	Dining tables	3
	Dining chairs	12
65. Pantry	Refrigerator	1
	Microwave Oven	1
	Electric Kettle	1
	Coffee Maker	1
	Water Dispenser	1
	Dish Rack	1
	Storage Cabinets	As needed
	Cutlery & Crockery	As needed
66. Sofa Area	5-Seater Sofas	3
	Coffee tables	3
67. Small Incubation Rooms (6x)	Mobile tables on rollers	6
	Office chairs	28
	Whiteboards	7
	Notice boards	7
68. Large Incubation Room (1x)	Mobile tables on rollers	11
	Office chairs	11
	Large whiteboard	2
	Notice board	1
69. Call Booths	Single-person desk	3
	Office chairs	3

Indicative Layout – Level 1 Mezzanine Level



Electrical Outlet Points

Category	Item	Outlet Points Needed	Voltage
Co-working Space	Foldable tables on rollers	64	240V 1P
Incubation Rooms	Desk points	32	240V 1P
Dining Area	Dining tables	2	240V 1P
	Dining chairs	8	240V 1P
Pantry	Refrigerator	1	240V 1P
	Microwave Oven	1	240V 1P
	Electric Kettle	1	240V 1P
	Coffee Maker	1	240V 1P
	Water Dispenser	1	240V 1P
Sofa Area	Coffee tables	6	240V 1P
	Total Outlet Points	86	

Initial Environmental Examination (2021)

Philippines: Supporting Innovation in the Philippine Technical and Vocational Education and Training System Project

Prepared by Technical Education and Skills Development Authority, Government of the Philippines for the Asian Development Bank.

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EXECUTIVE SUMMARY

Introduction

The Philippine Government has requested a loan from Asian Development Bank (ADB) in the amount of \$ 100 million to finance the proposed Supporting Innovation in the Philippine Technical and Vocational Education and Training Project (the Project) which will support the Philippine Development Plan (2017–2022) to improve the quality of technical and vocational education and training (TVET) training programs, integrate 21st century competencies, strengthen certification, encourage research and innovation, and forge stronger links between TVET institutes and industry to increase employability of Filipino youth. The Project aims to strengthen the global competitiveness and readiness of Filipino mid-level workforce and to effectively use TVET as an instrument for social equity for workforce inclusion and poverty reduction. The Executing Agency is the Technical Education and Skills Development Authority (TESDA).

Project Rationale

This Initial Environmental Examination (IEE) was prepared in relation to the upgrading and modernization of 17 TESDA technology institutions (TTIs), one per region, into industry-responsive innovation centers (Output 3). **First five (5 Sites will be in Region II, Region VIII, Region X, Region XII and BARMM.** To support the implementation of innovations within TESDA, Regional TVET Innovation Centers (RTICs) will be established in 16 regions and TTI facilities will be rehabilitated in 17 regions. Except for RTIC-Cebu, which has its own innovation center already, new RTICs will also be established within 16 TTIs. Each innovation center will have different areas of specialization supportive to the region's economic drivers.

Each innovation center will provide the infrastructure to operationalize the strategy for social innovation and the processing of "shared context" for quality assurance, upskilling of workforce, entrepreneurship, applied research and development, problem-solving to create social value, collaborative arrangements and institutional partnerships (international and domestic). It will serve as information hub and connector between the local industry and the government agencies (national and local), firms (domestic and international), training institutions, colleges, universities and research institutions.

Aside from the physical facility, the TTIs with RTICs will also be capacitated to include in their current curricular offering higher-level TVET programs (Philippine Qualifications Framework levels III to V) and joint skills development programs with industry, focusing on 21st century skills and new, advanced and emerging technologies. Complementary to the skills development programs of the TTIs, the RTICs will offer research, innovation, entrepreneurship and startup training programs. Likewise, the RTICs will be capacitated to implement "spoke and hub model" and provide technology demonstration services, research and development services, and incubation and business start-up services to its learners, industry partners and public and private technical vocational Institutions (TVIs) within the region.

The Project will support 4 outputs:

- Output 1: The Philippines's skills development ecosystem modernized
- Output 2: TVET training made more demand-driven and industry-led
- Output 3: Selected TESDA TTIs upgraded and modernized into industry-responsive innovation centers
- Output 4: TESDA's management capacity and resilience strengthened.

Purpose and Methodology of Environmental Assessment

This environmental assessment focuses on the upgrading and modernization of TTIs into industry-responsive innovation centers. These TTIs will have improved training facilities and equipment that will benefit students. Climate-smart designs and climate-proofing measures will be adopted while upgrading the TTIs and establishing select RTICs.

Environment Classification and Assessments

The Project is classified as environment category B based on ADB's Rapid Environment Assessment (REA) Checklist and Safeguards Policy Statement (SPS) 2009, requiring the preparation of an IEE and Environmental Management Plan (EMP). The IEE and EMP covers the civil works proposed under Output 3 of the Project, which covers the rehabilitation of existing TTIs and construction of new RTICs. The proposed civil works will be undertaken entirely within the existing campuses of TESDA, which are all owned by TESDA and / or the government of the Philippines. The proposed sites are located within built-up areas. There are no protected areas, wetlands, mangroves, estuaries, cultural heritage site or historical monuments that will be directly affected by the Project.

For new project where the total construction area is less than 1 hectare, it is not covered by the Philippine Environmental Impact Statement System (PEISS), based on the Department of Environment and Natural Resources–Environmental Management Bureau's (DENR-EMB) Memorandum Circular (MC) 005, series of 2014. The expansion, modification and/or rehabilitation of existing buildings with issued environmental compliance certificate (ECC), on the other hand, requires amending the ECC through the submission of an Environmental Performance Report and Management Plan to the DENR–EMB regional office where the project is located. A Building Permit must be secured from the local government unit where the facility will be constructed, in compliance with Presidential Decree No. 1096 (National Building Code of the Philippines) before any type of building construction or repair work can start. No significant non-compliance of existing facilities with government environment requirements has been observed during various consultations with TTIs, and basic environmental and utility services (water supply, wastewater treatment, and drainage) will be improved as part of upgrading of TTI facilities. The project will ensure that all the requisite clearances and permits will be secured prior to construction.

The detailed design of the TTIs and RTICs will conform with the National Building Code of the Philippines and international standards. Applicable local government clearances such as building, sanitary and electrical permits will be secured prior to construction. Other permits to be secured include Fire Safety Evaluation Clearance, Height Clearance Permit (for sites near airports) and Tree Cutting Permit. This IEE will be updated to include the detailed design of the Project.

Environmental Conditions at Project Sites

All of the identified TTIs have sufficient land for the proposed rehabilitation of existing buildings and construction of new buildings. All of the identified TTIs are connected with existing national, provincial, or local roads and can be accessed through public transportation. All TTIs have available land for the proposed innovation centers. The proof of occupancy includes Usufruct, Presidential Proclamation and Republic Act, Deed of Donations, Tax Declaration and Land Title.

In terms of topography, only the Regional Training Center - Baguio is located upland, with an elevation of 1,338 meters above sea level (masl), while the other 16 TTIs are located lowland, with an elevation that ranges from 3 to 43 masl.

The provinces that are at most risk to earthquakes include Benguet, Pangasinan, Davao Oriental, Leyte, Agusan del Norte and South Cotabato. Pangasinan is prone to earthquake, specifically the deep-focused ones, because of the Manila Trench, while Davao Oriental, Leyte, Agusan del Norte and General Santos have earthquake hazards due to the Philippine Fault Zone. Frequency of shallow and left-lateral strike-slip earthquakes in Eastern Pangasinan and Benguet can be attributed to its location along the Philippine Fault Zone. Benguet, Oriental Mindoro, Davao Oriental, South Cotabato and Misamis Oriental are susceptible to landslide hazards.

In terms of tsunami hazard, the TTIs that are most at risk from tsunami include Pangasinan Technological Institute, Regional Training Center Cavite, Laguna, Rizal, Quezon (RTC CALABARZON), Provincial Training Center Oriental (PTC) Mindoro – San Teodoro, RTC Iloilo, RTC Cebu, and RTC Zamboanga Peninsula (high potential); RTC Tacloban, RTC Tagoloan, and Davao Oriental Polytechnic Institute (local generators); and General Santos National School of Arts and Trades (local and foreign generators).

Active volcanoes that are within 100 km from proposed TTIs include Mt. Pinatubo, which is 65.13km from RTC Central Luzon- Guiguinto; Taal Volcano, which is 55.34 km and 29.06 km from RTC NCR and RTC CALABARZON, respectively; Mt. Isarog and Mt. Iriga, which is 13.86 km and 24.87 km, respectively, from RTC Pili; Davao Oriental Polytechnic Institute, which is 52 km from Leonard Range Volcano (or Leonard Kniazeff); and Mt. Parker, which is 30.72 km from General Santos National School of Arts and Trade.

In terms of frequency of tropical cyclones (TCs), Region II was the most affected, with 81-106 TCs from 1953-2010, while Regions I, CAR, V and VII received about 61-80 TCs for the same period. Regions XI, XII and BARMM received the lowest number, with 1-2 TCs for the same period.

TTIs most at risk for flooding include Pangasinan Technological Institute, RTC Tuguegarao, RTC - NCR, RTC – Pili, RTC Zamboanga Peninsula, RTC Tagoloan, and Davao Oriental Polytechnic Institute, where flooding may reach up to 1.5 meters during a 5-year return period. RTC Central Luzon – Guiguinto is also at risk for a 1.5 m flood with a return period of 25 years. TTIs with medium to high (>0.5 m to >1.5 m) 100-year return period flood hazard, include RTC – Baguio and Regional Manpower Development Center, while TTIs with low probability or no flooding, even a 100-year return period, include RTC – CALABARZON, PTC Oriental Mindoro – San Teodoro, RTC – Iloilo, RTC – Cebu, RTC – Tacloban, General Santos National School of Arts and Trades, and Northern Mindanao School of Fisheries.

Areas highly at risk to El Niño – induced drought include Davao Oriental, South Cotabato, Sultan Kudarat, Misamis Oriental and Cebu. Provinces included in the Project that are most at risk to projected rainfall changes are Batangas, Pangasinan, Metro Manila, Bulacan, Camarines Sur, Cebu, Leyte, Misamis Oriental and Sultan Kudarat.

In terms of locations of protected areas and key biodiversity areas, RTC Baguio and Regional Manpower Development Center are 1 km within buffer zone of Lower Agno Watershed Forest Reserve and Marcos Highway Watershed Forest Reserve; and Liguasan Marsh, respectively. General Santos National School of Arts and Trades is 5 km within buffer zone of Sarangani Bay Protected Landscape; PTC Oriental Mindoro– San Teodoro, also 5 km within buffer zone of Puerto Galera; and RTC Zamboanga Peninsula, also 5 km within buffer zone from Pasonanca watershed.

RTC Tuguegarao, RTC Pili, RTC Cebu and RTC Tacloban, are all 10 km within buffer zone of nearest protected areas.

Environmental Impacts and Mitigation Measures

A comprehensive environment and social safeguards questionnaire was prepared and used during the site surveys of TTIs. Assessments were done through video conferencing with TESDA regional safeguards focals to verify the initial assessments identified in the environment and social safeguards questionnaires sent to regional offices in November 2020. The National Institute for Technical Education and Skills Development (NITESD)-TESDA central office assisted in completing the questionnaires and provided lacking information.

The project is expected to have positive impact on the quality of (TVET in the Philippines. Students who intend to pursue TVET will directly benefit from upgraded curriculum geared towards the fourth industrial revolution (4IR), and better facilities in innovation centers.

During the pre-construction phase, major risks and potential negative impacts include geological and natural hazards, flooding risks and climate change impacts; and minor impacts on vegetation (loss of trees).

During construction, major potential impacts include disturbance of land and soil condition and generation of wastes from rehabilitated TTIs and construction of innovation centers, and impact on air quality and noise level; and medium impacts on the following: surface water quality, loss of vegetation, reduced water supply from ground water, temporary disturbance of access, increased level of use of water, increased level of vehicle traffic, and health and safety of workers and the community. There is a risk that asbestos or asbestos containing materials could be present in some of buildings to be demolished or rehabilitated. The Project will refer to DENR Administrative Order (DAO) No. 2000 – 02 (Chemical Control Order for Asbestos), particularly Section IX, Specific Requirements and Standards, item 6 – Renovation, Removal and Demolition Requirements. Based on the DAO, the duly authorized owner or operator, in this case the TTI, through the Design and Construction Supervision Consulting (DSC) Firm, shall thoroughly inspect and assess the facility to verify the presence of any friable asbestos containing materials, or non-friable asbestos containing materials that have become friable prior to the commencement of any demolition and/or rehabilitation activity. In addition, and based on the findings of the risk assessment, the DSC Firm will also develop a risk management plan to be refined and implemented by works contractors during the construction phase, using qualified and experienced experts.

During operation, major risks and impacts include climate change risks, while medium for generation of solid wastes from TVET activities, potential deterioration of water quality, additional strain to existing water resource, traffic generation, increase in level of particulate matter, and risks of students and workers from handling equipment.

Based on the assessment of adverse impacts of the Project, mitigating measures were proposed to address these potential impacts.

Information Disclosure, Consultation and Participation

Public consultations were conducted with different stakeholders via Microsoft Teams and Zoom videoconferencing due to travel restrictions brought by the COVID-19 pandemic. Concerns and recommendations of the stakeholders were incorporated in the environmental management plan

(EMP). A grievance redress mechanism (GRM) was also established at the national and regional levels to address concerns and complaints arising from the Project construction.

In line with ADB's Access to Information Policy (2018), the IEE Report for the project will be made available in a timely manner, in an accessible place, and in a form and language that will be understood by affected people and other stakeholders. The purpose is for affected people, including the general public, to provide meaningful inputs during project implementation. As this version of the IEE is based on the conceptual design, updated IEE reflecting detailed engineering design, which incorporates further inputs and feedbacks of all concerned stakeholders, will also be made available to the public.

Grievance Redress Mechanism

The Project Management Unit (PMU) will establish and maintain a grievance redress mechanism to register, assess, and address project-related complaints. The TTIs will assign GRM focals prior to commencement of works to address the issues raised by affected people on the project. Contact number of the contractor, the TTI safeguards focals, the PMU and the design and construction supervision consultant (DSC) including names, positions, and telephone numbers shall be disclosed at the project site. Persons or groups with project related issues may file their complaints with the GRM focals through the grievance intake form or through email or complaints box that will be made available in each TTI. The TESDA GRM focal at the regional office will be responsible for the registration of grievances and communication with aggrieved party.

Environmental Management Plan

The EMP for the project includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates and performance indicators. The Contractor must adhere to the mitigating measures and other requirements in the EMP to ensure that construction will not adversely affect the environment, the community and workers. In addition, the Contractor will prepare the following detailed Contractor's EMP (CEMP): workers' accommodation plan, occupational health and safety plan, emergency response plan, traffic management plan, waste disposal management plan, and demobilization plan. The contractor will also implement an asbestos risk management plan, as applicable.

I. INTRODUCTION

A. Project Concept and Rationale

1. The proposed Supporting Innovation in the Philippine Technical and Vocational Education and Training System Project (the Project) aims to strengthen the institutional capacity of Technical Education and Skills Development Authority (TESDA) as a public institution with the mandate to develop strategies and regulate the technical and vocational education and training (TVET) ecosystem, as well as become key actor in enabling policy and social innovations towards inclusive sustainable development.

2. The Philippine Development Plan, 2017–2022 emphasizes the need to improve the quality of TVET training programs, integrate 21st century competencies, strengthen certification, improve research and innovation, and forge stronger links between TVET institutes and industry to increase employability of Filipino workforce, including women and the youth.

3. The National Technical Education and Skills Development Plan 2018–2022 (NTESDP) identified priority industries and employment generators of TVET subsector, namely: (i) tourism; (ii) construction; (iii) information and communication technology and business process management; (iv) transport, communication and storage; (v) agriculture, fisheries, and forestry (including agro-processing); (vi) manufacturing including food manufacturing and electronics; and (vii) health, wellness, and other social services. The NTESDP 2018–2022 highlights the need to address social inequity through “greater collaboration between TESDA and other agencies that serve the basic sectors including agriculture, agrarian reform, environment and natural resources and social welfare and development. Moreover, recent social development policies likewise affirm the role of TVET and TESDA in human capital development, and convergence with other social programs such as universal access to health care, education, and social protection.

B. Methodology for Environmental Assessment

4. The project has been screened and categorized as “B” for environment since the proposed impacts of civil works are site-specific and confined within TESDA campuses, most are reversible, and can be managed using mitigation hierarchy and implementation of environmental management plan. This Initial Environmental Examination (IEE) and Environmental Management Plan (EMP) have been prepared based on ADB’s Safeguard Policy Statement (SPS, 2009).

5. The preparation of this IEE and EMP was guided by the following: ADB SPS (2009), ADB Operational Manual Section OM/F1, Access to Information Policy (2018), World Bank Group Environment, Health and Safety (EHS) Guidelines, the Philippine Environmental Impact Statement System (PEISS) and relevant Philippine environmental laws and regulations.

6. This IEE presents the findings from the assessment of 17 TESDA regional training centers and schools that represent each region in the Philippines. The assessments were done in two parts: the first, conducted in the 4th quarter of 2020, used environmental and social safeguards questionnaires to get information about TESDA facilities and the baseline environmental and social conditions in each site. The second, which was done in February 2021, involved consultations online with designated safeguards focal for each region, together with staff from the NITESD-TESDA. These consultations consisted of capacity building of safeguards focals on ADB’s SPS, particularly Safeguards Requirements 1: Environment; discussion on proposed Innovation Center site or alternative sites; discussion and clarification on the environmental and social safeguards questionnaires; and discussion on safeguards focals’ responsibilities during

project implementation, creation of Grievance Redress Committee for each TESDA site, and safeguards focals' role in monitoring and submission of reports to TESDA Central Office and ADB.

7. Following the survey and consultations, secondary data were gathered from different sources such as TESDA technology institutions (TTIs) proximity to protected areas or areas with high biodiversity, climate change and geological hazards, and socio-economic conditions in the area, where TESDA facilities will be constructed or rehabilitated. For each phase of the project, activities were identified as well as the environmental implications of each activity. Mitigation measures were proposed to address adverse environmental impacts. Responsibilities and budget for mitigation measures, frequency and parameters for environmental monitoring and reporting, institutional arrangements, and capacity building activities, were likewise indicated in the proposed Environmental Management Plan.

II. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

A. ADB's Environment Safeguard Policy

8. The environment safeguards requirements of ADB are presented in the following guidelines:

- (i) Safeguard Policy Statement (SPS) (2009),
- (ii) Operational Manual Section F1/BP², and
- (iii) Access to Information Policy (2018)

9. ADB's Strategy 2030³ emphasizes the pursuit of environmentally sustainable and inclusive economic growth for developing member countries (DMCs) and requires mitigation to address environmental and social impacts of projects. The ADB's Safeguards Policy Statement (SPS, 2009) governs the environmental and social safeguards of ADB's operations. When a project has been identified for ADB financing, it is screened and categorized to determine the following:

- (i) Significance of potential impacts or risks of the project to the environment
- (ii) Level of assessment and institutional resources required to address the safeguard issues; and
- (iii) Information disclosure and consultation requirements.

10. The Environmental Safeguard Requirements 1 (SR1) of the SPS (2009) outlines the requirements that borrowers/clients have to meet. These requirements include assessing impacts, planning and managing impact mitigations, preparing environmental assessment reports, disclosing information and undertaking stakeholder consultations, establishing a grievance redress mechanism, and monitoring and reporting. It also includes specific environmental safeguard requirements pertaining to biodiversity conservation and sustainable management of natural resources, pollution prevention and abatement, occupational and community health and safety, and conservation of physical cultural resources.

11. For environmental safeguards, projects are classified into the following categories:

- i) **Category A.** The proposed project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented; impacts may affect an area larger than the sites or facilities subject to physical works. A full-scale environmental impact assessment (EIA) including an EMP, is required.

- ii) **Category B.** The proposed project's potential environmental impacts are less adverse and fewer in number than those of category A projects; impacts are site-specific, few if any of them are irreversible, and impacts can be readily addressed through mitigation measures. An IEE, including an EMP, is required.
- iii) **Category C.** The proposed project is likely to have minimal or no adverse environmental impacts. No EIA or IEE is required although environmental implications need to be reviewed.
- iv) **Category FI.** The proposed project involves the investment of ADB funds to, or through, a financial intermediary.

12. Project categorization has been done using REA checklist following the guidance provided above and the project is categorized as B. As per SPS 2009, **Category B** projects warrants preparation of an IEE.

13. The SPS (2009) includes 11 policy principles on environment safeguards on screening, conduct of environmental assessment, alternative analysis, mitigation hierarchy, need for meaningful consultation, public disclosure, environmental management planning, biodiversity protection and conservation, pollution prevention, occupational health and safety, and conservation of physical cultural resources. The requirements of the 11 policy principles are detailed in Table 1.

Table 1: Environmental Safeguard Policy Principles of ADB Safeguard Policy Statement (2009)

Environment Policy Principle	Requirement
1. Screening and categorization	Use of a screening process for each proposed project to determine the extent and type of environmental assessment commensurate with the significance or potential impacts and risks.
2. Environmental assessment	Conduct of an environmental assessment for each proposed project to identify potential impacts and risks to environment and people.
3. Examination of alternatives	Examine alternatives to project's location, design, technology, and components and their potential environmental and social impacts. Also consider the "no project" alternative.
4. Environmental mitigation and monitoring plans	Prepare an EMP that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators.
5. Consultation and grievance redress mechanism	Carry out meaningful consultation with affected people and facilitate their informed participation early in the project preparation process and ensure that their views and concerns are taken into account. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns regarding the project's environmental performance.
6. Public disclosure	Disclose the environmental assessment including the EMP in a form and language understandable to affected people and other stakeholders.
7. EMP implementation and monitoring	Implement the EMP and monitor its effectiveness. Document the monitoring results, including corrective actions and disclose the monitoring reports.
8. Protection of critical habitats	Do not implement project activities in areas of critical habitats unless (i) there are no measurable adverse impacts on the critical habitat, (ii) there is no reduction in the population of any recognized endangered or critically endangered species and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, additional programs to promote and enhance the conservation aims of the protected area will be implemented.

Environment Policy Principle	Requirement
9. Pollution prevention and control technologies	Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank's Environmental, Health, and Safety (EHS) Guidelines.
10. Occupational health and safety	Provide workers with safe and healthy working conditions and prevent accidents, injuries and diseases in the workplace. Minimize adverse impacts and risks to the health and safety of local communities.
11. Preservation of physical cultural resources	Conserve physical cultural resources and provide a "chance find" procedure and conservation approach for materials that may be discovered during project implementation.

EHS = Environmental, Health, and Safety, EMP = environmental management plan.

14. Aside from ADB SPS (2009), the ADB also prescribes the Access to Information Policy (2018) which requires consultations, participation and disclosure of information to enhance stakeholders' trust in and ability to engage with ADB. The policy promotes transparency, accountability, and participatory development. It establishes the disclosure requirements for documents produced or to be produced through ADB assistance. The IEE, EMP and the environmental monitoring reports of the project are to be disclosed at the ADB website in accordance with the Access to Information Policy (2018).

15. For a category B project, the draft IEE report should be available to interested stakeholders before project approval and posted on the ADB's website upon Board approval of the project.

B. Philippines' Legal Framework and Regulatory Requirements

16. Presidential Decree (PD) 1151, enacted on June 6, 1977, established the Philippine Environment Policy to address the need to formulate an integrated program to protect the environment. The policy mandates the government, in cooperation of concerned private organizations and entities to use all practicable means to promote the general welfare of the people through safe, decent, helpful, productive and aesthetic environment. All agencies and instrumentalities of the national government, including all government owned and controlled corporations, as well as private companies and entities with projects or undertakings that can significantly affect the quality of the environment, are required to prepare a detailed statement on the environmental impact of the proposed action, project or undertaking.

17. Presidential Decree 1586, which became effective on June 11, 1978, established the Philippine Environmental Impact Statement System. Section 4 of the decree empowers the President or his duly authorized representative to grant or deny the issuance of environmental compliance certificates (ECCs) for environmentally critical projects (ECPs) and projects within environmentally critical areas (ECAs).

18. Presidential Proclamation No. 2146 (Proclaiming Certain Areas and Types of Projects as Environmentally Critical and Within the Scope of the Environmental Impact Statement System Established under Presidential Decree No. 1586), proclaim certain areas and types of projects as environmentally critical, and hence within the scope of the PEISS system.

19. ECPs include the following:
- (i) Heavy industries
 - a. Non-ferrous metal industries
 - b. Iron and steel mills
 - c. Petroleum and petrochemical industries including oil and gas
 - d. Smelting plants

- (ii) Resource extractive industries
 - a. Major mining and quarrying projects
 - b. Forestry projects
 - 1. Logging
 - 2. Major wood processing projects
 - 3. Introduction of fauna (exotic animals) in public / private forests
 - 4. Forest occupancy
 - 5. Extraction of mangrove products
 - 6. Grazing
 - c. Fishery Projects
 - 1. Dikes for/and fishpond development projects
 - (iii) Infrastructure Projects
 - a. Major dams
 - b. Major power plants (fossil-fueled, nuclear fueled, hydroelectric or geothermal)
 - c. Major reclamation projects
 - d. Major roads and bridges
20. ECAs include the following:
- (i) All areas declared by law as national parks, watershed reserves, wildlife preserves and sanctuaries;
 - (ii) Areas set aside as aesthetic potential tourist spots;
 - (iii) Areas which constitute the habitat for any endangered or threatened species of indigenous Philippine wildlife (flora and fauna);
 - (iv) Areas of unique historic, archaeological, or scientific interests;
 - (v) Areas which are traditionally occupied by cultural communities or tribes;
 - (vi) Areas frequently visited and/or hard-hit by natural calamities geologic hazards, floods, typhoons, volcanic activity, etc.
 - (vii) Areas with critical slopes;
 - (viii) Areas classified as prime agricultural lands;
 - (ix) Recharged areas of aquifers;
 - (x) Water bodies characterized by one or any combination of the following conditions:
 - a. tapped for domestic purposes;
 - b. within the controlled and/or protected areas declared by appropriate authorities;
 - c. which support wildlife and fishery activities.
 - (xi) Mangrove areas characterized by one or any combination or the following conditions:
 - a. with primary pristine and dense young growth;
 - b. near or adjacent to traditional productive fry or fishing grounds;
 - c. which act as natural buffers against shore erosion, strong winds and storm floods;
 - d. on which people are dependent for their livelihood.
 - (xii) Coral reef characterized by one or any combination of the following conditions:
 - a. with 50% and above live coralline cover;
 - b. Spawning and nursery grounds for fish;
 - c. Which act as natural breakwater of coastlines.

21. Administrative Order No. 300 (Further Strengthening the Philippine Environmental Impact Statement System and Clarifying the Authority to Grant or Deny the Issuance of ECC), signed in 1996, confirm the power of the Secretary of the Department of Environment and Natural Resources and the DENR Regional Executive Directors to grant or deny the issuance of ECCs.

22. Section 3 of PD 1586 mandates the National Environmental Protection Council to review and evaluate the environmental impact statements on declared ECPs and ECAs. The National Environmental Protection Council and National Pollution Control Commission were merged in June 1987, and by virtue of Executive Order 192, became the Environmental Management Bureau (EMB). The EMB became a line bureau of the DENR pursuant to Republic Act 8749 (Philippine Clean Air Act) in 1999. The DENR is tasked to administer the EIS System through the EMB and its regional offices (ROs). The DENR-EMB central office reviews and processes ECPs while the DENR-EMB ROs review and approve projects considered to be located in ECAs, as well as projects outside the purview of the EIS system.

23. DENR Administrative Order No. 30, series of 2003 categorized single projects into three major groups:

- Group I: ECPs in either ECAs or Non-ECAs
 - (i) Golf course
 - (ii) Heavy industries
 - (iii) Fishery
 - (iv) Logging
 - (v) Grazing projects
 - (vi) All projects introducing exotic fauna in public and private forests
 - (vii) Major wood processing
 - (viii) Major mining and quarrying projects
 - (ix) Major listed infrastructure projects
- Group II: Non-ECPs in ECAs;
 - (i) Agriculture industry
 - (ii) Buildings, storage facilities and other structures
 - a. Chemical industries
 - b. Cottage industries
 - c. Demonstration and pilot projects
 - d. Environmental enhancement and mitigation projects
 - e. Food and related industries
 - f. Packaging materials and miscellaneous products industries
 - g. Pipeline projects
 - h. Textile, wood and rubber industries
 - i. Tourism industry
 - j. Transport terminal facilities
 - k. Waste management projects
 - l. Water supply, irrigation or flood control projects
 - m. Treasure hunting in National Integrated Protected Areas System (NIPAS)
 - n. Wildlife farming or any related projects as defined by PAWB
- Group III: Non-ECPs in Non-ECAs – All Group II project types outside ECAs

24. Environmentally critical projects require the completion of an EIA and the submission of an EIS report (Group I) while projects in ECAs (Group II) require the preparation of an IEE Report. DENR determines if a project is an ECP or if a project will be implemented in an ECA. If either or both of these conditions apply, the proposal is required to secure an ECC. Otherwise, DENR – EMB or the regional offices can issue a Certificate of Non-Coverage (CNC) certifying that the project will not significantly affect the environment (Group III).

25. **Procedural requirements and responsibilities.** The project subscribes to ADB's Safeguards Policy Statement (SPS) 2009 and all applicable national environment related laws, regulations and administrative orders. Based on the Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB) Memorandum Circular (MC) 005, series of 2014 (Revised Guidelines for Coverage Screening and Standardized Requirements under the PEISS), **construction of new buildings such as schools**, including storage facilities with no hazardous or toxic materials, **with total/gross floor area that includes parking, open space and other areas of less than 1 hectare, is not covered by the PEISS.** The expansion, modification and/or rehabilitation of existing buildings requires securing or amending the ECC through the submission of an Environmental Performance Report and Management Plan to the DENR–EMB regional office where the project is located. A Building Permit must be secured from the local government unit where the facility will be constructed in compliance with Presidential Decree No. 1096 (National Building Code of the Philippines) before any type of building construction or repair work can start. All the Certificates of Non-coverage that have been secured are presented in **APPENDIX**. The project will ensure that all the remaining ECCs / CNCs that have not been secured yet will be secured prior to construction.

Table 2: Philippine Environmental Impact Assessment Requirements

Environmental Compliance Certificate Amendment	For existing facilities with issued ECC built since 1982 that will be rehabilitated, secure the ECC amendment by filing Environmental Performance Report and Management Plan (EPRMP) with DENR-EMB regional offices
Certificate of Non-coverage (CNC)	For existing facilities (with no ECC from DENR-EMB) built since 1982 that will be rehabilitated, secure CNC through the DENR-EMB online system by filing Project Description. For existing facilities built before 1982 that will be rehabilitated, secure CNC through DENR-EMB online system by filing Project Description and Proof of Project Implementation prior to 1982 without expansion / alteration / modification. For new facilities, secure CNC through the DENR–EMB online system by filing Project Description.

DENR-EMB = Department of Environment and Natural Resources – Environmental Management Bureau

C. Environmental Standards

26. The national environmental standards in the Philippines are based on Presidential Decree No. 1152 or the Philippine Environment Code, which orders the establishment of ambient air quality standards, national emission standards for new and existing stationary and mobile sources of pollution, community noise levels, standard for noise-producing equipment, classification standards for receiving bodies of water, effluent standards, guidelines for waste management, and liquid waste disposal.¹ Table below shows the National Ambient Air Quality Guideline Values as compared to World Health Organization (WHO) Ambient Air Quality Guideline Values.

¹ Presidential Decree No. 1152. Philippine Environment Code. 6 June 1977.

Table 3: National and WHO Ambient Air Quality Guideline Values

Pollutants	Short Term (24 hours averaging time), $\mu\text{g}/\text{m}^3$		Long Term (1 year averaging time), $\mu\text{g}/\text{m}^3$	
	Philippines	WHO	Philippines	WHO
	TSP	230	-	90
PM ₁₀	150	50	60	20
PM _{2.5}	50 ²	25	25	10

27. Section 74 to 79 of the issued rules and regulations of Presidential Decree (PD) 984 of the then National Pollution Control Commission in 1978 specified the noise control regulations and defined the environmental quality standards for noise in general areas. Table below shows the national environmental quality standards for noise in general areas. Subsequent table shows WHO Guidelines for Community Noise.

Table 4: National Environmental Quality Standards for Noise in General Areas

Category of Area	Maximum allowable noise by time period, dB		
	Daytime (9 AM–6 PM)	Morning and Evening (5–9 AM & 6–10 PM)	Nighttime (10 PM–5 AM)
AA – section or area which requires quietness, such as an area within 100 m from school sites, nursery schools, hospitals and special homes for the aged	50	45	40
A – residential purposes	55	50	45
B – commercial area	65	60	55
C – light industrial area	70	65	60
D – reserved as a heavy industrial area	75	70	65

Table 5: WHO Guidelines for Community Noise

Receptor	One Hour L _{Aeq} (dBA)	
	Daytime 07:00 – 22:00	Nighttime 22:00 – 7:00
Residential; institutional; educational	55	45
Industrial; commercial	70	70

28. Based on DENR Administrative Order No. 08, series of 2016 (Water Quality Guidelines and General Effluent Standards of 2016), the significant effluent quality parameters³ applicable for the Project includes BOD, Fecal Coliform, Ammonia, Nitrate, Phosphate, Oil and Grease, and all significant parameters depending on the nature of their activity.

Table 6: Effluent Standards

Parameter	Unit	AA	A	B	C	D	SA	SB	SC	SD	WB-IFC EHS
BOD	mg/L	NDA	20	30	50	120	NDA	30	100	150	30
Ammonia – as NH ₃ -N	mg/L	NDA	0.5	0.5	0.5	7.5	NDA	0.5	0.5	7.5	-
Fecal coliform	MPN/100 mL	NDA	4	200	400	800	NDA				-
Total coliform	MPN/100 mL	NDA	3,000	3,000	10,000	15,000	NDA	3,000	10,000	15,000	400

² DENR Administrative order No 20123-13. [Establishing the Provisional National Ambient Air Quality Guideline Values for Particulate Matter 2.5](#). 7 March 2013.

³ Education (Public and private education, including support services).

Parameter	Unit	AA	A	B	C	D	SA	SB	SC	SD	WB-IFC EHS
Nitrate as NO ₃ -N	mg/L	NDA	14	14	14	30	NDA	20	20	30	10 ⁴
Phosphate	mg/L	NDA	1	1	1	10	NDA	200	400	800	2 ⁵
Oil and grease	mg/L	<1	1	1	2	5	1	2	3	5	10
Total suspended solids	mg/L	NDA	70	85	100	150	NDA	70	100	150	50

Note: NDA = no discharge allowed; MPN=-- most probable number

Table 7: Water Body Classification and Usage of Freshwater

Classification	Intended Beneficial Use
Class AA	Public Water Supply Class I – Intended primarily for waters having watershed, which are uninhabited and / or otherwise declared as protected areas, and which require only approved disinfection to meet the latest Philippine National Standards for Drinking Water
Class A	Public Water Supply Class II – Intended as sources of water supply requiring conventional treatment (coagulation, sedimentation, filtration and disinfection) to meet the latest PNSDW
Class B	Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, etc.)
Class C	1. Fishery Water for the propagation and growth of fish and other aquatic resources 2. Recreational Water Class II – For boating, fishing, or similar activities 3. For agriculture, irrigation and livestock watering
Class D	Navigable waters

Note: For unclassified water bodies, classification shall be based on the beneficial use as determined by the Environmental Management Bureau (EMB)

Table 8: Water Body Classification and Usage of Marine Waters

Classification	Intended Beneficial Use
Class SA	1. Protected Waters – Waters designated as national or local marine parks, reserves, sanctuaries, and other areas established by law (Presidential Proclamation 1801 and other existing laws), and/or declared as such by appropriate government agency, LGUs, etc. 2. Fishery Water Class I – Suitable for shellfish harvesting for direct human consumption
Class SB	1. Fishery Water Class II – Water suitable for commercial propagation of shellfish and intended as spawning areas for milkfish (<i>Chanos chanos</i>) and similar species 2. Tourists Zone – For ecotourism and recreational activities 3. Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, skin diving, etc.)
Class SC	1. Fishery Water Class III – For the propagation and growth of fish and other aquatic resources and intended for commercial and sustenance fishing 2. Recreational Water Class II – For boating, fishing, or similar activities 3. Marshy and/or mangrove areas declared as fish and wildlife sanctuaries
Class SD	Navigable waters

29. **Solid Waste.** Republic Act 9003 or the Ecological Solid Waste Management Act of 2000 governs the solid waste management in the Philippines. The policy promotes the utilization of environmentally-sound methods that maximize the utilization of valuable resources; sets guidelines and targets for solid waste avoidance and volume reduction through source reduction and waste minimization measures⁶; ensure the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of the best environmental facilities; and ensure the integration of ecological solid waste management and

⁴ Total nitrogen.

⁵ Total phosphorus.

⁶ These include composting, recycling, reuse, recovery, and others, prior to collection, treatment and disposal.

resource conservation and recovery topics into the academic curricula of formal and non-formal education to promote environmental awareness and action among citizenry.

30. **Hazardous Wastes.** Republic Act 6969, otherwise known as the Toxic Substances and Hazardous and Nuclear Wastes Control Act mandates the control and management of import, manufacture, process, distribution, use, transport, treatment and disposal of toxic substances and hazardous and nuclear wastes in the country. DENR Administrative Order No. 2000-02 or Chemical Control Order for Asbestos governs the regulations for the importation, manufacture and use of asbestos and the storage, transport and disposal of their wastes.

31. Table below contains the summary of environmental legislations applicable to the Project.

Table 9: Summary of Environmental Legislations Applicable to the Proposed Project

No.	Legislation Number	Legislation Title	Relevance to the Project	Responsible Institution
1	Presidential Decree 1151 (1977)	Philippine Environmental Policy	Project proponent is not required to prepare an environmental impact statement or initial environmental examination of proposed action, project or undertaking.	Ministry of Natural Resources (1974-1987)
2	Presidential Decree 1586 (1978)	Philippine Environmental Impact Statement System	Establishment of Philippine environmental impact statement (EIS) system based on Section 4 of Presidential Decree 1151	Ministry of Natural Resources (1974-1987)
3	Presidential Proclamation 2146 (1981)	Proclaiming Certain Areas and Types of Projects as Environmentally Critical and Within the Scope of EIS Established under PD 1586	Proclamation of areas and types of projects as environmentally critical and within the scope of Philippine EIS system	Ministry of Natural Resources (1974-1987)
4	Presidential Decree 1121 (1977)	Creating the National Environmental Protection Council	Creation of the National Environmental Protection Council as a central authority that will oversee, unify and integrate the planning, management, and implementation of the government's environment program	National Environmental Protection Council (1977 – 1987)
5	Executive Order No. 192 (1987)	Reorganization Act of the Department of Environment and Natural Resources	Providing for the reorganization of the Department of Environment, Energy and Natural Resources, renaming it as the Department of Environment and Natural Resources and for other Purposes	Department of Environment and Natural Resources (1987 – present)
6	DENR Administrative Order No. 2002-17	Defining the Organizational Structure and Major Responsibilities of the Environmental Management Bureau as a line Bureau by virtue of Section 34 of the Philippine Clean Air Act of 1999 (RA 8749)	Strengthening the enforcement and implementation of major environmental laws such as Presidential Decree 984 – Pollution Control Law; Presidential Decree 1586 – The Environmental Impact Assessment Law; Republic Act 6969 – Toxic Substances and Hazardous and Nuclear Wastes Control Act; Republic Act 8749 – Philippine Clean Air Act of 1999; and Republic Act 9003 – Ecological Solid Wastes Management Act, among others	DENR and EMB
7	DENR Administrative	Implementing Rules and Regulations for the	Incorporation of environmental considerations into the Environmental	DENR and EMB

No.	Legislation Number	Legislation Title	Relevance to the Project	Responsible Institution
	Order No. 30, (2003)	Philippine Environmental Impact Statement System	Impact Assessment (EIA) process at an early stage to streamline the current procedure in the conduct of the EIA process to improve the effectiveness as a planning, regulatory and management tool, and enhance maximum public participation	
8	Republic Act 6969 (1990)	Toxic Substances and Hazardous and Nuclear Wastes Control Act	Control and management of import, manufacture, process, distribution, use, transport, treatment and disposal of toxic substances and hazardous and nuclear wastes in the country	DENR and EMB
9	Republic Act 8749 (1999)	Philippine Clean Air Act of 1999	Comprehensive air quality management policy and program with the objective of achieving and maintaining healthy air for all Philippine citizens	DENR and EMB
10	Republic Act 9003 (2000)	Ecological Solid Wastes Management Act	Provides guidelines for ecological solid waste management program and creating the necessary institutional mechanisms and incentives as well as prohibitions and penalties	National Solid Waste Management Commission (NSWMC) and EMB
11	Republic Act 9275 (2004)	Philippine Clean Water Act of 2004	Applies to water quality management in all water bodies. Primarily applies to abatement and control of pollution from land-based sources	DENR and EMB
12	Republic Act 7586 (1992)	National Integrated Protected Areas System Act	Establishment of a comprehensive system of integrated protected areas within the classification of national park to secure the present and future generations the perpetual existence of all native plants and animals	DENR
13	DAO 08, series of 2016	Water Quality Guidelines and General Effluent Standards of 2016	Amended DAO 34 and 35 series of 1990.	DENR and EMB
14	Republic Act 10066 (2009)	National Cultural Heritage Act of 2009	Provides for the protection and conservation of the national cultural heritage, strengthening the National Commission for Culture and the Arts (NCCA) and its affiliated cultural agencies	National Commission for Culture and the Arts (NCCA)
15	Presidential Decree 953 (1976)	Requiring the planting of trees in certain places and penalizing unauthorized cutting, destruction and damaging and injuring on certain trees, plants and vegetations destruction, damaging and injuring of certain trees, plants and vegetation	Guidelines on planting of trees and penalty for cutting and damaging of trees	Bureau of Forest Development (BFD)
16	Republic Act 11058 (2018)	An Act Strengthening Compliance with Occupational Safety and Health Standards and	Aims to ensure a safe and healthful workplace for all workers by affording them full protection against all hazards in their work environment. Rules apply to contractors and	Department of Labor and Employment (DOLE)

No.	Legislation Number	Legislation Title	Relevance to the Project	Responsible Institution
		Providing Penalties for Violations thereof	subcontractors including projects in the public sector	
17	Republic Act 9729 (2009)	Climate Change Act of 2009	Mainstreaming climate change into government policy and establishing framework strategy and program for its implementation	Climate Change Commission (CCC)
18	Executive Order 174 (2014)	Institutionalizing Philippine Greenhouse Gas Inventory Management and Reporting System	Institutionalization of GHG inventory management and reporting system in relevant government agencies to ensure transition towards a climate-resilient pathway for sustainable development.	Climate Change Commission (CCC)
19	DENR Administrative Order 2013-24	Chemical Control Order (CCO)	Set a 90 ppm total lead content limit in paint. The CCO provided for a three-year phase out period from 2013 to 2016 for lead-containing paints used for architectural, decorative and household applications.	Department of Environment and Natural Resources
20	DENR Administrative Order 2000 - 02	Chemical Control Order for Asbestos	Requirements and procedures related to the importation, manufacture and use of asbestos and the storage, transport and disposal of their wastes.	Department of Environment and Natural Resources

D. Permitting Requirements

32. Table below details the procedural requirements for the expansion, modification, and/or rehabilitation of TTIs and construction of RTICs, as well as the responsibilities of TESDA, the National Project Management Unit, Regional Project Management Unit, the Project Management Consulting (PMC) Firm, the DSC Firm, and Contractors. No significant non-compliance of existing facilities with government environment requirements has been observed during various consultations with TTIs. Basic environmental and utility services (water supply, wastewater treatment, and drainage) will be improved as part of upgrading of TTI facilities. The project will ensure that all the requisite clearances and permits will be secured prior to construction, and that necessary clearances (including fire safety inspection certificate and occupancy permits are secured prior to facility operation.

Table 10: Procedural Requirements for Environmental Compliance, Construction Permits and License to Operate

Item	Procedural Requirement	Responsible Entity	Approval Entity
Pre-construction			
Facility design, permit to construct	Upgrade TESDA technology institutions and design the new regional training innovation centers following the National Building Code of the Philippines, other relevant national regulations, and international standards. Prepare the Architectural and Engineering Design and documentation (signed and sealed by architect and engineers) and other requirements to secure building permits and licenses prior to construction.	Contractor, PMC Firm, DSC Firm	TESDA, City or Municipal Engineering Office of local government units
ECC Amendment	For existing facilities with issued ECC built since 1982 that will be rehabilitated, secure the ECC amendment by filing Environmental Performance Report and	RPMU	DENR-EMB regional offices

Item	Procedural Requirement	Responsible Entity	Approval Entity
	Management Plan (EPRMP) with DENR-EMB regional offices		
CNC	For existing facilities (with no ECC from DENR-EMB) built since 1982 that will be rehabilitated, secure CNC through the DENR-EMB online system by filing Project Description. For existing facilities built before 1982 that will be rehabilitated, secure CNC through DENR-EMB online system by filing Project Description and Proof of Project Implementation prior to 1982 without expansion / alteration / modification. For new facilities, secure CNC through the DENR – EMB online system by filing Project Description.	RPMU	DENR-EMB regional offices
Local permits	Secure the Building Permit, Sanitary Permit, Electrical Permit, and other permits from the local government prior to construction.	Contractor, RPMU	LGU
Fire Safety Evaluation Clearance	Submit building plan, pertinent documents and Fire and Life Safety Assessment Report (FALAR) to the city/municipal Fire Marshal to secure the Fire Safety Evaluation Clearance prior to construction.	Contractor, RPMU	City / Municipal fire marshal
Height Clearance Permit	Submit elevation plan of proposed structure and Certification of Geodetic Engineer – i) Geodetic Coordinates (WGS-84 Datum) and True Ground Elevation in meters above mean sea level / Orthometric Height of the site; ii) Location Plan with Vicinity Map; and iii) Copy of the original field notes, traverse computations and GPS processing notes including raw data (total station data should be in ASCI format and RINEX format in GPS), signed and sealed by a Geodetic Engineer. Complete requirements can be found here - https://caap.gov.ph/height-clearance-permit-and-limitation-form/	Contractor, RPMU	Civil Aviation Authority of the Philippines (CAAP)
Tree Cutting Permit	Submit letter of application and LGU Endorsement/ Certification of No Objection from the Municipality/City and Barangay. Submit as well copy of Land Title (OCT/TCT) and photographs of trees to be removed. Please include Site Development Plan and Environmental Compliance Certificate	Contractor, RPMU	Community Environment and Natural Resources Office (CENRO) - DENR
Construction			
EMP monitoring	Monitor the implementation of the EMP by the Contractor	NPMU, PMC, RPMU	TESDA, ADB
Progress reporting	Submit quarterly progress reports on the status of construction and EMP implementation to the TESDA and PMU	NPMU, PMC, RPMU, Contractor	TESDA, ADB
Post-construction			
Fire Safety Inspection Certificate	Secure a Fire Safety Inspection Certificate from the city/municipal Fire Marshal.	Contractor, RPMU	Municipal fire marshal
Occupancy Permit	Secure an Occupancy Permit from the local government	Contractor	LGU
Completion Report	Submit a completion report with as-built drawings to TESDA during turn-over.	Contractor, RPMU	NPMU, TESDA

ADB = Asian Development Bank, CAAP = Civil Aviation Authority of the Philippines, CENRO = Community Environment and Natural Resources Office, CNC = Certificate of Non-Coverage, COCP = Code of Construction Practice, DB =

design-build, DENR = Department of Environment and Natural Resources, DSC = Design and Supervision Consulting Firm, ECC = environment compliance certificate, EMB = Environmental Management Bureau, LGU = local government unit, NPMU = National Project Management Unit, PMC = Project Management Consulting Firm, RA = Republic Act, RPMU = Regional Project Management Unit, TESDA = Technical Education and Skills Development Authority.
Source: Asian Development Bank.

E. International Conventions

33. This section reviews all the relevant international agreements and commitments, existing institutions and legislations, both at the national and local levels. The Philippines is a member of various international agreements, conventions and treaties for conservation of the environment at global level. Some of the international agreements where the Philippines is a party and applicable to the proposed Project are discussed in the following sections.

34. **United Nations Convention on Sustainable Development (UNCSD).** Also known as Rio+20 or Earth Summit 2012, the UNCSD is the third conference on Sustainable Development. It followed the 1992 Earth Summit/United Nations Conference on Environment and Development. UNCSD is the key forum for the consideration of issues related to the integration of the three dimensions of sustainable development: economic development, social inclusion and environmental protection. As such, its mandate is not limited to environmental issues.

35. **Stockholm Convention, 2004.** The Stockholm Convention is a global treaty to protect human health and the environment from the adverse effects of persistent organic pollutants (POPs). Adopted in 2001 and entered into force in 2004, the convention requires its parties to take measures to eliminate or reduce the release of POPs into the environment.

36. **United Nations Framework Convention on Climate Change, 2003.** The United Nations Framework Convention on Climate Change (UNFCCC) is an international treaty focusing on what countries could do to limit average global temperature increases and the resulting climate change. The ultimate objective of the convention is the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. In 2013, both non-Annex (including the Philippines) and Annex I members to the UNFCCC were requested to prepare their Intended Nationally Determined Contributions. Activities/Goals set under the Intended Nationally Determined Contributions, regardless of the legal nature of the contributions, will serve as the first Nationally Determined Contribution of the respective parties for the period beyond the Doha Amendment, upon ratification of the Paris Agreement.

37. **Kyoto Protocol, 2003.** The Kyoto Protocol is an international treaty under the UNFCCC. Adopted in 1997, the protocol commits 43 Annex I countries to limit their greenhouse gas emissions for the period 2008-2012 below or equal to the level of their emissions in 1990. By 2012, the Doha Amendment to the protocol was proposed to extend the protocol to a second commitment period for 2013-2020. However, only 37 countries have committed to binding targets. Binding targets for Kyoto Protocol are applicable only to Annex I (developed countries), and will end in 2020.

38. **Vienna Convention for Protection of the Ozone Layer, 1991 and Montreal Protocol on Substances Depleting the Ozone Layer, 1991:** The Vienna Convention outlines states' responsibilities for protecting human health and the environment against the adverse effects of ozone depletion, and established the framework under which the Montreal Protocol was negotiated. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere - chlorofluorocarbons, halons, carbon tetrachloride, and

methyl chloroform), are to be phased out by 2010. The project does not envisage production and consumption of ODS.

F. Regulatory Framework for Construction and Rehabilitation of Technical Education Facilities

39. The Philippine Development Plan, 2017–2022 emphasizes the need to improve the quality of TVET training programs, integrate 21st century competencies, strengthen certification, improve research and innovation, and forge stronger links between TVET institutes and industry to increase employability of Filipino workforce, including women and the youth. The National Technical Education and Skills Development Plan 2018–2022 (NTESDP) identified priority industries and employment generators of TVET subsector, namely: (i) tourism; (ii) construction; (iii) information and communication technology and business process management; (iv) transport, communication and storage; (v) agriculture, fisheries, and forestry (including processing); (vi) manufacturing including food manufacturing and electronics; and (vii) health, wellness, and other social services.

40. Republic Act 11293 or the Philippine Innovation Act of 2019 adopts a state policy fostering “innovation” as a vital component of the country’s development policies to drive inclusive development. The law broadly defines innovation as the creation of new ideas resulting in development of new or improved policies, products, services which are then spread or transferred across the market. It intends to harness innovation efforts to help the poor and the marginalized and enable national competitiveness of micro, small and medium enterprises in both domestic and global supply chains. Further, it identifies education institutions, private organizations, government agencies and local government units as key drivers of programs that stimulate innovation literacy and skills development for the Filipino workforce and entrepreneurs, including women and the youth.

41. TESDA has embodied in the NTESDP 2018–2022 the strategic direction for global competitiveness and workforce readiness with the objective of preparing the Philippine workforce to meet the requirements of the 4IR (TESDA Circular 060, series of 2020).

III. DESCRIPTION OF THE PROJECT

A. Project Background

42. To support the project’s outcome of employability of TVET graduates and improvement in equitable access to quality TVET, one of the outputs –. The selection was based on demand and supply side considerations. The TTIs and their regional innovation centers will prioritize the economic needs of the particular province, the government’s flagship “Build, Build, Build” program, and the priority sectors indicated in the National Technical Education and Skills Development Plan (NTESDP) 2018 – 2022. The project will link the TTIs and RTICs in a hub-and-spoke model with nearby higher education institutions and community-based training providers. The project will also adopt climate-smart, gender-responsive, and accessible designs while upgrading the TTIs and establishing the RTICs.

The site development plans of the select TTIs are detailed in **APPENDIX 1**.

Figure 1: Location Map of the Proposed Regional TVET Innovation Centers



Table 11: List of First 5 TESDA Training Institutions

Region	TTI	Address	Sector and Focus Area of Innovation
XII	General Santos National School of Arts and Trades	Tionoson St., Lagao, General Santos City	Warehousing & Logistics Management

B. Design Features of TTIs and RTICs

43. The repair works of TESDA Technology Institutions (TTIs) cover improvement of dilapidated architectural members, major structural retrofitting or general rehabilitation works, upgrading of existing water supply system, drainage and sewerage system to meet environmental, electrical and safety requirements.

44. The design of the RTICs, on the other hand, draws from the expertise of international TVET practitioners to ensure compliance with industry specifications and at par with international standards. The size of the proposed innovation center will be determined by the maximum construction cost for construction and limits of the selected project site within the TESDA RTC compound or complex. The site location, availability of materials, and mark-up costs will also play a factor in the final construction cost. The detailed architectural and engineering plans will guide the PMU and the ADB determine the bill of materials

45. The design and construction of new building will adhere to the Philippines' national building code and integrate climate change resilience and green building features, e.g., type of construction and materials, building orientation, elevation, drainage, roofing system and windows. It will also take into consideration climate factors such as the amount of rainfall, frequency and intensity of typhoon as well as wind and solar direction. In order to ensure sufficient natural light and ventilation to the building adequate setbacks on all sides will be met; owing to the necessity of providing vehicular access for material delivery the setbacks will be in excess of those required by the building by laws.

46. The proposed RTIC building will be designed to ensure efficient use of functional areas and allocation of adequate spaces for the trainees and trainers. Related functions will be planned in proximity with each other within each floor level and between floor levels of the building. Floor to ceiling height will take into account the requirements of the training equipment to be installed and allow their effective usage. The width of the corridor will be set to allow movement of required training equipment, i.e., installation, use and subsequent maintenance and/or replacement. It will be more than the prescribed corridor width of the National Building Code; and not less than 1.8 meters.

47. **Structural design.** The structural design will be in accordance with the Philippines National Structural Code. It will take into account soil characteristics, the loads and movement of training equipment for each facility, topography of the site, and environmental conditions. The main structure will be built using concrete and suitable materials per the specification of walls and windows. Measures will be integrated in the design to avoid termite infestation, such as use of steel for the roofing system and fiber cement board with metal furring for the ceiling.

48. **Sustainable architecture.** Solar energy will be harnessed by the building by installing panels on the roof. A maximum capacity of 25 kW can be generated, which will be used for lighting the building and perimeter. Adequate access from the second/third floor to the roof area will be provided to allow the maintenance of solar panels and the roofing system. Rainwater harvesting shall also be done through collection tanks, and after filtration shall be used for irrigation and flushing.

IV. DESCRIPTION OF THE ENVIRONMENT

49. This chapter describes the environmental condition at the proposed TTI sites where rehabilitation and upgrading of select TTIs and new construction of selected 16 RTICs will be done. The REA Checklist summary is in **APPENDIX 2** while detailed baseline condition in each of these TTIs is detailed in **APPENDIX 3**.

A. Existing Conditions at Selected TTI Sites

50. **Land availability.** All of the identified TTIs have sufficient land for the proposed rehabilitation of existing buildings and construction of new buildings.

51. **Transportation Access.** All of the identified TTIs are connected with existing national, provincial, or local roads and can be accessed through public transportation.

Table 12: Information on Location, Elevation, Road Access, and Nearest Body of Water and Proof of Occupancy

Region	Name of TTI	Location		Elevation, m	Classification of Road Access	Receiving Body of Water	Distance to Body of Water, m
		Latitude	Longitude				
XII	General Santos National School of Arts and Trades	6° 07' 57" N	125° 10' 55" E	30	City road	Sarangani Bay	2,700

B. Existing Conditions of Proposed Regional Training Innovation Centers Sites

52. **Availability of Land and Proof of Occupancy.** All of the identified TTI sites have available land for the proposed innovation centers. The proof of occupancy includes deed of usufruct, presidential proclamation and republic act, deed of donation, tax declaration and land title.

C. Topography and Natural Hazards

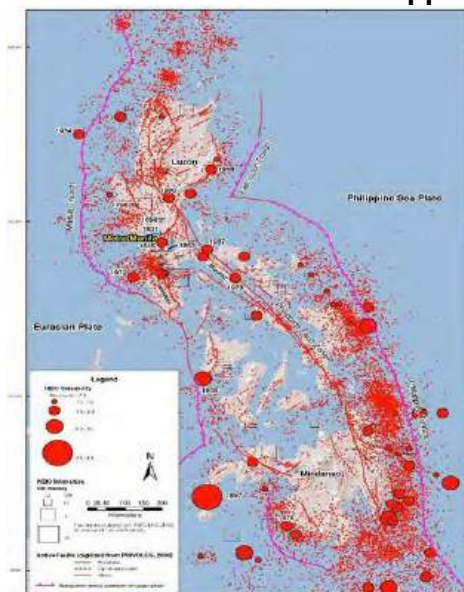
53. The Manila Observatory has developed risk maps of the Philippines' vulnerability to environmental hazards using data from the Philippine Institute of Volcanology and Seismology (PHIVOLCS) and the Earthquake and Natural Resource Atlas of the Philippines of 1998. Based on the geophysical hazards profiling, sites that are prone to earthquakes, earthquake-induced landslides, tsunamis and volcanic eruptions were identified.

54. **Earthquake.** Based on the Seismicity Map and the Earthquake Prone Areas of the Philippines, almost all regions have recorded earthquake events with moment magnitude greater than Mw 4.1, based on 25,100 historical and instrumentally recorded earthquake events from 1608 to 2016. The provinces that are at most risk to earthquakes include Leyte and South Cotabato. Leyte and and General Santos have earthquake hazards due to the Philippine Fault Zone. Leyte and General Santos City will be evaluated further during detailed design to ensure that the innovation centers will be able to withstand strong earthquakes. The same will be done for other sites, since they are also prone to earthquakes, although of lesser occurrences and magnitude.

55. In terms of earthquake hazard, the Philippines was classified as High, or more than 20% chance of potentially damaging earthquake in the next 50 years, based on **ThinkHazard**, a web-based tool to consider the impacts of disasters on new development projects developed by the Global Facility for Disaster Reduction and Recovery (GFDRR, 2020)⁷. Regions II, VIII, X, XII, and BARMM are all classified as High.

56.

Figure 5: Earthquakes and Fault Lines in the Philippines (Wong et al., 2014)

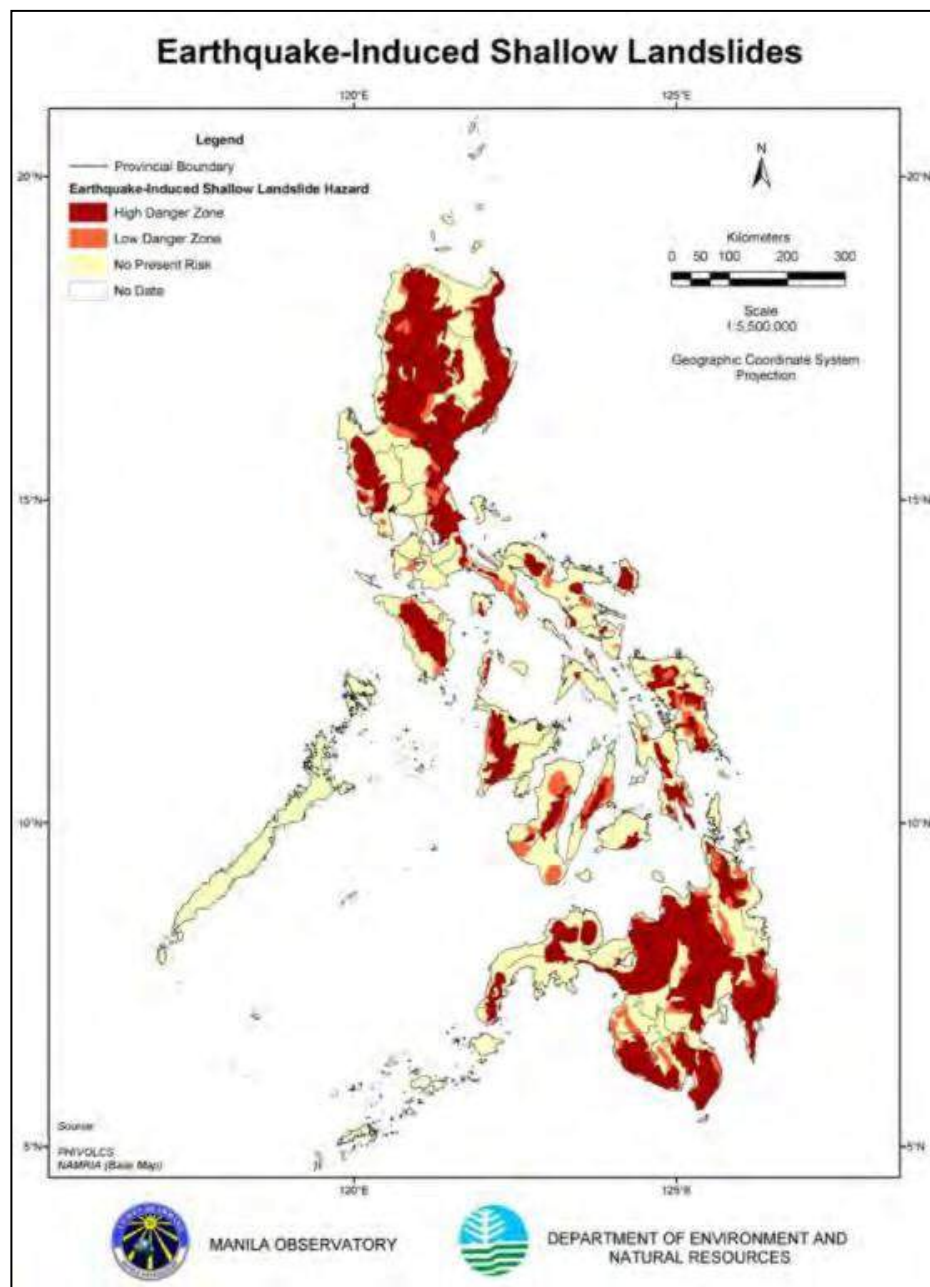


⁷ Thinkhazard.org. [ThinkHazard! Identify natural hazards in your project area and understand how to reduce their impact: Philippines.](https://www.thinkhazard.org/)

57. **Earthquake-Induced Landslides.** Most of the provinces are susceptible to landslide hazards. Among the provinces selected for the project, Misamis Oriental are susceptible to landslide hazards. The susceptibility of TTI sites will be further evaluated during detailed design.

58. **Earthquake-Induced Landslides.** Most of the provinces are susceptible to landslide hazards. Among the provinces selected for the project, Misamis Oriental are susceptible to landslide hazards. The susceptibility of TTI sites will be further evaluated during detailed design.

Figure 6: Earthquake-Induced Shallow Landslides in the Philippines

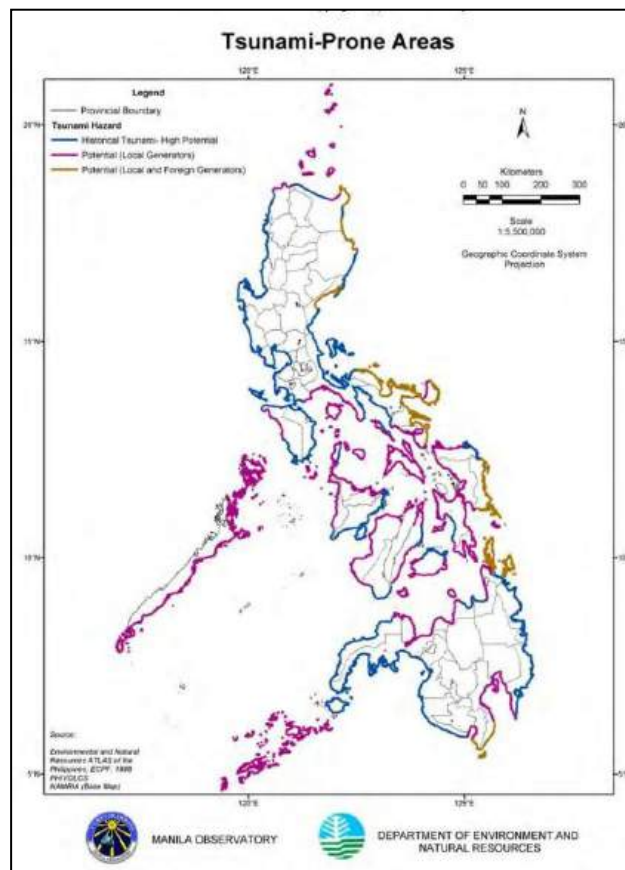


59. **Tsunamis.** Regional Training Center – Tacloban (140 m from Coalargo Bay), Regional Training Center – Tagoloan (367 m), General Santos National School of Arts and Trades (2.7 km from Sarangani Bay)), In terms of tsunami hazard, the TTIs that are most at risk from tsunami include the following:

- (i) Potential (Local Generators): RTC Tacloban, RTC Tagoloan, and Davao Oriental Polytechnic Institute;
- (ii) Potential (Local and Foreign Generators): General Santos National School of Arts and Trades⁸

60. The detailed design will consider the siting and design of building structures to minimize tsunami damages.

Figure 7: Tsunami-Prone Areas in the Philippines



⁸ Philippine Institute of Volcanology. [Tsunami-Prone Areas in the Philippines.](#)

61. **Volcanic Eruptions.** PHIVOLCS classifies volcanoes according to its eruptive history. Active volcanoes are those that erupted within the last 600 years, and those that have written accounts of eruption within the last 10,000 years based on the analyses of materials from young volcanic deposits. Potentially active volcanoes, on the other hand, are those that are morphologically young-looking but with no historical or analytical records of eruption. Active volcanoes that are within 100 km from proposed TTIs include Mt. Parker, which is 30.72 km from General Santos National School of Arts and Trade.

Figure 8: Distribution of Volcanoes in the Philippines

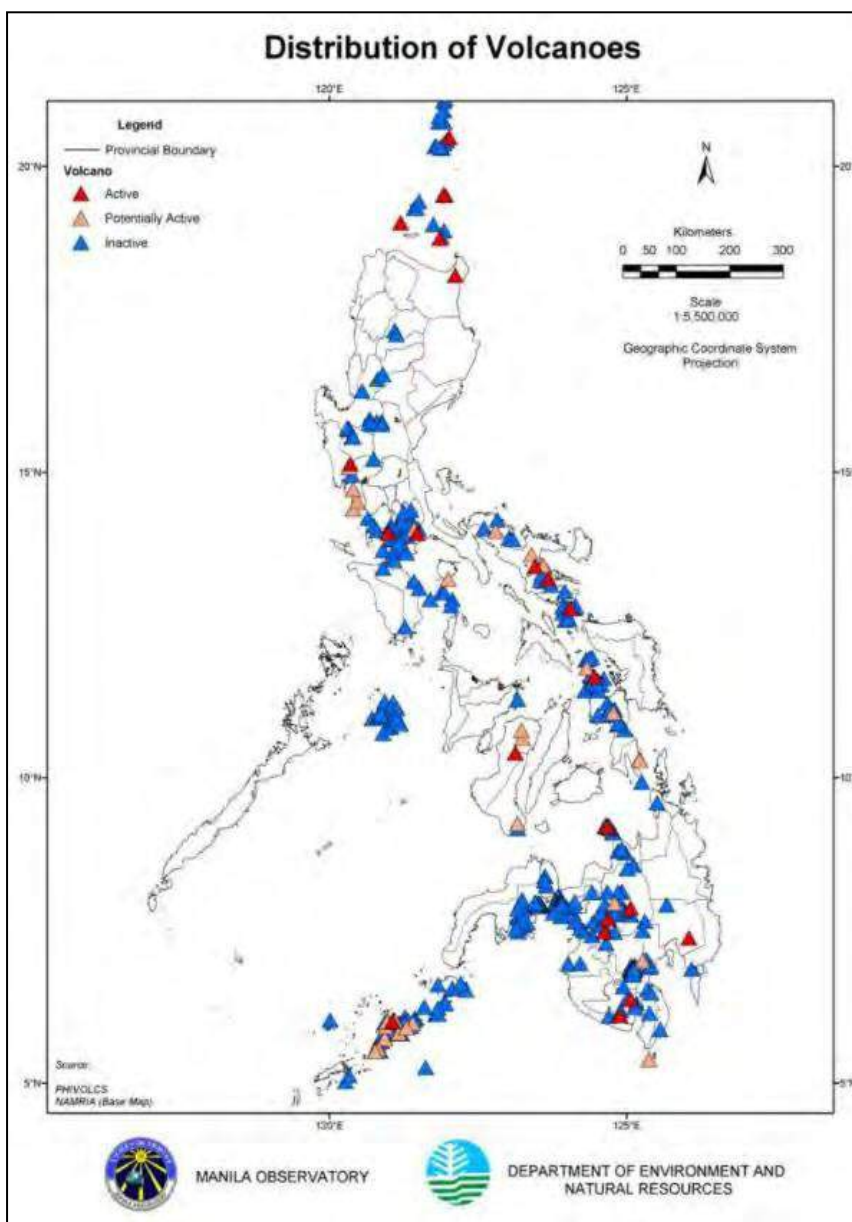
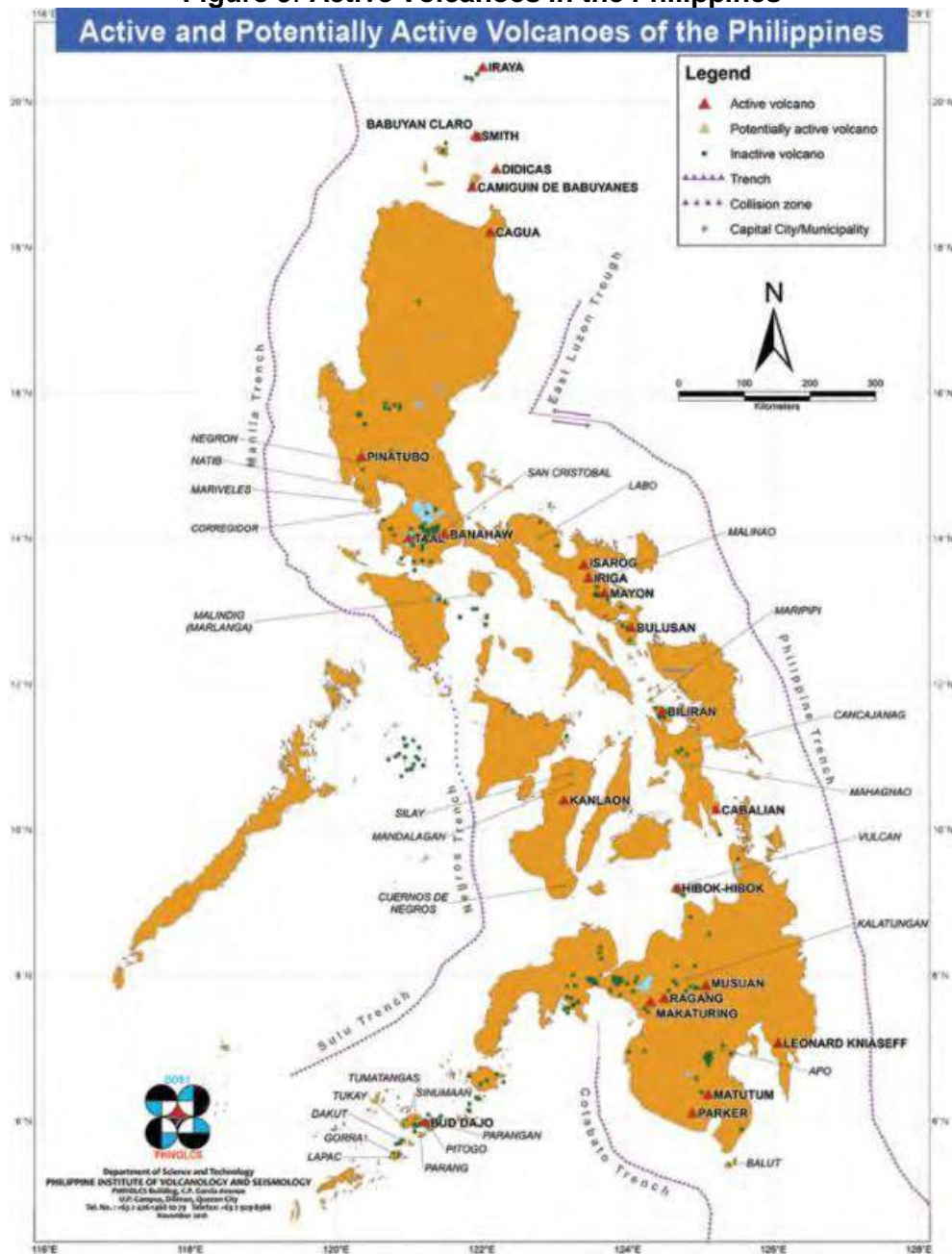
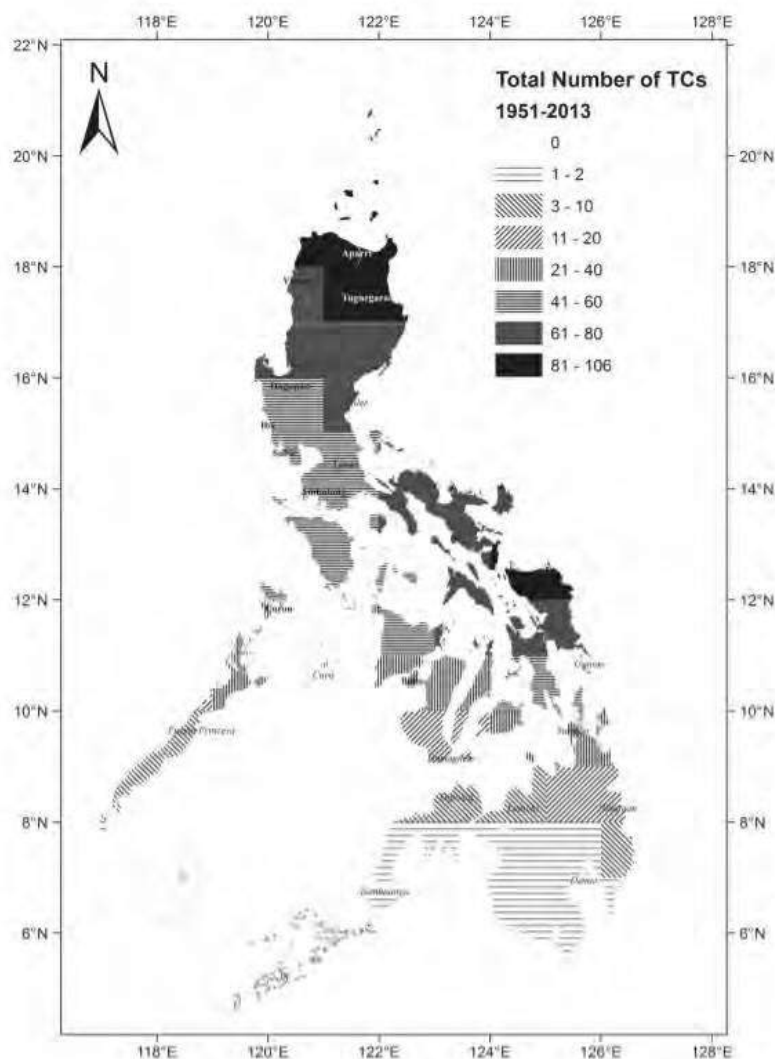


Figure 9: Active Volcanoes in the Philippines



62. **Tropical Cyclone (TC).** Approximately 19-20 tropical cyclones (TCs) enter the Philippine Area of Responsibility, with about 8 or 9 of them crossing the Philippines (PAGASA, 2021), which is equivalent to 25% of global occurrence (Huigen and Jens, 2006). In terms of frequency of tropical cyclones, Region II was the most affected, with 81-106 TCs from 1953-2010, Regions XII and BARMM received the lowest number, with 1-2 TCs for the same period. The technical team will evaluate further the design of innovation centers to mitigate the impact from typhoon.

Figure 10: Frequency of Tropical Cyclones in the Philippines (1951-2013)



63. **Flooding.** Data on predicted flooding were sourced from Project NOAH or the Nationwide Operational Assessment of Hazard, the Philippines' primary disaster risk reduction and management program, which was initially managed by the Department of Science and Technology (DOST) from 2012 to 2017, but is now under the management of the University of the Philippines.

64. Based on the flooding hazard assessment of NOAH, details of Flood Hazard Maps of which are indicated in **APPENDIX 3**, the TTIs most at risk for flooding include RTC Tuguegarao and RTC Tagoloan, where flooding may reach up to 1.5 meters during a 5-year return period. TTIs with low probability or no flooding, even a 100-year return period, include

Tacloban and General Santos National School of Arts and Trades, and Northern Mindanao School of Fisheries. The risks of flooding will be evaluated further by the technical team during detailed design.

Table 13: Flood Hazards and Return Period of select TTIs

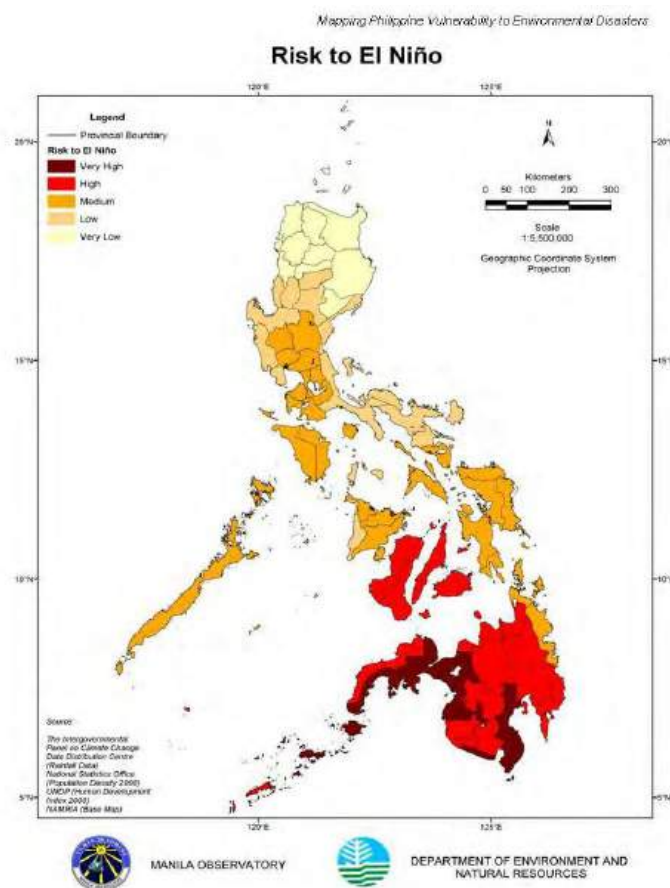
Region	Name of TTI	Flood Hazard	Flood Depth	Return Period, years
XII	General Santos National School of Arts and Trades	Low	up to 0.5 m	100

Note: Flood hazard – Low (≤ 0.5 m); Medium ($>0.5 - 1.5$ m); High (>1.5 m)

65. **El Niño – Induced Drought.** Areas highly at risk to El Niño – induced drought include Sultan Kudarat, Misamis Oriental and Cebu. The technical team will assess the sustainability of water supply for proposed infrastructure during detailed design.

66. **Rainfall Change.** The risk to projected rainfall change incorporates both decrease during the dry season and increase during the wet season. Provinces included in the Project that are most at risk to projected rainfall changes are Leyte, Misamis Oriental and Sultan Kudarat. The design team will further evaluate the impact of rainfall change in the design of innovation centers.

Figure 11: Risk to El Niño in the Philippines (1951-2013)



D. Climate

67. Philippine climate is characterized with relatively high temperature, humidity and rainfall. Rainfall varies regionally, which highly depend upon the direction of moisture-bearing winds and location of mountain ranges. The eastern parts of the country receive the highest amount of rainfall while the southernmost part of Mindanao receives the least. Based on the Modified Corona classification, the following are the four types of climate in the Philippines.

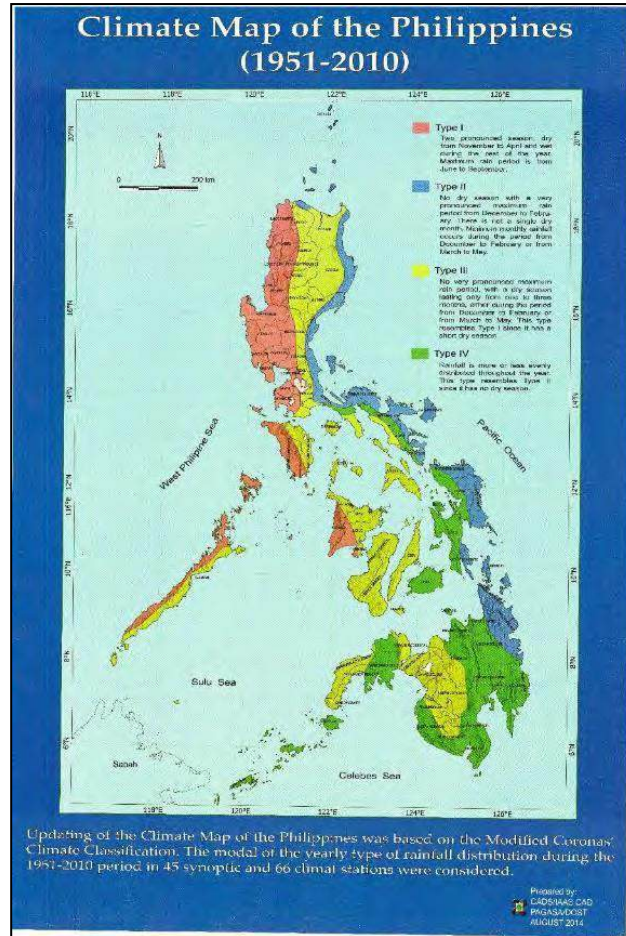
68. **Type I:** Two pronounced seasons, dry from November to April, and wet during the rest of the year. Maximum rain period is from June to September.

69. **Type II:** No dry season with a very pronounced maximum rain period from December to February. There is not a single dry month. Minimum monthly rainfall occurs during the period from March to May.

70. **Type III:** No very pronounced maximum rain period, with a short dry season lasting only from one to three months, either during the period from December to February or from March to May. This climate type resembles Type I since it has a short dry season. Provinces with this type of climate Misamis Oriental and Maguindanao.

71. **Type IV:** Rainfall is more or less evenly distributed throughout the year. This climate type resembles the second type more closely since it has no dry season. Provinces included in the project with this type of climate include Leyte.

Figure 12: Modified Coronas Classification of Climate in the Philippines



E. Air Quality and Noise

72. There are no major industrial sources of air pollution in the vicinity of the TTIs, except from vehicle sources. Sources of noise come from residential, commercial and institutional sources within the vicinity of TTIs.

F. Biological Resources

73. To determine if any TTI is located in any restricted zones of protected area or biodiversity conservation areas, Integrated Biodiversity Assessment Tool (IBAT) was used⁹. IBAT, which is a multi-institutional program of work involving BirdLife International, Conservation International,

⁹ IBAT Proximity Report. Generated under licence 2099-16526 from the Integrated Biodiversity Assessment Tool on 16-18 March 2021; 21 and 24 May 2021 (GMT). www.ibat-alliance.org.

International Union for Conservation of Nature (IUCN), and UN Environment Programme World Conservation Monitoring Centre (UNEP WCMC). The tool intends to provide a basic risk screening on biodiversity. Adjacent protected areas and key biodiversity areas within 10 km of TTI, using the IBAT tool are detailed in **APPENDIX 4**.

74. **Protected Areas.** The following TTIs are within 10 km of buffer zones of protected areas: RTC Tuguegarao (10 km), RTC Tacloban (10 km), General Santos National School of Arts and Trades (5 km).

75. **Key Biodiversity Areas.** Buffer zones of key biodiversity areas that are within 10 km from TTIs include: RTC Tuguegarao (10 km)

Table 14. Protected and Key Biodiversity Areas Near TTIs

No.	Region	Name of TTI	Protected Area	Key Biodiversity Area
3	II	Regional Training Center - Tuguegarao	Peñablanca Protected Landscape and Seascape (within 10 km of buffer zone)	Peñablanca Protected Landscape and Seascape (within 10 km of buffer zone)
11	VIII	Regional Training Center - Tacloban	MacArthur Landing National Park (Imelda Park) (within 10 km of buffer zone)	No key biodiversity area within buffer distance
13	X	Regional Training Center - Tagoloan	No protected area within buffer distance	No key biodiversity area within buffer distance

No.	Region	Name of TTI	Protected Area	Key Biodiversity Area
15	XII	General Santos National School of Arts and Trades	Sarangani Bay Protected Landscape (within 5 km of buffer zone)	No key biodiversity area within buffer distance
17	BARMM	Regional Manpower Development Center	No protected area within buffer distance	Liguasan Marsh (1 km)

G. Power, Water and Telecommunications Infrastructure

76. All TTIs are connected with the electric grid provided by electric utility companies or cooperatives. Some TTIs source their water from the community water supply, while others have back-up deep well and overhead water tanks. Internet connections vary from 5 Mbps (copper cable) in RTC - Iloilo, up to 1 Gbps (fiber optics) in RTC - Tuguegarao.

Table 15. Power, Water and Telecommunication Infrastructure

No.	Region	Name of TTI	Power	Water	Telecommunication
1	CAR	Regional Training Center - Baguio	220VAC Three-phase electrical connection	Community water supply	Fiber Optic: 100 Mbps
2	I	Pangasinan Technological Institute	220VAC Single Phase (220VAC-Neutral/Ground) electrical connection	Community water supply Deep-well (operated and maintained by the TTI) 2 Overhead tanks: 500L and 1000L	Copper Cable: 60 Mbps Fiber Optics: 200 Mbps
3	II	Regional Training Center - Tuguegarao	220VAC, 3phase 220VAC, Single phase	Deep-well (operated and maintained by the TTI) Gravity type concrete water tank (2 units)	Fiber Optic: 50 Mbps 1 Gbps
4	III	Regional Training Center Central Luzon - Guiguinto	220VAC Three-phase electrical connection	Deep-well (operated and maintained by the TTI)	Fiber Optics: 30 Mbps
5	NCR	Regional Training Center - NCR	220VAC Three-phase electrical connection	Community water supply Overhead water tank and Firefighting water backup tank	Fiber Optics: 100 Mbps
6	IV-A	Regional Training Center - CALABARZON	240VAC One-phase electrical connection 240VAC Three-phase electrical connection	Community water supply	Copper Cable 10 Mbps Fiber Optics: 100 Mbps
7	IV-B	Provincial Training Center Oriental Mindoro – San Teodoro	220VAC, 3 phase / 220VAC, 1 phase	No data	Copper cable: 10 Mbps
8	V	Regional Training Center - Pili	220VAC Three-phase electrical connection	Community water supply	Fiber Optics: 50 Mbps

No.	Region	Name of TTI	Power	Water	Telecommunication
				Deep-well (operated and maintained by the TTI) Overhead Bolted Steel Tank/ 1M Gallon	
9	VI	Regional Training Center - Iloilo	300 kVA 3-phase open delta	Water is delivered (with water shortage)	Copper cable: 5 Mbps
10	VII	Regional Training Center - Cebu	220VAC Three-phase electrical connection	Deep-well (operated and maintained by the TTI) Overhead Tank, Concrete, 3 m x 3 m x 3 m	Copper Cable: 15 Mbps
11	VIII	Regional Training Center - Tacloban	220VAC Three-phase electrical connection	Community water supply	Fiber Optics: 50 Mbps
12	IX	Regional Training Center – Zamboanga Peninsula	220VAC Single Phase electrical connection 220VAC Three-phase electrical connection	No data	DSL: 10 Mbps Broadband: 20 Mbps
13	X	Regional Training Center - Tagoloan	220VAC Three-phase electrical connection	Deep-well (operated and maintained by the TTI) Overhead Tank, Concrete, 40 m ³	Wireless: 50 Mbps Fiber Optics: 10 Mbps Broadband: 10 Mbps
14	XI	Davao Oriental Polytechnic Institute	220VAC 60 Amp, 1 phase	Deep-well (operated and maintained by the TTI)	8 Buildings with 20Mbps and 1 Building with 50Mbps
15	XII	General Santos National School of Arts and Trades	220VAC Single Phase (220VAC-line to line) electrical connection 220VAC Three-phase electrical connection	Community water supply Deep-well (operated and maintained by the TTI) Overhead Concrete Tank, 12.5 m ³ powered by 1.5 Hp electric motor pump	Fiber Optics: 300 Mbps
16	CARAGA	Northern Mindanao School of Fisheries	220VAC One-phase electrical connection	Community water supply	Fiber Optics: 10 Mbps; 100 Mbps; 500 Mbps
17	BARMM	Regional Manpower Development Center	220VAC Three Phase (220VAC-line to line) electrical connection	Deep-well (operated and maintained by the TTI) Pressurized and Overhead tank	Airfiber: 20 Mbps

H. Climate Risk Vulnerability Assessment

1. Background

78. The Philippines is highly vulnerable to climate change impacts, which includes increased frequency of extreme weather events, sea level rise, rising temperatures, and extreme rainfall (USAID, 2017).¹⁰ This is because of the country's high exposure to natural hazards such as typhoons, landslides, floods and droughts), dependence on natural resources which are sensitive to climate change, and the long coastlines where all major cities and bulk of the population reside. There are about 19-20 typhoons in the Philippines each year, of which about 7-9 make landfall. Sea levels are also rising faster than the global average, increasing storm surges and inundation hazard.

79. As a party to the United Nations Framework Convention on Climate Change, the country adopts its objective of stabilizing greenhouse gas concentrations in the atmosphere, to ensure that food production is not threatened and to ensure economic development to proceed in a sustainable manner. As one of the parties to the Hyogo Framework for Action, the country also adopts the strategic goals to build national and local resilience to climate change-related disasters. The Philippines has adopted Republic Act 9729 or the Climate Change Act of 2009 to provide the policy framework to systematically address the growing threats on community life and its impact on the environment.

80. The National Framework Strategy on Climate Change was adopted in April 2010 following the passage of Republic Act 9729 in 2009 (amended in 2012). The framework has been translated into a National Climate Change Action Plan for 2011–2028, which prioritizes food security, water sufficiency, ecological and environmental stability, human security, climate-smart industries and services, sustainable energy, and knowledge and capacity development. The Philippines ratified the Paris Agreement on March 23, 2017, with the objective of limiting global warming to well below 2, preferably to 1.5 °C compared to pre-industrial levels. The Philippines' Nationally Determined Contribution is to reduce GHG (CO₂ equivalent) emissions by 70% by 2030 compared to the business-as-usual scenario of 2000-2030. Reduction of CO₂ equivalent emissions will come from energy, transport, waste, forestry and industrial sectors.

2. Climate Baseline Conditions

81. The Philippines has exhibited increasing temperatures of 0.64 °C or an average of 0.01 °C per year-increase from 1951–2010. Maximum (daytime) and minimum (nighttime) temperatures are also seen to have increased by 0.36 °C and 0.1 °C, respectively in the last 59 years. There has also been a slight increase in the number of typhoons in the Visayas during the 30-year observation period from 1971-2000 compared with the 1951-1980 and 1960-1990 periods (PAGASA, 2011).

3. Future Climate Scenarios

82. According to Observed Climate and Projected Climate Change in the Philippines (Department of Science and Technology – PAGASA, 2018), observed temperature in the country is warming at an average rate of 0.1 °C every decade. Assuming the moderate emission scenario

¹⁰ Climatelinks – A Global Knowledge Portal for Climate and Development Practitioners. [Climate Risk Profile: Philippines](#). USAID Factsheet (accessed 20 April 2021).

(RCP4.5), it is projected that the country-averaged mean temperature could increase by 0.9 C to 1.9 C, and 1.2 C to 2.3 C (considering the high emission scenario or RCP8.5) in mid-21st century.

83. Rainfall, on the other hand, is projected to be within the natural rainfall variations, except for the projected rainfall reduction over central sections of Mindanao. The projection is based on multi-model central estimate of projected changes in rainfall (Observed Climate and Projected Climate Change in the Philippines, DOST- PAGASA, 2018). It was likewise projected, based on the same study, that the high year-to-year variations in the frequency of occurrence and intensity of tropical cyclones will remain.

84. It was also projected by DOST-PAGASA that the sea level in the country will increase by approximately 20 cm by the end of the 21st century under RCP8.5 scenario. The projected increase in sea level is expected to worsen storm surge hazards in coastal communities.

V. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATING MEASURES

A. Impact Assessment

85. This section will identify the impacts of the proposed construction of innovation centers and other facilities on the physical, biological, and socio-economic environment of proposed TTIs. The identification of impacts was based on the project design, location, proposed activities during construction and operation, secondary information from national government agencies and online resources, and information gathered from consultations with safeguards focals of the select TTIs conducted from 8 – 22 February 2021, and with safeguards focals of 6 new TTIs on 26-28 May 2021.

86. Prior to the impact assessment process, two broad requirements are needed:

- a. What is in the receiving environment that may be affected by the project activities?
- b. What are the project activities that may affect the receiving environment?

87. The first requirement determines the elements of the environment that are considered important. This is called Valued Environmental Receptors (VERs). The second requirement will be listed, based on similar projects funded by ADB, and the proposed program of works (POW).

B. Valued Environmental Receptors

88. Valued Environmental Receptors (VERs), which include the elements of the receiving environment which are considered to be important, were identified, based on review of available information and consultations with stakeholders. VERs are defined as fundamental elements of the physical, biological or socio-economic environment, including the air, water, soil, terrain, vegetation, fauna and land use that may be affected by a proposed project.

Table 16: Valued Environmental Receptors

Environment	Valued Environmental Receptors	Rationale and Relationship to the Project
Physical	Project location	Earthquake hazards. Regions II, VIII, X, XI, XII and BARMM are all classified as High (Global Facility for Disaster Reduction and Recovery, 2020). Regions IV-A, V, IX and NCR are considered medium.

Environment	Valued Environmental Receptors	Rationale and Relationship to the Project
		<p>Earthquake-induced landslides. Misamis Oriental are susceptible to landslide hazards.</p> <p>Volcanic eruptions. Active volcanoes that are within 100 km from proposed TTIs include Mt. Parker, which is 30.72 km from General Santos National School of Arts and Trade.</p> <p>Tropical cyclones. Region II was the most affected, with 81-106 TCs from 1953-2010. BARMM received the lowest number, with 1-2 TCs for the same period. Region VIII also experienced Haiyan in 2013.</p> <p>Tsunami. Potential tsunami generators in RTC Tacloban, RTC Tagoloan, Davao Oriental Polytechnic Institute, and General Santos National School of Arts and Trades.</p>
	Land and soil condition	Construction timing is important though as rainy and windy season impacts the soil condition.
	Topography and elevation	Flooding. The TTIs most at risk for flooding include RTC Tuguegarao, RTC Tagoloan, where flooding may reach up to 1.5 meters during a 5-year return period. TTIs with low probability or no flooding, even a 100-year return period, include RTC – Tacloban, General Santos National School of Arts and Trades.
	Receiving body of water	Effluent from gray water will contribute to water quality of nearby receiving bodies of water. Quality of effluent must be ensured prior to release to receiving water.
	Ground water	Regions II, X, XI, XII and BARMM depend on deep well for domestic water supply. Both quantity and quality of water must be ensured.
	Climate change	<p>Climate change impacts include increased frequency of extreme weather events, sea level rise, rising temperatures, and extreme rainfall.</p> <p>El Niño – induced drought. Areas highly at risk to El Niño – induced drought include, Sultan Kudarat and Misamis Oriental.</p> <p>Rainfall change. Provinces included in the Project that are most at risk to projected rainfall changes are Leyte, Misamis Oriental and Sultan Kudarat. The design team will further evaluate the impact of rainfall change in the design of innovation centers.</p>

Environment	Valued Environmental Receptors	Rationale and Relationship to the Project
Biological	Protected areas and key biodiversity areas	Protected areas. The following TTIs are within 10 km of buffer zones of protected areas: RTC Tuguegarao (10 km), RTC Tacloban (10 km), General Santos National School of Arts and Trades (5 km). Key biodiversity areas. Buffer zones of key biodiversity areas (KBAs) that are within 10 km from TTIs include: RTC Tuguegarao (10 km)
	Flora and Fauna	Trees will be cut in Regions II, VIII, and BARMM
	Fauna	The Regional Manpower Development Center in BARMM, on the other hand, is covered by the IBA of Liguasan Marsh.
Socio-economic	Access to technical and vocational education	The rehabilitation and construction of TTIs and RTICs will provide access to quality technical and vocational education in the selected regions.
	Infrastructure and access	All of the identified TTIs are connected with existing national, provincial, or local roads and can be accessed through public transportation.
		Existing TTI buildings will be demolished in Region II.
	Water supply	All selected TTIs have dependable water supply. Sources include community water supply and/or deep well. Some TTIs have overhead tank for water storage.
	Vehicle traffic	The proposed construction of innovation centers and other facilities will entail the transportation of construction materials which may obstruct the flow of traffic where the construction vehicles will pass through.
	Acoustic environment	Construction of innovation centers and other facilities will generate noise that may impact both workers, students and faculty of TTIs, and surrounding community.
	Community and occupational health and safety	During construction of innovation centers and other facilities, there are risks on the health and safety of workers and the community, which may lead to injury and/or death. TTI buildings to be rehabilitated may potentially contain asbestos or asbestos-containing materials that could put workers at risk.

89. **Project Activities.** The following project components and activities per phase that will have substantial interaction with the environment were identified:

- (i) Preconstruction stage:
 - a. Location and design of RTIC and other facilities
 - b. Consultation and securing of clearances from government agencies
 - c. Land survey
 - d. Survey of vegetation and tree cutting
 - e. Survey of TTI facilities that will be rehabilitated / replaced, including buildings to be demolished
 - f. Traffic planning
 - g. Capacity building on safeguards implementation and grievance redress

- (ii) Construction Phase
 - a. Site mobilization and construction of temporary facilities - establishment of storage areas for construction materials, mobilization of construction equipment and perimeter fencing
 - b. Management of wastes from demolished and/or repaired buildings
 - c. Construction of RTICs
 - d. Construction of dormitories and operation of other associated and related facilities
 - e. Management of construction activities- worker camps, stockpiles, solid wastes and wastewater

- (iii) Post-Construction Phase
 - a. Demobilization
 - b. Operation of RTICs and other facilities
 - c. Management of wastes from TVET activities
 - d. Monitoring

90. The assessment of impacts, both quantitatively and qualitatively, are based on the REA checklist (**APPENDIX 2**), and infrastructure and environmental questionnaires. Due to COVID-19 travel restrictions, consultations with safeguard focals of TTIs were conducted online from 8–22 February 2021, and 26–28 May 2021 with 6 new TTIs. Review of literature and environmental studies were also done.

91. These impacts can be classified as major, moderate, minor and negligible. Some of the impacts associated with the construction of RTICs include impacts on land, vegetation, receiving body of water, occupational health and safety during demolition or repair of old buildings (including potential exposure to asbestos or asbestos-containing materials), air quality impacts. Prevalent impacts during operation phase includes the management of solid waste and wastewater, sustainability of building and facilities, and climate change.

C. Evaluation of Impacts

1. Beneficial Impacts

92. The project is expected to have positive impact on the quality of TVET in the Philippines. Students who intend to pursue TVET will directly benefit from upgraded curriculum geared towards 4IR, and better facilities in innovation centers.

2. Adverse Impacts

93. The identification of potential negative impacts requires the identification of the components of physical, biological and socio-economic environment that are at risk from the proposed construction of innovation centers and other facilities such as dormitories. A modified Leopold matrix, involving interactions between valued environmental receptors and project activities are proposed.

94. Negative impacts can be mitigated through good construction management practices while positive impacts will be further enhanced. Impacts from the proposed projects are classified into intensity, duration and scope. Intensity refers to the level of disruption, duration pertains to the time dimension of impact, while scope refers to the spatial impact. These can be further classified into different levels, as shown in the next table.

Table 17: Intensity, Duration and Scope Classification of Impacts

Intensity: Level of impacts	Duration: Time dimension of impacts	Scope: Spatial dimension of the effect
Low: Little change in the characteristics of the component. Difficult to quantify	Short-lived: Effect dissipates easily	Regional: Action affects areas outside TTIs
Average: Change in certain characteristics of the components. Change may be quantified	Temporary: Effect does not last. Effect is felt during one project activity or throughout project implementation	Local: Action affects areas within TTIs
High: Change in all or in the main characteristics of the component. Change is quantifiable	Permanent: Effect leaves lasting impact for the life of the infrastructure	Limited: Action affects only the innovation center footprint of the project

95. The three parameters – intensity, duration and scope are incorporated to form multicriteria matrix that can be categorized into the following: Major – effect is permanent that substantially alters the environment quality; Medium – signifies temporary and perceptible effect that has little effect on the environmental component and can be reversed, the effect is only limited and short-lived; and Minor – effect does not affect the environmental component in qualitative or quantitative terms, that is, the effect is short-lived and very limited in scope.

Table 18: Multi-criteria Analysis to Determine the Potential Environmental Impacts

Intensity	Duration	Short-lived	Temporary	Permanent
	Scope			
Low	Limited	MIN	MIN	MED
	Local	MIN	MIN	MED
	Regional	MIN	MED	MED
Medium	Limited	MIN	MED	MED
	Local	MED	MED	MAJ
	Regional	MED	MAJ	MAJ
High	Limited	MED	MAJ	MAJ
	Local	MED	MAJ	MAJ
	Regional	MAJ	MAJ	MAJ

Table 19: Matrix Showing the Relationship Between VERs and Project Components and Activities for the Construction of Innovation Centers

Valued Environmental Receptors	Project Phases														
	Pre-construction						Construction					Operation			
	Location and design of RTIC and other facilities	Consultation and securing of clearances from government agencies	Land survey	Survey of vegetation and tree cutting	Survey of old facilities that will be rehabilitated / replaced, including buildings to be demolished	Traffic planning	Capacity building on safeguards implementation and grievance redress	Site mobilization and construction of temporary facilities - establishment of storage areas for construction materials	Mobilization of construction equipment and perimeter fencing	Management of wastes from demolished buildings	Construction of RTICs	Construction of dormitories and other associated and related facilities	Management of construction activities- worker camps, stockpiles	Demobilization	Operation of RTICs and other facilities
Physical Environment															
Project location	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	
Land and soil condition	✓		✓		✓		✓	✓	✓	✓	✓		✓		
Topography and elevation	✓		✓				✓				✓	✓			
Receiving body of water	✓		✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Ground water	✓				✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Air quality and noise level	✓				✓					✓	✓	✓		✓	✓
Climate	✓										✓	✓		✓	
Biological Environment															
Protected areas and key biodiversity areas	✓		✓	✓							✓	✓	✓		
Flora	✓		✓	✓			✓	✓		✓	✓	✓		✓	✓
Fauna	✓										✓	✓	✓	✓	✓
Socio-economic Environment															
Access to technical and vocational education		✓			✓	✓				✓				✓	✓
Infrastructure and access	✓	✓	✓		✓	✓	✓	✓		✓		✓	✓	✓	✓
Water supply	✓				✓		✓	✓		✓	✓	✓	✓	✓	✓
Vehicle traffic	✓	✓				✓	✓	✓		✓		✓	✓	✓	✓
Acoustic environment	✓	✓			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓

Table 20: Analysis of Environmental Impacts

Project Components	Environmental Components	Description of Environmental Effects	Intensity	Duration	Scope	Assessment of Potential Negative Impacts
Preconstruction Phase						
Location and design	Project location	Geological and natural hazards	High	Permanent	Regional	Major
	Topography and elevation	Flooding risks	High	Permanent	Regional	Major
	Climate	Climate change impacts	High	Permanent	Regional	Major
	Protected areas	Potential impacts on biodiversity	Medium	Permanent	Regional	Medium
	Vegetation	Loss of trees	Medium	Permanent	Limited	Medium
	Fauna	Loss of fauna	Low	Temporary	Limited	Minor
	Hazardous wastes, including asbestos	Impacts on land, air, water, flora and fauna and health and safety of workers and the community	High	Permanent	Regional	Major
Construction Phase						
Mobilization of construction equipment and construction of temporary facilities; Demolition of existing buildings; Construction of innovation centers and dormitories	Land and soil condition	Disturbance of land and soil condition	High	Temporary	Limited	Major
	Land and soil condition	Generation of wastes, including hazardous wastes from buildings to be demolished	High	Temporary	Limited	Major
	Surface water quality	Deterioration of water quality	Medium	Temporary	Local	Medium
	Air quality and noise	Increase in particulate matter and noise level	High	Temporary	Local	Major
	Vegetation	Loss of trees	Medium	Temporary	Local	Medium
	Ground water	Reduced water supply from groundwater	Medium	Temporary	Local	Medium
	Fauna	Loss of fauna	Low	Temporary	Limited	Minor
	Public infrastructure and access	Temporary disturbance of access	Medium	Temporary	Local	Medium
	Water supply	Increased level of use of water	Medium	Temporary	Local	Medium
	Vehicle traffic	Increased level of traffic	Medium	Temporary	Local	Medium
	Occupational health and safety	Impact on health and safety of workers	High	Short-lived	Local	Medium
	Community health and safety	Impact on health and safety of community	High	Short-lived	Local	Medium
Operation Phase						
Demobilization	Land and soil condition	Compaction of soil	Low	Temporary	Limited	Minor
	Surface water quality	Increase in level of pollutants	Low	Temporary	Limited	Minor
	Air quality	Increase level of particulate matter	Low	Temporary	Limited	Minor
	Ambient noise	Increased level of noise	Low	Temporary	Limited	Minor
	Vehicle traffic	Increased level of traffic	Low	Temporary	Limited	Minor
	Community health and safety	Impact on the community	Low	Temporary	Limited	Minor
Operation of innovation centers and dormitories	Climate	Climate change impacts	High	Permanent	Regional	Major
	Land	Generation of solid wastes from TVET activities	Medium	Temporary	Local	Medium
	Surface water quality	Potential deterioration of water quality	High	Temporary	Regional	Medium

Project Components	Environmental Components	Description of Environmental Effects	Intensity	Duration	Scope	Assessment of Potential Negative Impacts
	Water supply	Additional strain to existing water resource	Medium	Temporary	Local	Medium
	Vehicle traffic	Traffic generation	Medium	Temporary	Local	Medium
	Air quality	Increase in level of particulate matter	High	Temporary	Local	Medium
	Receiving body of water	Deterioration of water quality	Low	Temporary	Local	Minor
	Ground water	Reduced water supply from groundwater	Medium	Temporary	Local	Medium
	Occupational health and safety	Risks from handling of equipment	Medium	Permanent	Regional	Medium

96. The analysis of impacts shown in the preceding table revealed the following:
- (i) During the pre-construction phase, major risk and potential negative impact include geological, natural and physical hazards, flooding risks and climate change impacts; and medium impacts on biodiversity and loss of trees.
 - (ii) During construction, major potential impacts include disturbance of land and soil condition and generation of wastes, including hazardous wastes from buildings to be demolished, and from rehabilitated TTIs and construction of innovation centers, and impact on air quality and noise level; and medium impacts on the following: surface water quality, loss of vegetation, reduced water supply from ground water, temporary disturbance of access, increased level of use of water, increased level of vehicle traffic, and health and safety of workers and the community.
 - (iii) During operation, major impacts include climate change while medium for generation of solid wastes from TVET activities, potential deterioration of water quality, additional strain to existing water resource, traffic generation, increase in level of particulate matter, deterioration of water quality, reduced water supply from groundwater, and risks of students and workers from handling equipment.

D. Negative Impacts and Mitigation

1. Pre-construction Phase

97. The construction of innovation centers and rehabilitation of TTIs will be done exclusively at the selected TTI sites. Impacts due to project location include geological hazards such as earthquake and volcanoes, vulnerability to tropical cyclones and flooding, and proximity to areas with high biodiversity, and loss of trees. As some buildings will be demolished in NCR, CAR, Region I, Region II and Region III, and some TTIs will be rehabilitated or expanded, there is a potential that hazardous wastes including asbestos or asbestos-containing materials (ACM) are present in buildings affected. The design of buildings, facilities and other associated infrastructure necessary for the construction and operation of RTICs and other facilities will be evaluated further during detailed design stage.

98. The following are the major environmental issues associated with project location.

a. Geological Hazards

99. **Earthquake Hazards.** In terms of earthquake hazards, Regions II, VIII, X, XI, XII, and BARMM are all classified as High (Global Facility for Disaster

Reduction and Recovery, 2020). The project will conduct geotechnical survey during detailed design to further evaluate the hazards from active faults close to the TTIs that may trigger earthquakes. The project will also be in compliance with the National Structural Code of the Philippines and other applicable codes, standards and regulations.

100. **Volcanoes.** Mt. Parker, which is 30.72 km from General Santos National School of Arts and Trade. Volcano hazards associated with eruption include lava flow, ash fall, pyroclastic flow, lateral blast and volcanic gas. The project will utilize the Volcano Information Materials from PHIVOLCS to educate the TTI stakeholders on the needed actions to prepare for volcanic eruptions.

b. Natural Hazards

101. **Tropical Cyclones.** Region II was the most affected, with 81-106 TCs from 1953-2010, while VIII received about 61-80 TCs for the same period. The design of innovation centers will take into consideration the impacts of severe tropical cyclones.

102. **Flooding.** The TTIs most at risk for flooding include RTC Tuguegarao and RTC Tagoloan where flooding may reach up to 1.5 meters during a 5-year return period. The design of innovation centers and other facilities will consider flooding risks and incorporating mitigating measures such as raising the floor height of buildings and increasing capacity of drainage.

103. **Vulnerability to climate change.** Increased temperature in the TTIs may lead to decreased ground water supply for innovation centers, increased need for ventilation and additional energy for air conditioning. The projected rainfall reduction over central sections of Mindanao, will likewise impact on TTI's water supply. The high variability in the frequency of occurrence and intensity of tropical cyclones will impact on the integrity of the buildings, specifically in Region II, and VIII. The projected sea level rise of 20 cm by the end of the 21st century will likewise impact TTIs located near coastal areas, as this will worsen storm surge hazards in these areas.

104. **Impacts on biodiversity.** The construction of innovation centers and other facilities will not lead to loss of biodiversity or critical habitat since all activities will only be confined within TESDA sites. To coordinate with the Department of Environment and Natural Resources and Ministry of Environment, Natural Resources and Energy (MENRE) regional office to ensure compliance with local environmental requirements.

105. **Loss of trees.** Based on the initial survey from selected sites, trees will be affected in the following regions, arising from the construction of RTICs: II, VIII, XII, CAR and BARMM.

TTIs will coordinate with the Community Environment and Natural Resources Office (CENRO) with jurisdiction over the TTI, on requirements and mitigating measures (including replacement of cut trees) to lessen impacts of cut vegetation.

c. Physical Hazard

106. **Hazardous wastes from buildings to be demolished or rehabilitated.** There is a potential that hazardous wastes, including asbestos, are present in buildings affected. To ensure compliance with relevant regulations, the Project will refer to DENR Administrative Order (DAO) No. 2000 – 02 (Chemical Control Order for Asbestos), particularly Section IX, Specific Requirements and Standards, item 6 – Renovation, Removal and Demolition Requirements. Based on the DAO, the duly authorized owner or operator, in this case the TTI, through the Design and Construction Supervision Consulting (DSC) Firm, shall thoroughly inspect and assess the facility to verify the presence of any friable asbestos containing materials, or non-friable asbestos containing materials that have become friable prior to the commencement of any demolition activity.¹¹ In addition, and based on the findings of the risk assessment, the DSC Firm will also develop a risk management plan to be refined and implemented by works contractors during the construction phase.

2. Construction Phase

107. **Disturbance of land and soil condition.** The construction of innovation centers will only be done in the land allocated by TTIs. There will be no land acquisition and resettlement as these lots are owned by TTIs.

108. Construction phase activities include mobilization of construction equipment, construction of temporary facilities, and construction of innovation centers and other facilities. Prior to the construction of innovation centers, contractors will transport construction materials and equipment that will disturb soil condition within the project area. The impact will be permanent since the area traversed will be used for internal road, parking and buildings. Impacts will be limited to the building footprint area and areas devoted for roads and parking. At the minimum, about 1,900 to 2,500 m² of land will be altered permanently since these are the areas required for the building.

109. To mitigate the impacts on disturbance of land and soil condition, best management practices include limiting the amount of erosion and sediment by disturbing only the areas necessary for construction, phasing of construction activity, lessening the grade of steep slopes, and covering of exposed soils until time of revegetation or building of facilities. Soil loss can also be lessened by scheduling construction activities during fair weather to prevent soil erosion, use of appropriate sedimentation and soil erosion and control devices (sediment traps or silt fences). Stockpiles of soil removed during construction should be covered. Storage of construction materials should be limited to paved parking lots or inactive areas within existing building or temporary shed. Construction machineries should be parked in paved areas. Drivers should also be instructed to observe speed limit to reduce soil disturbance.

¹¹ Friable asbestos material" means any material containing more than one percent (1%) asbestos, as determined using standard polarized light microscopy techniques, which when dry can be crumbled, pulverized, or reduced to powder by hand pressure thereby, releasing airborne fibers. "Non-friable asbestos containing material", on the other hand, means any material containing more than one percent (1%) asbestos, as determined by using standard polarized light micro- copy techniques, which when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure (DENR Administrative Order 2000 – 02).

110. **Generation of wastes.** The rehabilitation of TTIs and construction of innovation centers will generate wastes from cut trees, spoil, demolition and construction wastes that can negatively impact the environment, workers, students and faculty of TTIs, and people close to TTIs. Prior to construction of innovation centers, vegetation will be cut and land will be cleared. These will generate wastes from cut trunks, leaves and roots that may contaminate receiving body of water. Permit to cut trees will be coordinated with DENR CENRO while the disposal of organic materials will be coordinated with the local government.

111. Rehabilitation of TTIs will also generate demolition wastes that may include general wastes and hazardous wastes. The works contractor must implement a waste management plan as part of CEMP, and in case asbestos is identified as being present in those areas of buildings to be demolished or rehabilitated (to be identified during detailed engineering design), the contractor must implement the risk management plan developed by DSC Firm. The contractor must ensure to set-up waste collection area for construction, non-hazardous and domestic solid wastes. Solid wastes must be segregated into biodegradable, recyclable, residual and hazardous wastes. Construction wastes, consisting of concrete and rubble, steel rods, damaged formworks and paper that can be recycled must be separated. Hazardous wastes such as paint, used oil and fuel, and batteries, must be disposed temporarily in designated hazardous waste temporary storage, prior to collection by DENR accredited hazardous waste management provider, for proper treatment, storage and disposal. The contractor will ensure compliance with national regulations, international commitments where Philippines is a party, and WB - IFC EHS Guidelines (2007) on hazardous waste storage, transportation and treatment and disposal. Hazardous wastes generated during construction, which include fuel and chemicals, among others, should be stored to prevent or control accidental releases to air, soil and water resources. Stored waste should have physical separation or containment curbs, and should be stored in closed containers away from direct sunlight, wind and rain. There should be adequate ventilation where volatile wastes are stored.

112. **Impact on air quality and noise level.** There will also be impacts on air quality and increased level of noise arising from movement of construction vehicles, demolition of buildings in some TTIs, and the construction activities itself. The quality of receiving body of water will also be affected, as disturbed land will generate runoff during rainfall events.

113. The movement of vehicles carrying construction materials may generate dust that may affect the air quality in surrounding areas and may also impact the health of the people. The contractor must require covering trucks carrying construction materials to prevent dispersion of dust during transport. Piles of aggregates must also be covered during high wind condition to prevent dust from scattering in TTI vicinity. Washing of tires of construction vehicles will also be imposed after delivery of construction materials. Speed limit and watering of roads will also be implemented to prevent dust.

114. Workers exposed to high noise levels (i.e., 90 dBA) may suffer from physical and psychological stress, reduced productivity, interference with communication and concentration, and may contribute to workplace accidents and injuries due to difficulty in hearing warning signals.¹² Workers who are exposed to repeated exposures to high levels of vibration may suffer from hand-arm and whole-body vibration. Hand-arm vibration exposure, is a known contributing

¹² United States Department of Labor. [Occupational Noise Exposure](#) (accessed 13 May 2020).

factor to carpal tunnel syndrome and other ergonomic-related injuries. It also causes direct injury to the fingers and hand that affect feeling, dexterity and grip.¹³

115. To mitigate excessive noise, no worker should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C). The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110dB(A). Impact of vibration can be lessened through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure. Electric hazard from exposed or faulty electrical device can be mitigated by such measure as marking all energized electrical devices and lines with warning signs and protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic areas.

116. **Impact on surface water quality.** The contractor will ensure that the wheels of vehicles transporting aggregates and other construction materials are thoroughly washed to prevent sediment runoff that will impact the quality of receiving body of water. Portable toilets will be provided to manage the wastewater coming from the workers. Contractor through third party service provider, will be responsible for the operation, maintenance and disposal and treatment of collected wastes from portable toilets. Potential impacts on receiving body of water will be addressed through minimization of exposed soil from erosion, construction of silt traps, interceptor drains and sedimentation pits around work areas and camp site.

117. Construction of innovation centers will generate construction wastewater as well as domestic wastewater from workers who will temporarily stay inside workers' camp. It was estimated that around half of workers will stay inside the construction camp. It was estimated that water consumption for each worker is 80 liters/day or a total of 1.92 m³/day. Sources of water consumption will come from toilets, housing, dining area, laundry and kitchen. It was also estimated that 80%, or 1.5 m³/day will drain into receiving body of water of each TTI. This volume of wastewater will have high level of BOD₅, nutrients, bacteria and pathogen. This will further contribute to local water pollution if not treated. The impacts on waterways can be mitigated through appropriate collection and treatment.

118. **Impact on vegetation.** As there are trees in some TTIs where innovation centers will be constructed, there will be medium impact on trees as these need to be cut or transplanted in available land within the TTI. A permit to cut will be secured from the CENRO prior to cutting or transplanting of trees. The contractor will schedule the cutting of trees progressively so as not to expose soil for long period. Contractor will be responsible for transport and disposal of biomass wastes from cut trees. Contractor also need to strip the topsoil from any areas to be covered by pavement, structures or where utilities will be located, to be used later for revegetation. Stripping of topsoil shall be at a depth to the bottom of the grassroots zones. Grass shall be stripped together with topsoil.

119. **Impact on water supply.** Since construction will involve the use of water, there will be medium impact on the water supply of TTIs, which is sourced from the community water supply and groundwater supply of TTIs. Water supply will be used for construction activities and for workers' use in construction camp.

¹³ R. Brauch. 2015. [Vibration Hazards in the Workplace: The Basics of Risk Assessment](#). *Occupational Health and Safety*.

120. **Impact on vehicle traffic.** There will be increased vehicle movements during construction phase, which may affect localized traffic. There may also be restriction of access in other buildings resulting from the construction of TTI facilities. The contractor will prepare and implement traffic management plan as part of the Contractor's EMP, in coordination with the Traffic Management Office of the city or municipality covering the TTI, to manage the traffic in the area. The plan will include driving policy, roles and responsibilities of drivers, workers and management, traffic management procedures, site layout and traffic flow pattern and schedule, road safety rules, training and vehicle inspection registries, road safety records and incident reports, and performance reports. The contractor must set speed limit for all construction vehicles and install traffic warning signs within the project site. The contractor must also conduct regular orientation and capacity building on safe driving for drivers and workers. Contractor must also be responsible for regular vehicle maintenance. Warning and informatory signs will also be put up along the roads leading to the construction site. There will be prior consultation and coordination with the local governments and affected stakeholders prior to start of construction.

121. **Impact on health and safety.** To minimize the short-term construction impacts on health and safety of workers, students, TESDA personnel, and the community, good construction management practices will be implemented in the select TTIs. The Environmental Management Plan (EMP) for the project, includes mitigation measures to prevent or minimize above construction impacts. The Contractor will also prepare and implement occupational health and safety plan as part of the CEMP, format of which is based from Section 2.0 of World Bank – IFC EHS Guidelines on Occupational Health and Safety.¹⁴ The contractor will implement as well the asbestos risk management plan developed by DSC Firm, as applicable. The project will adhere to the relevant provisions of the Environmental, Health and Safety General Guidelines of the World Bank Group (2007) and the relevant environmental regulations of the Philippines. The EMP includes mitigation measures on environment (air emissions and ambient air quality, wastewater and ambient water quality, water conservation, hazardous materials management, waste management and noise); occupational health and safety; community health and safety; and construction and decommissioning. The bidding documents and contracts for civil works will include the EMP.

122. Contractor shall require workers with high exposure to hazards to wear personal protective equipment (PPE) such as face and eye protection device with side shields, welder goggles for welding and hot works, gloves, facemasks with appropriate filters for dust removal, plastic helmets with top and side protection, body suits, and safety shoes and boots. Contractor must also implement fall prevention and protection measures for workers exposed to falling hazard. These include installation of guard rails, proper use of ladders and scaffolds, and use of fall prevention devices such as safety belt. The Contractor should also provide first aid attendant for the project as well as medical kit to treat workers' injuries and illnesses prior to transportation to hospital.

123. The contractor must also restrict the access of students and other personnel of TTIs, and the general public to the site as the construction poses health and safety hazards. These include accidents associated with building structure failure, injuries from falls, open excavation or contact with heavy equipment, respiratory problems from dust and fumes, elevated noise from construction equipment, and exposure to hazardous materials. To lessen the impact of the project on the community's health and safety, the contractor must fence the perimeter of the construction site, install signages, assign guards at entrance and exit, and inform the public through regular

¹⁴ International Finance Corporation. [Environmental, Health, and Safety \(EHS\) Guidelines—General EHS Guidelines: Occupational Health and Safety](#).

consultation. The contractor must also ensure that there are no hazardous conditions inside the project site such as open excavation and unstable piles.

3. Operation Phase

124. **Impact of climate change.** Based on the analysis of climate baseline conditions and future climate change scenario, the project will be affected by El Niño-induced drought and rainfall change.

Table 21: Potential Climate Change Impacts and Proposed Adaptation Measures

Climate Change Indicator	Affected Provinces	Potential Climate Change Impacts	Proposed Adaptation Measures
Niño – induced drought	Sultan Kudarat, Misamis Oriental	Decrease in both community and groundwater supply, affecting the operation of TTIs	Rainwater harvesting measures to supplement existing water supply, specifically in TTIs that depend on ground water supply
		Increase in demand for power supply for air conditioning	Utilize solar PV panels to complement the power supply from the grid. Design incorporating natural ventilation or use of fans instead of air conditioners in some sections of RTICs and rehabilitated TTIs. Possible use of skylight roofing to utilize natural light, and to lessen localized temperature.
		Impact on long-term viability of agri-fisheries related programs of TTIs	Introducing drought tolerant variety of crops, use of water-smart technologies such as drip irrigation and wastewater reuse, and adopting conservation agriculture technologies
Rainfall change	Leyte, Misamis Oriental and Sultan Kudarat, Cagayan	Flooding	Increase in elevation of building above High Flood Level Increase in capacity of drainage Provision of permeable pavement for parking spaces to recharge groundwater supply
Sea level rise	Leyte, Zamboanga del Sur	Flooding, saltwater intrusion, increased level of storm surge	Increase in elevation of building above High Flood Level Developing additional water supply in view of salt water intrusion on groundwater supply Design to minimize impact caused by storm surge

125. **Generation of wastes.** The operation of TTIs and RTICs will generate wastes from students and faculty. The National Solid Waste Management Commission of the DENR estimated that the per capita waste generation for the Philippines is 0.4 kg/day. These include biodegradable from food consumed and papers, recyclables such as bottled water and soft drinks, and wastes generated from TESDA programs (e.g., wastes from metal works, used oil and fuel, batteries, etc.).

126. The Project will abide by the guidelines of Ecological Solid Waste Management Act of 2000 (Republic Act 9003) and the Toxic Substances and Hazardous and Nuclear Wastes Control

Act of 1990 (Republic Act 6969). The former regulates general wastes, while the latter regulates toxic and hazardous wastes.

127. To manage general, non-hazardous wastes, the management must install 3 types of solid waste containers in designated areas with the following labels: biodegradable or organic (food waste, kitchen waste, paper), recyclable (plastics, glasses and metals), and residuals. All domestic wastes must be collected, segregated, and transported to common solid waste management facility of each TTI. The collected wastes will be transported through the municipal or city solid wastes management services or through a service provider that will transport the collected solid wastes to materials recovery facility and at the disposal facility of the municipality or city. Hazardous waste management, such as those coming from laboratories, vocational courses related activities, and maintenance activities, will be governed by relevant provisions of RA 6969.

128. Within the project site, each TTI must designate a specific storage zone for hazardous waste. The facility should be lined, with enclosed walls and roofs to store hazardous waste containers. The management should actively promote waste segregation to avoid hazardous waste mixing with general wastes. The management must also initiate regular training on safe practices to handle hazardous wastes. These hazardous wastes include used oil, battery, electric and electronic wastes, pesticides, and paints and other chemicals. Appropriate PPEs will also be required for the workers.

129. **Potential deterioration of water quality.** Wastewater from cleaning of equipment, used oil from vehicles and equipment, kitchen wastes, and other sources may contaminate the receiving body of water of the TTI. To mitigate the potential deterioration of water quality of receiving body of water, each innovation center will install a wastewater treatment system that will meet the effluent standard for water following the Philippine Clean Water Act of 2004 and WB-IFC EHS Guidelines.

130. Additional strain to existing water resource. The operation of innovation center and rehabilitated TTIs will increase additional demand to existing water resource of TTIs. In addition, there will be additional power arising from the usage of additional facilities and equipment. Each TTI will explore options to utilize solar power to complement power from the grid. Each TTI will explore rainwater harvesting for plant irrigation and for general use, except for drinking. Each TTI will also explore the potential of reusing the effluent for flushing toilets, design of which will be finalized in detailed engineering design phase.

E. Analysis of Alternatives

131. Alternative locations for innovation centers were discussed during the February consultations with safeguards focals of each TTI. ADB consultant also consulted with each TTI to discuss the area allocation and the most suitable site for the TTI. The Site Development Plans (**APPENDIX 1**) for the select TTIs are the most suitable locations for each TTI, based on the preliminary evaluation and consultations with the TTI.

VI. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

A. Information Disclosure

132. In line with the Access to Information Policy of ADB (2018), the IEE report for the project will be made available in a timely manner, in an accessible place, and in a form and language

that will be understood by affected people and other stakeholders. The purpose is for affected people, including the general public, to provide meaningful inputs into project design and implementation. As this version of the IEE is based on the conceptual design, updated IEE reflecting detailed engineering design, which incorporates further inputs and feedbacks of all concerned stakeholders, will also be made available to the public.

133. ADB will disclose the following safeguard documents on its website: final or updated initial environmental examination upon receipt; and environmental monitoring reports submitted by TESDA during project implementation upon receipt.

B. Key Stakeholder Consultation and Participation to Date

134. ADB's SPS (2009) requires project proponents to carry out meaningful public consultation that begins early and is carried out throughout the project cycle and to provide timely disclosure of relevant information that affected people can understand and can be easily accessed. Moreover, SPS also requires that consultations be free from coercion, be gender inclusive and caters to the needs of disadvantaged and vulnerable people, and that all relevant views of affected people are considered.

135. The consultations aimed to familiarize and build capacity of safeguards focals on ADB's SPS (2009) and the Philippine environmental impact assessment requirements for the TTIs. These consultations also allowed safeguards focals to present the baseline conditions of proposed sites for innovation centers and other facilities. The infrastructure survey and safeguards information that were previously submitted by the TTIs were also discussed to confirm the information indicated in the forms. Lastly, responsibilities on environmental monitoring, establishment of grievance redress mechanism within TTI, and securing of various permits and clearances at each stage of the project from relevant government agencies were also discussed. Below is the program for the consultation.

C. Future Public Consultation and Information Disclosure

136. All key stakeholders should be informed about the project and their inputs solicited. Activities for information disclosure, public consultation and public participation are part of the overall planning design process and construction of the proposed TTIs. Information of planned project activities prior to construction works will be done through stakeholder consultations and publications through mass media and posters. Stakeholder consultations will be done through:

137. **Discussions with stakeholders.** It aim to explain the construction activities of TTIs, including the environmental and social impacts associated with the activities and the management plan to address potential impacts. Stakeholders, which include students, staff of TTIs, and the communities that will be affected by the project, may express their opinions verbally during these discussions.

138. **Survey.** Stakeholders that will be affected by the project will fill out their responses in the questionnaire prepared by TESDA / TTIs. The stakeholders will also provide written opinions and suggestions on the project in the prepared questionnaire as well as their suggestions on managing potential environmental and social impacts of the project.

VII. GRIEVANCE REDRESS MECHANISM

A. Grievance Redress Mechanism

139. ADB's SPS (2009) requires the borrower to establish a GRM to receive and facilitate the resolution of environment-related issues and concerns affecting the project. A project-specific grievance redress mechanism will be established in each TTI, to receive, evaluate and facilitate the complaints / grievances of affected persons on the environmental performance of the established facilities.

140. The PMU will establish and maintain a grievance redress mechanism to register, assess, and address project-related complaints. The select TTIs will assign GRM focals prior to commencement of works to address the issues raised by affected people on the project. Contact number of the contactor, the TTI safeguards focals, the PMU and the DSC including names, positions, and telephone numbers shall be disclosed at the project site.

141. Persons or groups with project related issues may file their complaints with the GRM focals through the grievance intake form or through email or complaints box that will be made available in each TTI. The TESDA GRM focal at the regional office will be responsible for the registration of grievances and communication with aggrieved party.

142. The steps to be followed in filing complaints and the procedures for redress during construction phase are the following:

- (i) Complainant will provide the background and file the complaint verbally or in writing to TTI. The GRM focal will assist the complainant in filling-up the grievance intake form;
- (ii) Within 2 working days, TTI, the contractor's representative, and the complainant will discuss if the complaint can be resolved without calling for a meeting;
- (iii) Within 3 days of lodging the complaint, TTI will provide the complainant a written feedback on the process, steps and timeframe for resolving the complaint.
- (iv) If the complaint cannot be resolved, a meeting with the complainant will be called within 5 working days;
- (v) The TTI will have 15 working days to resolve the complaint;
- (vi) The complainant will receive feedback from TTI within 5 working days after the various steps of the GRM are completed; and
- (vii) If the complainant is not satisfied with the feedback from the TTI, the complainant will elevate the complaint to TESDA Central Office following the above process. If the complainant is still not satisfied with the outcome, he or she or the group has the option to access the Government's judicial, administrative remedies or through concerned government agencies.

143. The steps to be followed during operation will be the same, except that the contractor's representative will no longer be involved.

144. The GRM focal will receive, follow-up and prepare monthly reports regarding all complaints, disputes or questions received about the Project and corresponding actions taken to resolve the issues. These reports will be included in the semi-annual environmental monitoring reports to be submitted by TESDA to ADB.

B. ADB's Accountability Mechanism

145. In case issues are not resolved through the GRM, affected persons may elevate their complaint to Philippine ADB Resident Mission. The complainant can elevate the case further through the ADB's accountability mechanism in case issues are not resolved through the GRM and ADB Resident Mission. The accountability mechanism provides opportunities for people that are adversely affected by ADB-financed projects to express their grievances, seek solutions, and report alleged violations of ADB's operational policies and procedures, including safeguard policies. ADB's accountability mechanism comprises of (i) consultation led by ADB's special project facilitator to assist people adversely affected by ADB-assisted projects in finding solutions to their concerns and (ii) providing a process through which those affected by projects can file requests for compliance review by ADB's Compliance Review Panel.

VII. ENVIRONMENTAL MANAGEMENT PLAN

A. Overview

146. The EMP has been prepared to provide the mitigating and management measures that will be undertaken for identified impacts at different phases of the project. Information includes: (i) Mitigating measures to be implemented (ii) required monitoring associated with the mitigating measures and (iii) implementation arrangement. Institutional set-up is presented in the implementation arrangement and discusses the monitoring and supervisory roles of responsible parties.

147. The EMP contains a number of components crucial to effective environmental management within the Project. These include:

- (i) Evaluate the performance of mitigation measures proposed in IEE;
- (ii) Provide information which could be used to verify predicted impacts and thus validate impact prediction techniques;
- (iii) Suggest improvement in environmental mitigation measures as required; and
- (iv) Provide information on unanticipated adverse impacts or sudden change in impact trends.

148. The EMP has been developed based on discussions with NITESD-TESDA and the online consultations with safeguards focals of the selected TTIs. The EMP will be included in the bid and contract documents to ensure that contractors are aware of their obligations during construction phase. The plan will also guide TESDA in the supervision and monitoring of contractors' safeguards performance during construction.

B. Mitigation Plan

149. Environmental mitigation measures of the project have been formulated and summarized in Table 27. It presents summary information on: (i) project activity causing impacts by project's phase; (ii) Anticipated impacts associated with project activity; (iii) proposed mitigation measures for each environmental impact, (iv) responsible party for carrying out mitigation measures, and (v) associated cost (tentative). Details of mitigating measures are already discussed in Chapter V where the need for mitigation of each impact was determined in the screening process. The table also presents the information on Impact Monitoring including: (i) parameters to be monitored; (ii) frequency and means of verification; (iii) party responsible for monitoring.

150. During the pre-construction phase the cost of preparing tender documents with provisions for the required environmental measures are part of the design consultant's contract. During construction, all costs of environmental mitigation measures shall be the responsibility of contractors and are considered part of their contracts as specified in the technical specifications. During the operation phase, all costs of mitigation measures are part of the operation and maintenance costs of TTIs.

151. The EMP costs shall not be taken as separate environmental costs since they are already part of specific items such as the design consultant's contract, contractors' contracts and TTI's operation and maintenance costs.

C. Reporting

152. Throughout the construction period, each contractor will submit monthly works progress and CEMP implementation reports to the DSC. The quarterly project progress reports prepared by the PMU for ADB should include a short summary of EMP implementation progress and any grievances raised/resolved in the reporting period. The PMC will support the PMU in preparing and submit semi-annual environmental monitoring reports (SAEMRs) to TVET and ADB.¹⁵ The SAEMR will include progress of construction, results of site inspections and environmental monitoring, progress made in EMP implementation, status of compliance with domestic environmental regulatory requirements and other clearances, record of community complaints, unforeseen environmental impacts, and suggested corrective actions for the next monitoring period. The SAEMRs submitted to ADB until the Project Completion Report is prepared. The SAEMR shall be based on the semi-annual environment monitoring reports to be prepared by the TTIs (on behalf of the PIUs). Table below presents the environment safeguards reporting plan for the project.

Table 24: Environmental Safeguards Reporting Plan

Type of Report	Basic Content	Prepared by	Submitted to	Frequency
Construction Phase				
Construction Progress Report	Progress of construction, CEMP implementation (checklists)	Contractors	TTIs, DSC, PMC	Weekly and Monthly
TTI Environment Progress Report	Environment progress reports, including environment supervision results, accidents and	TTIs, DSC	PMU, PMC	Semi-annual

¹⁵ Report template is annexed to the IEE.

Type of Report	Basic Content	Prepared by	Submitted to	Frequency
	incidents, and any complaints received			
Project Progress report	Project status Including a summary section on EMP implementation, accidents and incidents, and any complaints received	PMU, PMC	ADB	Quarterly
Environmental Monitoring Report	EMP implementation, environmental monitoring, compliance with GOI environmental requirements, accidents/incidents, complaints received, and actions undertaken	PMU, PMC	ADB, TVET	Semi-annual
Operational Phase				
Report to ADB	Subproject progress report, including section on EMP implementation and monitoring	PMU, PMC	ADB	Semi-annual until PCR

ADB = Asian Development Bank; CEMP = contractor environmental management plan; EMP = environmental management plan; PCR = project completion report; PIU = project implementation unit; PMC = project management consultant; DSC = design and construction supervision consultant; PMU = project management unit.

D. Institutional Arrangement

153. The Department of Finance is the Executing Agency (EA) and TESDA is the Implementing Agency (IA) for the project. The DOF, who will sign the Loan Agreement on behalf of the Philippine government, will be responsible for overall oversight, strategic and policy direction of the project. TESDA, as the implementing agency, will be responsible for implementing the project. It will be accountable for the use of the ADB loan proceeds and for preparing project financial reports. TESDA will also ensure that the project complies with the ADB SPS, the IEE and EMP, and the PEIS System. The Project Management Unit (PMU) to be established for the project will include safeguard specialists who will be supported by a Project Management Consultant (PMC) and Design and Construction Supervision Consultant (DSC), each with safeguards consultants. Each TTI will assign one safeguards focal for EMP implementation supervision. The PMC, on behalf of the TESDA and the PMU, will update the IEE and EMP during detailed engineering design stage. The tendering process shall advocate environmentally responsible procurement by ensuring the inclusion of EMP provisions in the bidding documents and construction contracts. TTIs are tasked to (i) secure required government environmental approvals such as CNC or ECC prior to project implementation; (ii) establish and operationalize the grievance receipt and administration mechanisms at the TTI level, in line with the overall project level grievance redress mechanism; (iii) conduct consultations with internal and external stakeholders; and (iv) provide inputs to DSC on TTI's compliance to ADB's and Philippine's safeguards requirements for submission to PMU, which, through the PMC, will be responsible for consolidating all the reports from TTIs into one consolidated semi-annual safeguards monitoring report.

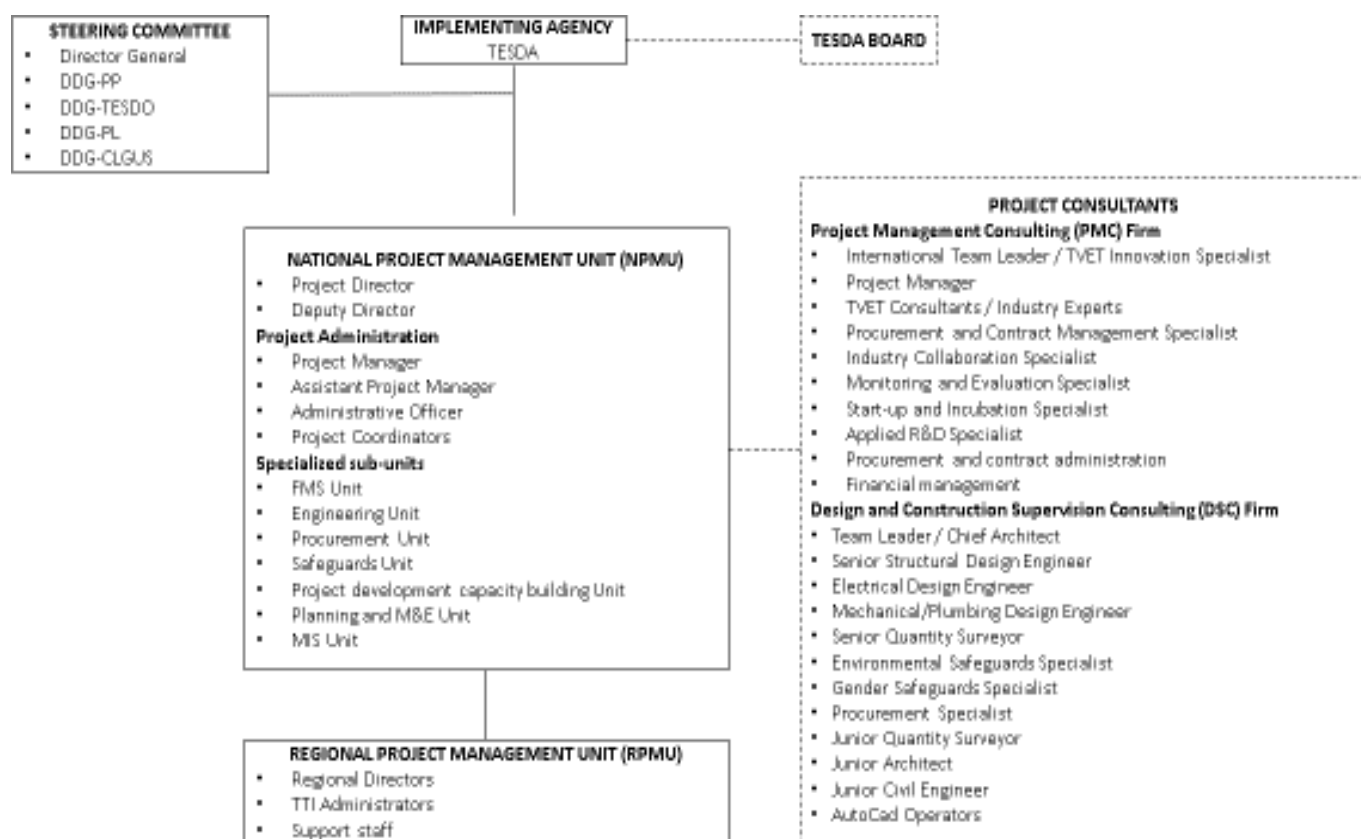
154. Works contractors will assign qualified EHS staff at each construction site to supervise and monitor the EMP and ensure compliance with safeguards requirements of ADB and the

Government of the Philippines. Contractors will be required to prepare and submit their CEMP prior to commencement of works, to be cleared by the DSC.¹⁶

155. Training and/or workshops on environmental management and monitoring requirements shall be programmed by the PMC for PMU, safeguard focals at TTIs, Contractors and other relevant parties. Monitoring of occupational and community health and safety requirements, including COVID-19 risk management, will be prioritized during construction to reduce risks to workers and the community. PMU and safeguard focals at TTIs shall continue the process of public consultation and information disclosure in accordance with the requirements of the SPS and the government rules and regulations during detailed engineering design and construction phases.

156. The Contractor must adhere to the mitigating measures and other requirements in the EMP to ensure that construction will not adversely affect the environment, the community and workers. During operation phase, each regional TTI will be responsible for implementing environmental management measures specified in the EMP. These include management of wastes from activities arising from the courses to be offered and innovations to be introduced in rehabilitated TTI facilities and innovation centers, respectively. These also include other management measures, as detailed in the EMP of the IEE.

Figure 13: Project Management Organization



¹⁶ The CEMP shall include but not necessarily be limited to the following sub-plans: workers' accommodation plan, occupational health and safety plan, emergency response plan, traffic management plan, waste disposal management plan, and demobilization plan.

Table 25: Institutional Arrangement

Responsible Unit	Roles and Responsibilities
ADB	<ul style="list-style-type: none"> • Provide financing, monitor implementation and undertake review missions • Approve procurement activities • Review project implementation twice a year • Disburse grant proceeds to the consultants and the contractors for the project
TESDA Board	<ul style="list-style-type: none"> • Advises the PMO on general policy directions for the project, including ensuring synergy of programs across TVET stakeholder agencies
Steering Committee	<ul style="list-style-type: none"> • Provides overall direction and oversight function to the PMU; and • Makes decisions on matters critical to the implementation of the project
Project Management Unit (NPMU)	<ul style="list-style-type: none"> • Responsible for the overall day-to-day operations of the PMO • Liaise with ADB and relevant NGAs and LGUs to ensure compliance with processes and requirements needed in the implementation of the project • Coordinate with relevant NGAs (DTI, DOST, etc.) to ensure project components and outputs are in sync with Philippine development priorities and action plans; • Coordinate with different project stakeholders; • Coordinate / call on other TESDA offices or organizes technical working groups (TWG) to provide or produce administrative, logistical, technical, financial, and other relevant information and data needed for the project; • Ensure compliance with all applicable laws in the implementation of the project; • Provide guidance and ensure seamless communication and coordination between and among the PMU and the Project Consultants; • Undertake project procurement activities (goods, works and consultancy services) in accordance with the Loan Agreement and ADB Procedures; • Handle project financial managements activities in accordance with ADB Procedures; • Facilitate quarterly, special administrative and midterm reviews of the project; • Prepare and submit regular project implementation reports; • Manage contract administration and negotiations requirement; • Provide regular updates to the Oversight Committee and TESDA Board, as needed; • Elevate critical decision points regarding the project to the Oversight Committee
Project Management Consulting (PMC) Firm	The Firm will ensure that the project management, monitoring and support requirements for the project and the delivery of project outputs will be implemented in compliance with the ADB's Policies and Regulations, Loan Agreement, Project Agreement, project administration manual (PAM), procurement plan, and the GOP's national laws.
Design and Construction Supervision Consulting (DSC) Firm	The Firm will work closely with and assist the PMU in the finalization and approvals of all design work needed for the new construction of selected 16 RTICs and the repair and upgrading of select TTIs. The Firm will be responsible for the timely completion of the detailed architectural and engineering designs (architectural, structural, electrical, mechanical, plumbing designs) for new construction and repair. The Firm will also conduct asbestos risk assessment for the buildings (or parts thereof) to be rehabilitated or demolished, and to develop an asbestos risk management plan should asbestos be identified.
Contractor	Each Contractor will be required to hold a valid Philippine Contractors Accreditation Board license and will appoint a qualified Environment, Health and Safety (EHS) officer to supervise construction works in compliance with the EMP and the Philippine regulatory and policy framework for EHS.

E. Environmental Management Plan

157. The EMP for the project includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates and performance indicators. The Contractor must adhere to the mitigating measures and other requirements in the EMP to ensure that construction will not adversely affect the environment, the community and workers. In addition, the Contractor will prepare the following detailed CEMP:

workers' accommodation plan, occupational health and safety plan, emergency response plan, traffic management plan, waste disposal management plan, and demobilization plan. Key responsibilities for EMP implementation and details of the EMP are detailed below.

Table 26: Key Responsibilities for EMP Implementation

Entity	Key Responsibilities
TESDA	<ul style="list-style-type: none"> • Ensure that staff of TESDA are aware of and comply with the Government regulations and requirements on environmental management, permits, reporting, and monitoring. • Liaise with DENR to facilitate the securing of ECCs / CNCs. • Comply with the safeguard related provisions with the project Loan Agreement, Project Administration Manual, and Initial Environmental Examination and Environmental Management Plan
Project Management Unit	<ul style="list-style-type: none"> • Ensure compliance with loan covenants and ADB SPS (2009) • Coordinate with TTI regional offices in the review and approval of the design and contract awards • Ensure that the project design conforms with international standards for TVET • Ensure that the EMP is included in the bid and contract documents with the Contractor • Liaise with the Regional Office to monitor implementation of the EMP by the Contractor • Prepare semi-annual environment monitoring reports on EMP implementation to ADB. • Coordinate the securing of licenses and permits and ensure that Contractors will implement the environmental management plan (EMP) of the project • Provide relevant information on the operation and environmental performance of the existing TTI facilities that includes DENR permits (ECC or CNC and other applicable permits) monitoring reports, and facility layout. • For TTIs that will be rehabilitated, Safeguards Focal of each TTI to complete the Environmental Performance Report and Management Plan (EPRMP) as required in securing the Environmental Compliance Certificate (ECC) amendment from the Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB) regional office • For TTIs not covered by the Philippine EIS System, Safeguards Focal of each TTI to secure Certificate of Non-coverage (CNC) from the DENR-EMB regional office • Ensure the implementation of EMP and reporting of its compliance is being followed by the Contractor • Establish and disseminate the GRM to TESDA regional office and local government, including contact details of authorized person to receive complaints • Address environment-related concerns through the Grievance Redress Mechanism (GRM) set-up for the project
Project Management Consulting Firm	<ul style="list-style-type: none"> • Support PMU in the project implementation. • Ensure compliance with loan covenants and ADB SPS (2009) • The environment safeguards specialist under the PMC to develop a capacity building program in environmental assessment and management to train and provide capacity support to TESDA, PMU, and Contractors
Design and Construction Supervision Consulting (DSC) Firm	<ul style="list-style-type: none"> • The Firm will be responsible for the incorporation of the climate resilient design in architectural and engineering designs (architectural, structural, electrical, mechanical, plumbing designs) for new construction and repair • Screening of asbestos risks of facilities to be demolished and rehabilitated and develop asbestos risk management plan • Assign an environment, health and safety officer who will supervise the work of the Contractor in completing the EPRMP / PD as required in securing the ECC amendment / CNC from the DENR-EMB regional office • Ensure compliance with loan covenants and ADB SPS (2009). • Ensure the construction of facilities conforms with the approved building design • Ensure the implementation of EMP and reporting of its compliance is being followed by the Contractor • Review the environment monitoring reports submitted by the Contractor prior to submission to PMU of TESDA
Contractors	<ul style="list-style-type: none"> • Ensure compliance with relevant design standards for TVET facilities based on the National Building Code, international standards and other related TESDA administrative orders, circulars, and guidelines.

Entity	Key Responsibilities
	<ul style="list-style-type: none"> • Secure the ECC (or ECC Addendum) or CNC from the concerned DENR-EMB regional office in coordination with the RPMU. • Secure the Building Permit, Sanitary Permit, Electrical Permit, and other clearances from the local government prior to start of construction works. • Implement the asbestos risk management plan developed by DSC Firm • Secure the Fire Safety Evaluation Clearance from the city/municipal Fire Marshal prior to start of construction. • Conduct air, water, and noise monitoring during construction phase. • Prepare the requirements for the requisite permits in close coordination with the TTI. • Assign qualified EHS staff at the construction site to supervise and monitor the EMP • Secure a Fire Safety Inspection Certificate from the city/municipal Fire Marshal. • Secure an Occupancy Permit from the local government • Submit a completion report with as-built drawings to TESDA regional office during turn-over.

ADB = Asian Development Bank, CNC = Certificate of Non-coverage, DENR = Department of Environment and Natural Resources, ECC = environment compliance certificate, EHS = environment, health and safety, EMB = Environmental Management Bureau, EMP = environmental management plan, EPRMP = Environmental Performance Report and Management Plan, GRM = Grievance Redress Mechanism, NPMU = National Project Management Unit, PCO = Pollution Control Officer, PTC = Permit to Construct, RPMU = Regional Project Management Unit, SPS = Safeguard Policy Statement, TESDA = Technical Education and Skills Development Authority, TTI = TESDA technology institutions, TVET = Technical and Vocational Education and Training.

Source: Asian Development Bank.

Table 27: Environmental Management Plan

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
Pre-construction Phase					
Preparation of plans and requirements to secure licenses and permits	Impact on commencement of construction activities	<ul style="list-style-type: none"> Obtain all clearances, licenses or permits required for the proposed innovation centers and rehabilitation of TTIs prior to commencing construction in accordance with relevant Philippine government regulations on building structures, environment clearances, and local permits, respectively Ensure all designs conform with the National Building Code of the Philippines Ensure all licenses and permits have been secured prior to construction work Prepare the following Contractor's Environmental Management Plan (CEMP): <ul style="list-style-type: none"> Workers' accommodation plan Occupational health and safety plan Emergency response plan Traffic management plan Waste disposal management plan Demobilization plan 	DSC Firm / TTI / Contractor	TESDA / City or Municipal Engineering Offices of LGUs	Operational budget of TESDA
Social Preparation	Community Impact	<ul style="list-style-type: none"> Establish Grievance Redress Mechanism Conduct Traffic Impact Assessment Capacity building of Safeguards Focal on SPS 2009 and environmental management plan and grievance redress mechanism implementation Consult with stakeholders 	Safeguards Focal of TTI / PMU	TESDA	Operational budget of TESDA
Detailed Design	Impact of climate change and natural hazards on location of innovation center, resources and people	<ul style="list-style-type: none"> Incorporation of natural hazard and climate resilient design (e.g., increasing building elevation, increasing drainage capacity, building rainwater harvesting facilities) to minimize impact of natural hazards and climate change Incorporation of environment-friendly design such as use of natural light, water conservation, solid waste recycling, and energy conservation through use of solar power Incorporate design that will facilitate easy access for differently abled people in compliance with applicable government regulations 	DSC Firm / Contractor	PMC Firm / PMU TESDA	Part of detailed design cost
	Conformity of the project to land use plan	<ul style="list-style-type: none"> The innovation centers are within the compound of the TTIs 			

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
	Impacts of hazardous wastes from buildings to be demolished	<ul style="list-style-type: none"> DSC Firm to thoroughly inspect and assess existing facilities to be demolished or rehabilitated to verify the presence of any friable asbestos containing materials, or non-friable asbestos containing materials that have become friable prior to commencement of any demolition activity. DSC Firm to prepare asbestos risk management plan, as required. 			
	Geologic hazards	<ul style="list-style-type: none"> Ensure that the design of the RTIC buildings prone to geologic hazards incorporate resiliency against earthquake, earthquake-induced landslides, and volcanic eruptions 			
Flora and fauna survey	Loss of flora and fauna species	<ul style="list-style-type: none"> Coordinate with the nearest Community, Environment and Natural Resources Office (CENRO) for RTIC that will be constructed near protected areas and key biodiversity areas to determine appropriate mitigating measures Secure tree cutting permit from CENRO and implement management measures in the issued Permit to Cut Trees Schedule cutting of trees progressively so as not to expose soil for long period. Contractor will be responsible for transport and disposal of biomass wastes from cut trees Catching of animals will be prohibited Strip the topsoil at a depth to the bottom of the grassroots zones from any areas to be covered by pavement, structures or where utilities will be located, to be used later for revegetation Grass shall be stripped together with topsoil, which will be used later for revegetation of RTIC building compound 	Safeguards Focal of TTI / Contractor	PMU / TESDA	Operational budget of TESDA
Geologic hazards and climate change assessment	Vulnerability to natural hazards and climate change impacts	<ul style="list-style-type: none"> Detailed design will consider hazards from earthquake, tsunami, volcano and flooding Design properly the drainage system for the project to prevent flooding 	DSC / Contractor	PMC Firm / PMU / TESDA	Operational budget of TESDA
Construction Phase					
Mobilization of construction materials and heavy equipment	Disturbance of land and soil condition	<ul style="list-style-type: none"> Limit the amount of erosion and sediment by disturbing only the areas necessary for construction, phasing of construction activity Lessen the grade of steep slopes 	Contractor	DSC Firm / PMU / TESDA	Incorporated in environmental mitigations allocation of construction

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
		<ul style="list-style-type: none"> • Cover exposed soils until time of revegetation or building of innovation centers • Schedule construction activities during fair weather to prevent soil erosion • Use of appropriate sedimentation and soil erosion and control devices (sediment traps or silt fences). • Cover stockpiles of soil removed during construction • Limit storage of construction materials to paved parking lots or inactive areas within existing building or temporary shed • Park construction machineries in paved areas • Drivers to observe speed limit to reduce soil disturbance 			contract (contract of civil works)
	Impact on surface water quality	<ul style="list-style-type: none"> • Ensure that the wheels of vehicles transporting aggregates and other materials are thoroughly washed to prevent sediment runoff going to nearest body of water • Provide portable toilets to manage wastewater from workers who stays in construction camp • Contractor through third party service provider or through coordination with local government unit, will be responsible for the operation, maintenance and disposal and treatment of collected wastes from portable toilets • Segregate and pre-treat oil and grease containing effluent using grease trap prior to discharge • Minimize erosion from exposed soil, construct silt traps, interceptor drains and sedimentation pits around work areas and camp site • Clean construction vehicles within paved surfaces to lessen contamination of soil and groundwater • The contractor will be responsible for compliance with DENR's Clean Water Act and WB – IFC EHS Guidelines on wastewater discharge standard. 	Contractor	DSC Firm / PMU / TESDA	Incorporated in environmental mitigations allocation of construction contract (contract of civil works)
	Impact from generation of solid wastes and hazardous wastes.	<p>General non-hazardous wastes:</p> <ul style="list-style-type: none"> • Contractor must implement a waste management plan as part of Contractor's Environmental Management Plan (CEMP) • Ensure to put up waste collection points for construction, hazardous, non- hazardous and domestic solid wastes • Install garbage receptacles at worker camp and construction area 	Contractor / Approved service provider	DSC Firm / PMU TESDA	Incorporated in environmental mitigations allocation of construction contract (contract of civil works)

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
		<ul style="list-style-type: none"> • Coordinate with local government unit or private contractor for the collection, treatment and disposal of wastes • Coordinate with local government units where TTIs are located for the management of wastes • Segregate solid wastes into biodegradable, recyclable, residual and hazardous wastes • Separate construction wastes (consisting of concrete and rubble, steel rods, damaged formworks, paper) that can be recycled • The contractor will be responsible for compliance with the Ecological Solid Waste Management Act of 2000 and WB – IFC EHS Guidelines on waste management <p>Hazardous wastes</p> <ul style="list-style-type: none"> • Ensure compliance with Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 and WB - IFC Environment, Health and Safety Guidelines (2007) on hazardous waste storage, transportation and treatment and disposal • For asbestos, works contractor to implement asbestos risk management plan developed by DSC Firm. These shall be implemented by qualified experts only. • Store hazardous wastes generated during construction of innovation centers and rehabilitation of TTIs, which include fuel and chemicals, among others, to prevent or control accidental releases to air, soil and water resources • Physical separation or use closed containers for hazardous wastes, away from direct sunlight, wind and rain. • Provide adequate ventilation where volatile wastes are stored • Conduct on-site and off-site transportation of waste to prevent or minimize spills, releases, and exposures to workers and the public • In case of third-party hazardous waste transporter, employees involved in the transportation of hazardous materials should be trained regarding proper shipping procedures and emergency procedures 			

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
	Increase in the level of air pollutants and noise	<ul style="list-style-type: none"> • Ensure that the wheels of vehicles transporting aggregates and other materials are thoroughly washed • Cover material piles during high wind condition • Impose speed limit within the TTI compound to lessen disturbance of soil • Ensure that contractors' vehicles meet the regulatory requirement on air quality • Water exposed soil to prevent suspension of particulate matter • Cover construction materials to prevent erosion and dispersion of materials • Apply water to minimize dust from vehicle movements • Train drivers on good driving practices, including driving within safe speed limits and measured acceleration to prevent to lessen dust • Ensure that all air emission licenses and permits of construction machineries and equipment are updated • Implement a regular vehicle maintenance and repair program. The Contractor will ensure to comply with Philippine Clean Air Act or WB – IFC EHS Guidelines 2007 on air quality standards, whichever is stricter • Comply with the Environmental Quality Standards for Noise in General Areas (National Pollution Control Commission, 1980) or WB – IFC EHS Guideline on Noise. • Monitor air quality standards and noise, together with other parameters, quarterly, to ensure compliance • Contain the pollutants by fencing off the construction site • Require exposed workers to wear appropriate personal protective equipment (PPE) such as masks and goggles • For workers exposed to excessive noise, wear hearing protection and for a limited exposure time only • Implement timing of operation that avoids sensitive hours, shielding of noise sources, and proper maintenance and operation of equipment • Restrict work between 8:00 AM and 5:00 PM • Schedule classes and activities in TTI buildings not directly affected by the construction activities in the innovation centers • Prohibit workers from open burning of wastes. 	Contractor / Approved service provider	DSC Firm / PMU / TESDA	Incorporated in environmental mitigations allocation of construction contract (contract of civil works)

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
	Impacts from transportation of construction materials and wastes	<ul style="list-style-type: none"> • Prepare and implement traffic management plan as part of the Contractor's EMP, in coordination with the Traffic Management Office of the local government unit where TTI is located, to manage the traffic in the area • Traffic management plan to include driving policy, roles and responsibilities of drivers, workers and management, traffic management procedures, site layout and traffic flow pattern and schedule, road safety rules, training and vehicle inspection registries, road safety records and incident reports, and performance reports • Set speed limit for all construction vehicles and install traffic warning signs within the project site • Conduct regular orientation and capacity building on safe driving for drivers and workers • Regular vehicle maintenance and use of genuine parts to prevent malfunction that may lead to accident • Put up warning and informatory signs along the routes of construction vehicles • Prior coordination with the affected stakeholders, specifically with barangays where construction vehicles will pass through, prior to commencement of construction. 	Contractor	DSC Firm / PMU / TESDA	Incorporated in environmental mitigations allocation of construction contract (contract of civil works)
Hiring and mobilization of workers	Occupational health and safety of workers	<ul style="list-style-type: none"> • Prepare and implement occupational health and safety plan as part of the CEMP. Such plan shall also include a COVID-19 risk management protocol to address COVID-19 risks to workers and nearby community. • Avoid forced labor and child labor (Contractor, subcontractors, and supply chain) as per ADB's SPS, 2009 and Philippine law • Inform workers regarding access to Grievances Redress Mechanisms (GRM) • No worker should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection • No unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C) • Lessen impact of vibration through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure. • Require workers with high exposure to hazards to wear personal protective equipment (PPE) such as face and eye protection device with side shields, welder goggles for 	Contractor	DSC Firm / PMU / TESDA	Incorporated in environmental mitigations allocation of construction contract (contract of civil works)

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
		<p>welding and hot works, gloves, facemasks with appropriate filters for dust removal, plastic helmets with top and side protection, body suits, and safety shoes and boots</p> <ul style="list-style-type: none"> • Implement fall prevention and protection measures for workers exposed to falling hazard • Install guard rails, proper use of ladders and scaffolds, and use of fall prevention devices such as safety belt • Provide first aid attendant for the project as well as medical kit to treat workers' injuries and illnesses prior to transportation to hospital. • Train workers in the use of MSDS of chemicals used in the construction site, safe work practices, and appropriate use of PPE to mitigate exposure from chemical hazards • Implement the asbestos risk management plan developed by DSC Firm. Only workers with necessary qualifications and experience shall implement the plan. • Store flammables away from entry and exit points of buildings, and storage area should have natural floor and ceiling level ventilation • Install fire extinguishers in workers' camp and in construction site • Ensure and enforce hygiene among workers and to allow sick workers not to continue working in the construction site • Observe COVID 19 health protocols as mandated by the Inter-agency Task Force on COVID 19 and the Department of Health • Breeding grounds of vectors such as mosquitoes should be kept free from stagnant water • Ensure cleanliness to keep away pests • Provide emergency and health services on site to address worker's injury and illness, including access to ambulance and medical services from nearby hospitals 			
	Community health and safety	<ul style="list-style-type: none"> • Fence the perimeter of the construction site, install signages, assign guards at entrance and exit, and inform the stakeholders (internal and external) through regular consultations • Ensure that there are no hazardous conditions inside the project site such as open excavation and unstable piles. • Prioritize and promote traffic safety during construction phase when project equipment and machineries were utilized that may impact the safety and health of the public 	Contractor	DSC Firm / PMU / TESDA	Incorporated in environmental mitigations allocation of construction contract (contract of civil works)

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
		<ul style="list-style-type: none"> • Hire professional licensed drivers and train them on safe driving • Limit the duration of trips to avoid overtiredness • Maintain vehicles regularly • Cover trucks carrying construction materials to prevent dispersion of dust during transport • Prepare and implement emergency response plan health as part of the CEMP to primarily assist staff and emergency response teams during real life emergency that may also affect the community 			
Operation Phase					
Operation of innovation center	Management of solid wastes,	<ul style="list-style-type: none"> • Engage solid waste management service to manage the cleaning of facilities, and collection of wastes • All domestic wastes must be collected, segregated, and transported to common solid waste management facility • Transport collected wastes will by a licensed collection / treatment company to materials recovery facility and finally, at the disposal facility 	TTI	TESDA	Yearly maintenance cost of building including fire protection and waste management is estimated 2% of the total building cost. The budgeted to be included in operations and maintenance budget of the TTI
	Management of wastewater	<ul style="list-style-type: none"> • Install a wastewater treatment system that will meet the effluent standard of Clean Water Act and WB-IFC EHS Guidelines • Monitor effluent standard for water following Clean Water Act and WB-IFC EHS Guidelines 	TTI	TESDA	
	Traffic Management	<ul style="list-style-type: none"> • Coordinate with the Traffic Management Office of the local government unit where TTI is located, to manage the traffic within the vicinity of TTI • Orient drivers on driving policy and road safety rules • Install traffic management signs inside TTI such as speed limit, pedestrian crossing and parking spaces 	TTI	TESDA	
	Occupational health and safety	<ul style="list-style-type: none"> • Prepare and implement occupational health and safety plan for innovation center • Adopt COVID-19 protocols as provided by the Department of Health and Inter-agency Task Force for the Management of Emerging Infectious Diseases • Inform workers regarding access to Grievances Redress Mechanisms (GRM) • Require students who are exposed to hazardous course-related activities to wear appropriate PPE such as face and eye protection device with side shields, welder goggles for 	TTI	TESDA	

Project Activities	Environmental Impacts	Mitigation Measures	Responsibility		Budget Source
			Implementation	Monitoring	
		welding and hot works, gloves, and facemasks with appropriate filters for dust removal <ul style="list-style-type: none"> • Provide first aid kit to treat minor injuries and illnesses • Install fire extinguishers in designated sites 			

Table 28. Environmental Monitoring Plan

Environmental Indicators	Parameters	Location	Methodology	Frequency	Standard	Responsibility		Budget Source
						Implementation	Monitoring	
General impact	Licenses and permits, social preparation, detailed engineering design	TTI in 17 regions	Fieldwork, community consultation, consultant to prepare detailed engineering design, coordination with utility companies	Once, prior to construction phase		DSC Firm / TTI / Contractor	PMU	Operational budget of TESDA
Flora and fauna	Species, volume of yard wastes generated	TTI in 17 regions	Survey and marking of affected trees	Once, prior to construction phase		TTI	PMU / CENRO	Operational budget of TESDA
Air quality	SO ₂ (1 hour) CO (1 hour) NO ₂ (1 hour) PM _{2.5} (24 hours) TSP (24 hours)	TTI in 17 regions	Field works with analysis approved by DENR	Semi-annual during construction	Philippine Clean Air Act of 1999	DSC	PMU / EMB - DENR	DSC budget
Noise level	Average dB(A)	TTI in 17 regions	Field works with analysis approved by DENR	Semi-annual during construction	World Bank – IFC EHS Guidelines	DSC	RPMU / EMB - DENR	DSC budget
Surface water quality	pH, temperature, color, BOD ₅ , DO, oil and grease, TSS, nitrate, phosphate, ammonia, surfactant (MBAS), fecal coliform, total coliform	Receiving body of water of TTI in 17 regions	Field works with analysis approved by DENR	Semi-annual during construction	Philippine Clean Water Act of 2004 / DENR Administrative Order No. 08, series of 2016 (Water Quality Guidelines and General Effluent	DSC	RPMU / EMB - DENR	DSC budget

Environmental Indicators	Parameters	Location	Methodology	Frequency	Standard	Responsibility		Budget Source
						Implementation	Monitoring	
					Standards of 2016)			
Wastewater quality	pH, temperature, color, BOD ₅ , DO, oil and grease, TSS, nitrate, phosphate, ammonia, surfactant (MBAS), fecal coliform, total coliform	Construction site and workers camp	Field works with analysis approved by DENR	Semi-annual during construction	Philippine Clean Water Act of 2004 / DENR Administrative Order No. 08, series of 2016 (Water Quality Guidelines and General Effluent Standards of 2016)	DSC	RPMU / EMB - DENR	DSC budget
Solid waste	Domestic waste segregated, collected and disposed in disposal site; Hazardous waste collected, transported and treated in accredited facility	Location of demolished buildings; Construction site and workers camp	Screening for hazardous wastes and asbestos; Visual observation	Prior to construction phase for hazardous wastes; Monthly	Republic Act 6969; DENR Administrative Order 2000 – 02 for asbestos; Ecological Solid Waste Management Act of 2000	Contractor	DSC	DSC Budget
Occupational health and safety	Space allocated per person, supply of safe water, adequate sewage and garbage disposal system, accommodation, sanitary and washing facilities, ventilation, provision for cooking, and storage facilities	Workers' camp	Observation	Daily	Republic Act 11058 (Occupational Safety and Health Standards)	Contractor	DSC	DSC Budget
	Near misses, incidents, or accidents resulting in injuries and emergency response	Workers' camp	Observation	Daily	Republic Act 11058 (Occupational Safety and Health Standards)	Contractor	DSC	DSC Budget

Environmental Indicators	Parameters	Location	Methodology	Frequency	Standard	Responsibility		Budget Source
						Implementation	Monitoring	
	Dust mitigation, noise and vibration levels, stagnant water	Workers' camp	Observation	Daily	Republic Act 11058 (Occupational Safety and Health Standards)	Contractor	DSC	DSC Budget
Community health and safety	Access to the site and dangerous conditions - fencing the perimeter of the construction site, installation of signages, assigning guards at entrance and exit, and informing public through consultation No hazardous conditions - open excavation and unstable piles Traffic incidents and accidents	Construction site	Observation	Daily	World Bank – IFC EHS Guidelines	Contractor	DSC	DSC Budget
Operation Phase								
Solid waste	Domestic waste segregated, collected and disposed in disposal site; Hazardous waste, including infectious wastes collected, transported and treated in accredited facility	TTI in 17 regions	Observation	Annual	Republic Act 6969; Ecological Solid Waste Management Act of 2000	TTI	EMB - DENR	TESDA budget
Wastewater quality	pH, temperature, color, BOD ₅ , DO, oil and grease, TSS, nitrate, phosphate, ammonia, surfactant	TTI in 17 regions	Field works with analysis approved by DENR	Annual	Philippine Clean Water Act of 2004 / DENR Administrative Order No. 08,	TTI	EMB - DENR	TESDA budget

Environmental Indicators	Parameters	Location	Methodology	Frequency	Standard	Responsibility		Budget Source
						Implementation	Monitoring	
	(MBAS), fecal coliform, total coliform				series of 2016 (Water Quality Guidelines and General Effluent Standards of 2016)			
Traffic	Traffic incidents and accidents	TTI in 17 regions	Observation	Annual	Republic Act 4136 (Land Transportation and Traffic Code)	TTI	DOTR / Local Government Unit	LGU budget
Occupational health and safety	Space allocated per person, supply of safe water, adequate sewage and garbage disposal system, sanitary facilities, lighting and ventilation	TTI in 17 regions	Observation	Annual	Republic Act 11058 (Occupational Safety and Health Standards)	TTI	TESDA	TESDA budget

VIII. CONCLUSION AND RECOMMENDATION

158. The results of the initial evaluation for the rehabilitation of TTIs and construction of innovation centers in the select regions, show that based on the preliminary design, location and environmental conditions, the anticipated environmental impacts will be primarily related to geologic hazards, natural hazards, flooding risks, climate change impacts and impacts on biodiversity and loss of trees. Construction phase impacts are considered typical for similar buildings, and mainly involved disturbance of land and soil condition, generation of wastes from rehabilitated TTIs and construction of innovation centers, and impact on air quality and noise level, surface water quality, loss of vegetation, reduced water supply from ground water, temporary disturbance of access, increased level of use of water, increased level of vehicle traffic, and health and safety of workers and the community. During operation, major impacts include climate change while medium for generation of solid wastes from TVET activities, potential deterioration of water quality, additional strain to existing water resource, traffic generation, increase in level of particulate matter, deterioration of water quality, reduced water supply from groundwater, and risks of students and workers from handling equipment.

159. Mitigating measures were proposed and incorporated in the environmental management plan to lessen the identified risks. Stakeholders from TESDA were favorable of the project since the expected benefits far outweighed the anticipated impacts. Overall, the project is expected to bring beneficial impacts to TTIs in the 17 regions on a wider scale in terms of enhancing the quality of vocational education in the Philippines.

Region XII



Figure 15. General Santos National School of Arts and Trades – 100-year flood hazards (low, up to 0.5 m)

APPENDIX 4: PROTECTED AREAS AND KEY BIODIVERSITY AREAS NEAR THE select TTIs USING INTEGRATED BIODIVERSITY ASSESSMENT TOOL (IBAT)

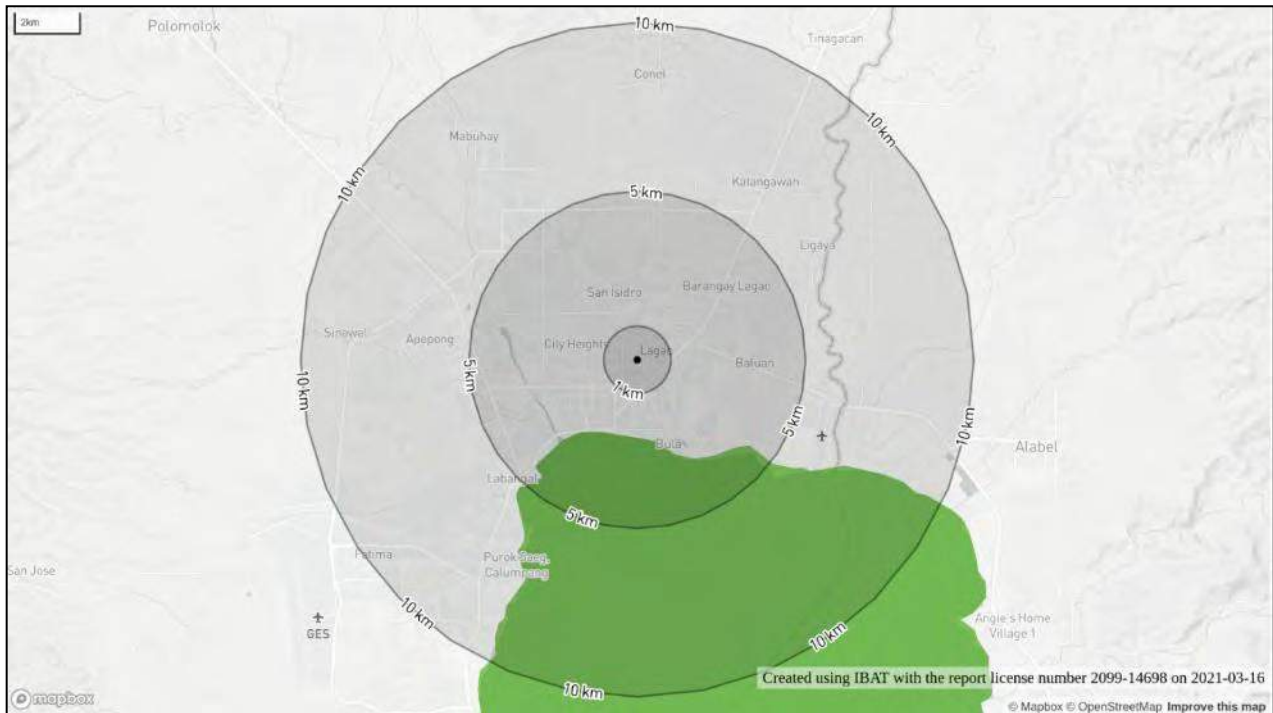


Figure 7. General Santos National School of Arts and Trades

ANNEX H - Design and Build of the TESDA Innovation Center with Rehabilitation Works, General Santos City

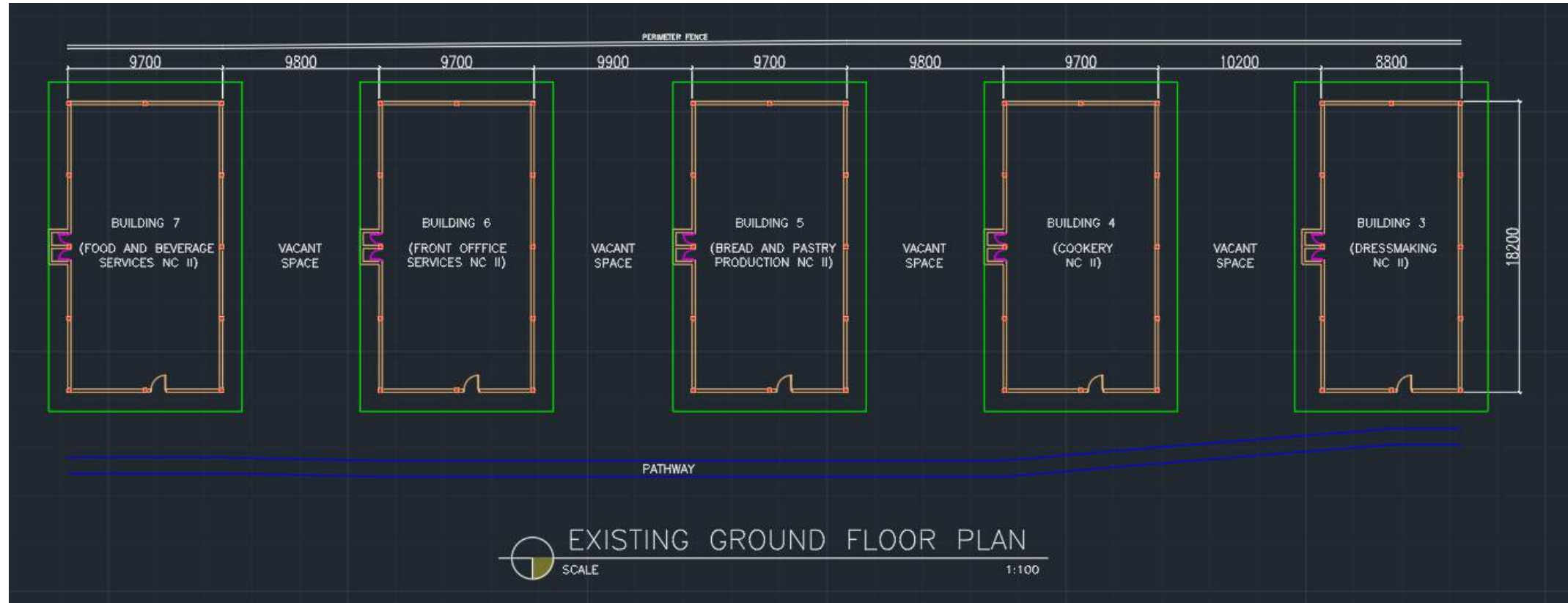
Minimum Requirements for Rehabilitation / Renovation Works

Name of Support Facility: Warehousing Building, Automotive Servicing NC I, and NC II Building, and Covered Court

Address: Tiongson St., Lagao, General Santos City



Proposed Diploma Program: DIPLOMA IN LOGISTIC SUPPLY MANAGEMENT AND STORAGE OPERATIONS











Proposed Warehousing Building







Project/ Item/ Area No.	Location	Description / Scope of Work	Qty.	Unit	Photos
1	Warehousing Building Building 6 (Front Office Services NC II) & Building 7 (Food & Beverages Services NC II)	1.1 Retrofitting of columns (.3m X .3m X 4m X 6 columns)	6.00	ea	 



		<p>1.2 Additional construction of columns between merged buildings (2m x 2m x 0.35m x 5 FTG) (0.3m X 0.3m X 6m X 5 columns)</p>	<p>10.00</p>	<p>cu.m</p>	
		<p>1.3 Construction of beams between the merged buildings (68m x 0.3m x 0.25m)</p>	<p>7.00</p>	<p>cu.m</p>	



		<p>1.4 Rehabilitation of the right-side walls in Building 6 and the left-side walls in Building 7.</p>	<p>130.00</p>	<p>sq. m</p>	
		<p>1.5 Merging of buildings (Construction of new wall) rear and front</p>	<p>80</p>	<p>sq. m</p>	

		<p>1.6 Concreting of floor between the two merged buildings.</p>	<p>23</p>	<p>cu.m</p>	
		<p>1.7 Replacement of existing ceiling of building 6 and 7</p>	<p>540.00</p>	<p>sq. m</p>	



		<p>1.8 Painting work on the ceiling of renovated buildings</p>	540.00	sq. m	
		<p>1.9 Replacement of steel trusses of the whole building</p>	1.00	lot	


		<p>1.10 Installation of roof in the merged area/spaces, with insulation</p>	<p>185.00</p>	<p>sq. m</p>	
		<p>1.11 Replacement of existing building's roofing with insulation</p>	<p>600.00</p>	<p>sq. m</p>	



		<p>1.12 Painting of walls of merged building's interior and exterior</p>	<p>575.00</p>	<p>sq. m</p>	
		<p>1.13 Replacement of wooden door to swing-type glass door with additional roll-up shutters</p>	<p>1.00</p>	<p>lot</p>	


		<p>1.14 Replacement of windows to sliding glass windows (FBS NC II)</p>	<p>40.00</p>	<p>sq. m</p>	
		<p>1.15 Replacement of windows to sliding-type glass window (FOS NC II)</p>	<p>40.00</p>	<p>sq. m</p>	



		<p>1.16 Installation of steel grills on 16 windows (L3.2m X H-1.4m)</p> <p>Building 6 and Building 7</p>	16.00	ea	
		<p>1.17 Painting of window grills (L3.2m X H-1.4m)</p>	1.00	lot	
		<p>1.18 Installation of gutter</p>	28.00	ln.m	

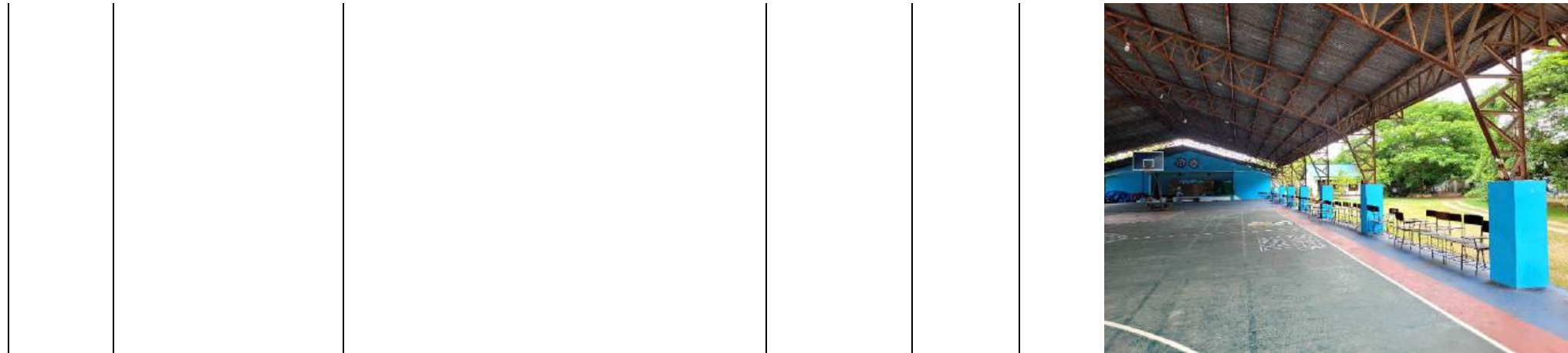
		<p>1.19 Renovation of toilet -plumbing works -tiling works -ceiling works -painting works -masonry works</p>	30.00	sq.m	
		<p>1.20 Installation and rewiring of electrical works</p>	1.00	lot	

		<p>1.21 Sanitary and plumbing works of the whole building</p>	<p>1.00</p>	<p>lot</p>	
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<p style="text-align: center;">2</p>	<p>Automotive Servicing Building Building 9 (ATS Building)</p>	<p>2.1 Repainting of walls (exterior and interior)</p>	<p>2,800.00</p>	<p>sq.m</p>	 
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		<p>2.2 Replacement of ceiling</p>	625.00	sq.m	
		<p>2.3 Painting of ceiling</p>	650.00	sq.m	

<p>3</p>	<p>Covered Court Building 10 (GSNSAT Covered Court)</p>	<p>Rehabilitation of covered court (approximate area 48.00m x 20.00, for on-site verification)</p>	<p>1.00</p>	<p>lot</p>	 
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Section 7: General Conditions of Contract

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A. General

1. Definitions

- 1.1 Boldface type is used to identify defined terms.
- (a) The **Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.
 - (b) The **Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
 - (c) The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 29.1 [Appointment of Adjudicator] hereunder.
 - (d) **Bank** means the financing institutions named in the **Particular Conditions of Contract (PCC)**.
 - (e) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
 - (f) **Compensation Events** are those defined in GCC 51.1 [Compensation Events] hereunder.
 - (g) The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC 69.1 [Completion].
 - (h) The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC 2.3 below.
 - (i) The **Contractor** is the party whose Bid to carry out the Works has been accepted by the Employer.
 - (j) The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.
 - (k) The **Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
 - (l) **Days** are calendar days; months are calendar months.
 - (m) **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
 - (n) A **Defect** is any part of the Works not completed in accordance with the Contract.
 - (o) The **Defects Liability Certificate** is the certificate issued by the Project Manager upon correction of defects by the Contractor.
 - (p) The **Defects Liability Period** is the period calculated from the Completion Date where the Contractor remains responsible for

- remedying defects.
- (q) **Drawings** include calculations and other information provided or approved by the Project Manager for the execution of the Contract.
 - (r) The **Employer** is the party who employs the Contractor to carry out the Works, as specified in the **PCC**.
 - (s) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
 - (t) **Force Majeure** means an exceptional event or circumstance: which is beyond a Party's control; which such Party could not reasonably have provided against before entering into the Contract; which, having arisen, such Party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other Party.
 - (u) **In writing** or **written** means hand-written, type-written, printed, or electronically made, and resulting in a permanent record.
 - (v) The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.
 - (w) The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the **PCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
 - (x) **Letter of Acceptance** means the formal acceptance by the Employer of the Bid and denotes the formation of the Contract at the date of acceptance.
 - (y) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
 - (z) **Party** means the Employer or the Contractor, as the context requires.
 - (aa) **PCC** means Particular Conditions of Contract.
 - (bb) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
 - (cc) The **Project Manager** is the person named in the **PCC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
 - (dd) **Retention Money** means the aggregate of all monies retained by the Employer pursuant to GCC 55.1 [Retention].
 - (ee) **Schedules** means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Bid, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.
 - (ff) The **Site** is the area defined as such in the **PCC**.

- (gg) **Site Investigation Reports** are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- (hh) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- (ii) The **Start Date** is given in the **PCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- (jj) A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (kk) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- (ll) A **Variation** is an instruction given by the Project Manager which varies the Works.
- (mm) The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the **PCC**.

2. Interpretation

- 2.1 In interpreting these GCC, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
- 2.2 If sectional completion is specified in the **PCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
 - (a) Contract Agreement,
 - (b) Letter of Acceptance,
 - (c) Letter of Bid,
 - (d) Particular Conditions of Contract,
 - (e) the List of Eligible Countries that was specified in Section 5 of the bidding document,
 - (f) General Conditions of Contract,
 - (g) Specifications,
 - (h) Drawings,
 - (i) Completed Activity Schedules or Bill of Quantities, and
 - (j) any other document listed in the **PCC** as forming part of the Contract.

- 3. Language and Law**
- 3.1 The language of the Contract and the law governing the Contract are stated in the **PCC**.
- 3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Employer's country when
- (a) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from, or any payments to, a particular country, person, or entity. Where the Borrower's country prohibits payments to a particular firm or for particular goods by such an act of compliance, that firm may be excluded.
- 4. Contract Agreement**
- 4.1 The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Contract Agreement shall be based upon the attached Contract forms in Section 8. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.
- 5. Assignment**
- 5.1 Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party
- (a) may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party; and
- (b) may, as security in favor of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.
- 6. Care and Supply of Documents**
- 6.1 The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.
- 6.2 Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.
- 6.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.
- 6.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.
- 7. Confidential Details**
- 7.1 The Contractor's and the Employer's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor's compliance with the Contract and allow its proper implementation.

- 7.2 Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.
- 7.3 Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this Clause.

8. Compliance with Laws

- 8.1 The Contractor shall, in performing the Contract, comply with applicable Laws.
- 8.2 Unless otherwise stated in the Particular Conditions,
- (a) the Employer shall acquire and pay for all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings in the [Employer's Country or country where the Site is located] which (i) such authorities or undertakings require the Employer to obtain in the Employer's name, and (ii) are necessary for the execution of the Contract, including those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract;
 - (b) the Contractor shall acquire and pay for all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings in the [Employer's Country or country where the Site is located] which such authorities or undertakings require the Contractor to obtain in its name and which are necessary for the performance of the Contract, including, without limitation, visas for the Contractor's and Subcontractor's personnel and entry permits for all imported Contractor's Equipment. The Contractor shall acquire all other permits, approvals, and/or licenses that are not the responsibility of the Employer under Subclause 8.2(a) hereof and that are necessary for the performance of the Contract. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to Subclause 8.1 hereof.

9. Joint and Several Liability

- 9.1 If the Contractor is a Joint Venture of two or more persons, all such persons shall be jointly and severally liable to the Employer for the fulfillment of the provisions of the Contract, and shall designate one of such persons to act as a leader with authority to bind the Joint Venture. The composition or the constitution of the Joint Venture shall not be

altered without the prior consent of the Employer.

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| 10. Project Manager's Decisions | 10.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer. |
| 11. Delegation | 11.1 The Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor. |
| 12. Communications | 12.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered. |
| 13. Subcontracting | 13.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations. |
| 14. Other Contractors | 14.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the PCC . The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification. |
| 15. Personnel and Equipment | <p>15.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid to carry out the functions stated in the Schedule or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.</p> <p>15.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within 7 days and has no further connection with the work in the Contract.</p> <p>15.3 Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the execution of the Works, then that employee shall be removed in accordance with Clause 15.2 above.</p> |
| 16. Employer's and Contractor's Risks | 16.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks. |
| 17. Employer's Risks | <p>17.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks:</p> <p>(a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to</p> <p>(i) use or occupation of the Site by the Works or for the</p> |

purpose of the Works, which is the unavoidable result of the Works, 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 him except the Contractor.

- (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

17.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

- (a) a Defect which existed on the Completion Date,
- (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
- (c) the activities of the Contractor on the Site after the Completion Date.

18. Contractor's Risks

18.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks, are Contractor's risks.

19. Insurance

19.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the **PCC** for the following events, which are due to the Contractor's risks:

- (a) loss of or damage to the Works, Plant, and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- (d) personal injury or death.

19.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

19.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance, which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

19.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

- 19.5 Both parties shall comply with any conditions of the insurance policies.
- 20. Site Investigation Reports** 20.1 The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the **PCC**, supplemented by any information available to the Contractor.
- 21. Contractor to Construct the Works** 21.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.
- 22. The Works to Be Completed by the Intended Completion Date** 22.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.
- 23. Designs by Contractor and Approval by the Project Manager** 23.1 The Contractor shall carry out design to the extent specified in the **PCC**. The Contractor shall promptly submit to the Employer all designs prepared by him. Within 14 days of receipt, the Employer shall notify any comments. The Contractor shall not construct any element of the permanent work designed by him within 14 days after the design has been submitted to the Employer or where the design for that element has been rejected. Design that has been rejected shall be promptly amended and resubmitted. The Contractor shall resubmit all designs commented on, taking these comments into account as necessary.
- 23.2 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings..
- 23.3 The Contractor shall be responsible for design of Temporary Works.
- 23.4 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 23.5 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- 23.6 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use.
- 24. Safety** 24.1 The Contractor shall be responsible for the safety of all activities on the Site.
- 25. Discoveries** 25.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.
- 26. Possession of the Site** 26.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the **PCC**, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

- 27. Access to the Site** 27.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
- 28. Instructions, Inspections, and Audits** 28.1 The Contractor shall carry out all instructions of the Project Manager, which comply with the applicable laws where the Site is located.
- 28.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and subconsultants to keep accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs.
- 28.3 The Contractor shall permit ADB or its representative to inspect the Contractor's site, assets, accounts, records, and other documents relating to the submission of bids and contract performance and to have them audited by auditors appointed by ADB. The Contractor shall maintain all documents and records related to the bid submission and execution of the Contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer. The Contractor shall provide any documents necessary for the investigation of allegations of corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations and require its employees or agents with knowledge of the Contract to respond to questions from ADB.
- 28.4 ADB's right to inspect the Site and/or the Contractor's accounts and records relating to the performance of the Contract stated in Sub-Clause 28.3 and 74.2 (e) shall survive termination and/ or expiration of this Contract.
- 29. Appointment of the Adjudicator** 29.1 The Adjudicator shall be appointed jointly by the Employer and the Contractor, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the **PCC**, to appoint the Adjudicator within 14 days of receipt of such request.
- 29.2 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority at the request of either party, within 14 days of receipt of such request.
- 30. Procedure for Disputes** 30.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Project Manager's decision.
- 30.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.
- 30.3 The Adjudicator shall be paid by the hour at the rate specified in the

PCC, together with reimbursable expenses of the types specified in the **PCC**, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision shall be final and binding.

30.4 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and in the place specified in the **PCC**.

B. Staff and Labor

- 31. Forced Labor** 31.1 The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor–contracting arrangements.
- 32. Child Labor** 32.1 The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where national laws have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work.
- 33. Workers' Organizations** 33.1 In countries where national law recognizes workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the Contractor shall comply with national law. Where national law substantially restricts workers' organizations, the Contractor shall enable alternative means for the Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. In either case described above, and where national law is silent, the Contractor shall not discourage the Contractor's Personnel from forming or joining workers' organizations of their choosing or from bargaining collectively, and shall not discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organizations and bargain collectively. The Contractor shall engage with such workers representatives. Worker organizations are expected to fairly represent the workers in the workforce.
- 34. Nondiscrimination and Equal Opportunity** 34.1 The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where national law provides for non-discrimination in employment, the Contractor shall comply with national law. When national laws are silent on nondiscrimination in employment, the Contractor shall meet this Subclause's requirements. Special measures of protection or assistance to remedy past discrimination or

selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination.

C. Time Control

35. Program

- 35.1 Within the time stated in the **PCC**, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.
- 35.2 An update of the Program shall be a program showing 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.
- 35.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the **PCC**. If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the **PCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager.
- 35.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

36. Extension of the Intended Completion Date

- 36.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 36.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

37. Acceleration

- 37.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.
- 37.2 If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated

as a Variation.

- 38. Delays Ordered by the Project Manager** 38.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.
- 39. Management Meetings** 39.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 39.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.
- 40. Early Warning** 40.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 40.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

D. Quality Control

- 41. Identifying Defects** 41.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.
- 42. Tests** 42.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.
- 43. Correction of Defects** 43.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the **PCC**. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 43.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

- 44. Uncorrected Defects** 44.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.
- E. Cost Control**
- 45. Contract Price** 45.1 In the case of an admeasurement contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.
- 45.2 In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for Materials on Site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.
- 46. Changes in the Contract Price** 46.1 In the case of an admeasurement contract:
- (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25%, provided the change exceeds 1% of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.
 - (b) The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15%, except with the prior approval of the Employer.
 - (c) If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.
- 46.2 In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.
- 47. Variations** 47.1 All Variations shall be included in updated Programs, and, in the case of a lump sum contract, also in the Activity Schedule, produced by the Contractor.
- 47.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered.
- 47.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of

the Variation on the Contractor's costs.

- 47.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 47.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
- 47.6 In the case of an admeasurement contract, if the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in GCC 46.1 [Changes in the Contract Price] or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

**48. Cash Flow
Forecasts**

- 48.1 When the Program, or, in the case of a lump sum contract, the Activity Schedule, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

**49. Payment
Certificates**

- 49.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.
- 49.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 49.3 The value of work executed shall be determined by the Project Manager.
- 49.4 The value of work executed shall comprise,
- (a) in the case of an admeasurement contract, the value of the quantities of work in the Bill of Quantities that have been completed; or
 - (b) in the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule.
- 49.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 49.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

50. Payments

- 50.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.
- 50.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- 50.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.
- 50.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

51. Compensation Events

- 51.1 The following shall be Compensation Events:
- (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC 26.1 [Possession of the Site].
 - (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
 - (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
 - (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
 - (e) The Project Manager unreasonably does not approve a subcontract to be let.
 - (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to Bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
 - (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
 - (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

- (i) The advance payment is delayed.
- (j) The effects on the Contractor of any of the Employer's Risks.
- (k) The Project Manager unreasonably delays issuing a Certificate of Completion.

51.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

51.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

51.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

52. Tax

52.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC 54.1 [Price Adjustment].

53. Currencies

53.1 Where payments are made in currencies other than the currency of the Employer's country specified in the **PCC**, the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Bid.

54. Price Adjustment

54.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the **PCC**. If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:

$$P_c = A_c + B_c \text{ Imc/loc}$$

where:

P_c is the adjustment factor for the portion of the Contract Price payable in a specific currency "c."

A_c and B_c are coefficients¹ specified in the **PCC**, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency “c;” and

I_{mc} is a consolidated index prevailing at the end of the month being invoiced and I_{oc} is the same consolidated index prevailing 28 days before Bid opening for inputs payable; both in the specific currency “c.”

54.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.

55. Retention

55.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the **PCC** until Completion of the whole of the Works.

55.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 69.1 [Completion], half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an “on demand” bank guarantee.

56. Liquidated Damages

56.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the **PCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the **PCC**. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor’s liabilities.

56.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC 50.1 [Payments].

57. Bonus

57.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the **PCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete.

58. Advance

58.1 The Employer shall make advance payment to the Contractor of the amounts stated in the **PCC** by the date stated in the **PCC**, against

¹ The sum of the two coefficients A_c and B_c should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulas for all currencies, since coefficient A_c , for the nonadjustable portion of the payments, is a very approximate figure (usually 0.10 ~ 0.20) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency is added to the Contract Price.

Payment

provision by the Contractor of an unconditional bank guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

58.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

58.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

59. Securities

59.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the **PCC**, by a bank acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a bank guarantee.

60. Dayworks

60.1 If applicable, the Dayworks rates in the Contractor's Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

60.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within 2 days of the work being done.

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

61. Cost of Repairs

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

F. Force Majeure**62. Definition of Force Majeure**

62.1 In this Clause, "Force Majeure" means an exceptional event or circumstance,

(a) which is beyond a Party's control;

- (b) which such Party could not reasonably have provided against before entering into the Contract;
- (c) which, having arisen, such Party could not reasonably have avoided or overcome; and
- (d) which is not substantially attributable to the other Party.

62.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies;
- (b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war;
- (c) riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel;
- (d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity; and
- (e) natural catastrophes such as earthquake, hurricane, typhoon, or volcanic activity.

63. Notice of Force Majeure

63.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

63.2 The Party shall, having given notice, be excused from performance of its obligations for so long as such Force Majeure prevents it from performing them.

63.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

64. Duty to Minimize Delay

64.1 Each Party shall at all times use all reasonable endeavours to minimize any delay in the performance of the Contract as a result of Force Majeure.

64.2 A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

65. Consequences of Force Majeure

65.1 If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under GCC Subclause 63 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to GCC Subclause 30.1 [Procedure for

Disputes] to

- (a) an extension of time for any such delay, if completion is or will be delayed, under GCC Subclause 36 [Extension of the Intended Completion Date]; and
- (b) if the event or circumstance is of the kind described in subparagraphs (a) to (d) of GCC Subclause 62.2 [Definition of Force Majeure] and, in the case of subparagraphs (b) to (d), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destructed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in GCC Subclause 19 [Insurance].

65.2 After receiving this notice, the Project Manager shall proceed in accordance with GCC Subclause 10 [Project Manager's Decisions] to agree or determine these matters.

66. Force Majeure Affecting Subcontractor

66.1 If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader Force Majeure events or circumstances shall not excuse the Contractor's nonperformance or entitle him to relief under this Clause.

67. Optional Termination, Payment and Release

67.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under GCC Subclause 63 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with GCC Subclause 73.5 [Termination].

67.2 Upon such termination, the Project Manager shall determine the value of the work done and issue a Payment Certificate, which shall include

- (a) the amounts payable for any work carried out for which a price is stated in the Contract;
- (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- (c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
- (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
- (e) the Cost of repatriation of the Contractor's staff and labor employed wholly in connection with the Works at the date of

termination.

- 68. Release from Performance**
- 68.1 Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises, which makes it impossible or unlawful for either or both Parties to fulfill its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance,
- (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract; and
 - (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under GCC Subclause 67 [Optional Termination, Payment and Release] if the Contract had been terminated under GCC Subclause 67.

G. Finishing the Contract

- 69. Completion**
- 69.1 The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the work is completed.
- 70. Taking Over**
- 70.1 The Employer shall take over the Site and the Works within 7 days of the Project Manager's issuing a certificate of Completion.
- 71. Final Account**
- 71.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate.
- 72. Operating and Maintenance Manuals**
- 72.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **PCC**.
- 72.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **PCC** pursuant to GCC 72.1, or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount stated in the **PCC** from payments due to the Contractor.
- 73. Termination**
- 73.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 73.2 Fundamental breaches of Contract shall include, but shall not be

limited to, the following:

- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 28 days;
- (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 84 days of the date of the Project Manager's certificate;
- (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- (f) the Project Manager gives two consecutive Notices to update the Program and accelerate the works to ensure compliance with GCC Subclause 22.1 [The Works to Be Completed by the Intended Completion Date] and the Contractor fails to update the Program and demonstrate acceleration of the works within a reasonable period of time determined by the Project Manager;
- (g) the Contractor does not maintain a Security, which is required;
- (h) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the **PCC**; and
- (i) if the Contractor, in the judgment of the Employer has engaged in integrity violations in competing for or in executing the Contract, pursuant to GCC 74.1 [Fraud and Corruption].

73.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC 73.2 above, the Project Manager shall decide whether the breach is fundamental or not.

73.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

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

74. Fraud and Corruption

74.1 If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, or other integrity violations, including the failure to disclose any required information which constitutes a fraudulent practice, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contract and expel him from the Site, and the provisions of Clause 73 [Termination] shall apply as if such termination had been made under

Sub-Clause 73.2 (i).

74.2 ADB requires Borrowers (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, Contractors, agents, subcontractors, subconsultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB's Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, the ADB

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
 - (iv) "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
 - (v) "abuse" means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;
 - (vi) "conflict of interest" means any situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations; and
 - (vii) "integrity violation" is any act, as defined under ADB's Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB's Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standard.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, subconsultants, subcontractors, service

providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;

- (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;
- (d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB's Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate² in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and
- (e) will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers and contractors, consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.

74.3 All Bidders, consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities and their respective officers, directors, employees and personnel are obliged to cooperate fully in any investigation when requested by ADB to do so. As determined on a case by case basis by ADB, such cooperation includes, but is not limited to, the following:

- (a) being available to be interviewed and replying fully and truthfully to all questions asked;
- (b) providing ADB with any items requested that are within the party's control including, but not limited to, documents and other physical objects;
- (c) upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically

² Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;

- (d) cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB's Information and Communications Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);
- (e) cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and
- (f) preserving and protecting confidentiality of all information discussed with, and as required by, ADB.

74.4 All Bidders, consultants, contractors and suppliers shall require their officers, directors, employees, personnel, agents to ensure that, in its contracts with its subconsultants, Subcontractors and other third parties engaged or involved in ADB-related activities, such subconsultants, Subcontractors and other third parties similarly are obliged to cooperate fully in any investigation when requested by ADB to do so.

74.5 The Contractor undertakes that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the bid, have been given or received in connection with the procurement process or in the contract execution.³

75. Payment upon Termination

75.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the **PCC**. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.

75.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

76. Property

76.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the

³ The undertaking also applies during the period of performance of the contract

Contract is terminated because of the Contractor's default.

- 77. Release from Performance**
- 77.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterward to which a commitment was made.
- 78. Suspension of ADB Loan or Credit**
- 78.1 In the event that ADB suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made,
- (a) the Employer is obligated to notify the Contractor, with copy to the Project Manager, of such suspension within 7 days of having received ADB's suspension notice.
 - (b) if the Contractor has not received sums due it within the 28 days for payment provided for in GCC 50.1 [Payments], the Contractor may immediately issue a 14-day termination notice.
- 79. Eligibility**
- 79.1 The Contractor shall have the nationality of an eligible country as specified in Section 5 (Eligible Countries) of the bidding document. The Contractor shall be deemed to have the nationality of a country if the Contractor is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.
- 79.2 The materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries as specified in Section 5 (Eligible Countries) of the bidding document and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, the Contractor may be required to provide evidence of the origin of materials, equipment, and services.
- 79.3 For purposes of GCC 79.2, "origin" means the place where the materials and equipment are mined, grown, produced, or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

Section 8: Particular Conditions of Contract

The following Particular Conditions of Contract shall supplement the GCC. Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

A. General	
GCC 1.1 (d)	The financing institutions is Asian Development Bank.
GCC 1.1 (r)	The Employer is Technical Education and Skills Development Authority (TESDA)
GCC 1.1 (w)	The Intended Completion Date for the whole of the Works shall be for 18 months from the date of the Notice to Proceed.
GCC 1.1 (cc)	The Project Manager is Project Management Office (TESDA) or its duly authorized representative.
GCC 1.1 (ff)	The Site is located at: Address: Tionoson St., Lagao, General Santos City Coordinates: 6°07'54 7"N 125°10'57 1"E (6.131858, 125.182514)
GCC 1.1 (ii)	The Start Date shall be the date of the Notice to Proceed.
GCC 1.1 (mm)	The Works consist of Design and Build of the TESDA Innovation Center with Rehabilitation Works at General Santos National School of Arts and Trades, General Santos City.
GCC 2.2	Sectional Completions are: Not Applicable
GCC 2.3 (j)	The following documents also form part of the Contract: 1. Environmental Management Plan 2. Initial Environmental Examination (IEE) 3. Site-Specific Health and Safety Management Plan (SSEHSMP)
GCC 3.1	The language of the contract is English. The law that applies to the Contract is the law of the Philippines.
GCC 11.1	The Project Manager may delegate any of his duties and responsibilities.
GCC 14.1	Schedule of other contractors: Not applicable.
GCC 19.1	The minimum insurance amounts and deductibles shall be: (a) for loss or damage to the Works, Plant and Materials: 100% of the Contract Price (no deductible) (b) for loss or damage to Equipment: PHP 2 million (c) for loss or damage to property (except the Works, Plant, Materials, and

	<p>Equipment) in connection with Contract: PHP 5 million and for unlimited number of occurrences</p> <p>(d) for personal injury or death:</p> <p>(i) of the Contractor's employees: As per governing law of the Philippines but not less than PHP1.0 million and for unlimited number of occurrences</p> <p>(ii) of other people: As per governing law of the Philippines but not less than PHP1.0 million and for unlimited number of occurrences</p>
GCC 20.1	Site Investigation Reports are required and as listed in Section 6. Employer's Requirements.
GCC 23.1	The following shall be designed by the Contractor: Please refer to Section 6. Employer's Requirements.
GCC 26.1	The Site Possession Date(s) shall be the date of the Notice to Proceed.
GCC 29.1	Appointing Authority for the Adjudicator: Construction Industry Arbitration Commission (CIA)
GCC 30.3	<p>The Adjudicator shall be paid by the hour at the rate of maximum of PHP1,500.</p> <p>The reimbursable expenses are travel expenses and other miscellaneous fees to be supported by actual receipts / invoices.</p>
GCC 30.4	<p>Institution whose arbitration procedures shall be used:</p> <p>Arbitration shall be conducted in accordance with the laws of the Philippines.</p> <p>The place of arbitration shall be at Taguig, Metro Manila, Philippines.</p>
GCC 34.2	<p>The following sentence shall apply:</p> <p>Respectful Work Environment</p> <p>The Contractor shall ensure that its employees and Subcontractors observe the highest ethical standards and refrain from any form of bullying, discrimination, misconduct and harassment, including sexual harassment and shall, at all times, behave in a manner that creates an environment free of unethical behavior, bullying, misconduct and harassment, including sexual harassment. The Contractor shall take appropriate action against any employees or Subcontractors, including suspension or termination of employment or sub-contract, if any form of unethical or inappropriate behavior is identified.</p> <p>The Contractor shall conduct training programs for its employees and Subcontractors to raise awareness on and prevent any form of bullying, discrimination, misconduct and harassment including sexual harassment, and to promote a respectful work environment. The Contractor shall keep an up to date record of its employees and Subcontractors who have attended and completed such training programs and provide such records to the Employer or the Engineer at their first written request.</p>

C. Time Control	
GCC 35.1	The Contractor shall submit for approval a Program for the Works within fourteen (14) days from the date of the Letter of Acceptance.
GCC 35.3	The period between Program updates is 45 days. The amount to be withheld for late submission of an updated Program is five percent (5%) of the next payment certificate / approved progress billing.
D. Quality Control	
GCC 43.1	The Defects Liability Period is: 365 days reckoned from issuance of a Certificate of Completion of the Works.
E. Cost Control	
GCC 53.1	The currency of the Employer's country is: Philippine Peso.
GCC 54.1	The Contract is not subject to price adjustment in accordance with GCC Clause 54, and the following information regarding coefficients does not apply.
GCC 55.1	The proportion of payments retained is ten percent (10%).
GCC 56.1	The liquidated damages for the whole of the Works are 0.1% per day. The maximum amount of liquidated damages for the whole of the Works is 10% of the final Contract Price.
GCC 57.1	Bonus for the whole of the Works: Not Applicable.
GCC 58.1	The Advance Payments shall be 15% of the Contract Price and shall be paid to the Contractor upon receipt of the unconditional bank guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment.
GCC 58.3	Repayment of the Advance Payments shall be: 15% deducted from each payment certificate
GCC 59.1	The Performance Security amount is 10% of the Contract Price.
G. Finishing the Contract	
GCC 72.1	The date by which operating and maintenance manuals are required is within 30 days from issuance of a Certificate of Completion of the Works. The date by which "as built" drawings are required is as specified in Section 6. Employer's Requirements.
GCC 72.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC 72.1 is equivalent to the total proportion of payments retained as provided in GCC 55.1.

GCC 73.2 (h)	The maximum number of days is: 90 days.
GCC 75.1	The percentage to apply to the value of the work not completed, representing the Employer's additional cost for completing the Works, is 10% of the value of the work not completed.

Section 9: Contract Forms

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Notice of Intention for Award of Contract

[on letterhead paper of the Employer]

[date of notification]

To: [name of the Bidder]
 Attention: [insert name of the Bidder's authorized representative]
 Address: [insert address of the Bidder's authorized representative]
 Telephone/Fax numbers: [insert telephone/fax numbers of the Bidder's authorized representative]
 E-mail Address: [insert e-mail address of the Bidder's authorized representative]

This is to notify you of our intention to award the contract [insert name of the contract and identification number, as given in the Bid Data Sheet]. You have [insert number of days as specified in ITB 40.1 of the BDS] days from the date of this notification to (i) request for a debriefing in relation to the evaluation of your Bid; and/or (ii) submit a bidding-related complaint in relation to the intention for award of contract, in accordance with the procedures specified in ITB 45.1.

The summary of the evaluation are as follows:

1. List of Bidders

Name of Bidder	Bid Price as Read Out at Opening	Evaluated Bid Price

2. Reason/s Why Your Bid Was Unsuccessful

.....

3. The Successful Bidder

Name of Bidder:	
Address:	
Accepted Contract Amount:	
Duration of Contract:	
Scope of the Contract Awarded:	
Amount Performance Security Required:	

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Letter of Acceptance

[on letterhead paper of the Employer]

[date]

To: [Name and address of the contractor]

Subject: Contract No. [please specify]

This is to notify you that your Bid dated [date] for execution of the [name of the contract and identification number, as given in the Bid Data Sheet] for the Accepted Contract Amount of the equivalent of [amount in words and figures and name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract and any additional security required as a result of the evaluation of your bid, using for that purpose the Performance Security Form included in Section 9 (Contract Forms) of the Bidding Document.

[Choose one of the following statements:]

We accept that [insert the name of adjudicator proposed by the Bidder] be appointed as the Adjudicator.

[or]

We do not accept that [insert the name of the adjudicator proposed by the Bidder] be appointed as the Adjudicator, and by sending a copy of this Letter of Acceptance to [insert name of the appointing authority], the Appointing Authority, we are hereby requesting such Authority to appoint the Adjudicator in accordance with GCC 29.1.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the [date] day of [month], [year], between [name of the Employer] (hereinafter “the Employer”), of the one part, and [name of the contractor] (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as [name of the contract] should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - (a) Letter of Acceptance,
 - (b) Letter of Bid,
 - (c) Addenda Nos. [insert addenda number if any]¹
 - (d) Particular Conditions of Contract,
 - (e) List of Eligible Countries that was specified in Section 5 of the bidding document,
 - (f) General Conditions of Contract,
 - (g) Specifications,
 - (h) Drawings,
 - (i) Completed Activity Schedules or Bill of Quantities, and
 - (j) any other documents shall be added here.²
3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of [name of the borrowing country] on the day, month and year indicated above.

¹ Information contained in the addenda and or addendum should preferably be included in the contract documents to avoid potential ambiguities during contract implementation. If however, unavoidable priority should be decided depending on the nature of information provided in the addenda/addendum.

² Tables of Adjustment Data may be added if the contract provides for price adjustment (see GCC 54.1).

Signed by
for and on behalf of the Employer

Signed by
for and on behalf the Contractor

in the presence of:

in the presence of:

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date

Performance Security

[Bank's name, and address of issuing branch or office]

Beneficiary: [Name and address of the Employer]

Date:

Performance Guarantee No.:

We have been informed that [name of the contractor] (hereinafter called "the Contractor") has entered into Contract No. [reference number of the contract] dated [date] with you, for the execution of [name of contract and brief description of works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we [name of the bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [name of the currency and amount in words]¹ [amount in figures] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the [date] day of [month], [year]², and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revisions, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.³

.....
[Signature(s) and seal of bank (where appropriate)]

- Note to Bidder -

If the bank issuing performance security is located outside the Employer's country, it shall be counter-guaranteed or encashable by a bank in the Employer's country.

¹ The guarantor shall insert an amount representing the percentage of the contract price specified in the contract and denominated either in the currency(ies) of the contract or in any freely convertible currency acceptable to the Employer. If the bank issuing the performance security is located outside the country of the employer, it shall have a correspondent financial institution located in the country of the Employer.
² Insert the date 28 days after the defect liability period. The Employer should note that in the event of an extension of the time for completion of the contract, the employer would need to request an extension of this guarantee from the guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [6 months][1 year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."
³ Or the employer may use "Uniform Rules for Demand Guarantees (URDG), ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded" as appropriate.

Advance Payment Security

[Bank's name, and address of issuing branch or office]

Beneficiary: [Name and address of the Employer]
Date:
Advance Payment Guarantee No.:

We have been informed that [name of the contractor] (hereinafter called "the Contractor") has entered into Contract No. [reference number of the contract] dated [date] with you, for the execution of [name of contract and brief description of works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the Conditions of the Contract, an advance payment in the sum [name of the currency and amount in words]¹ [amount in figures] is to be made against an advance payment guarantee.

At the request of the Contractor, we [name of the bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [name of the currency and amount in words]² [amount in figures] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor:

- (a) used the advance payment for purposes other than the costs of mobilization and cash flow support in respect of the Works; or
- (b) has failed to repay the advance payment when it has become due and payable in accordance with the conditions of the Contract, specifying the amount payable by the Contractor.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on its account number [contractor's account number] at [name and address of the bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty percent (80%) of the Contract Price has been certified for payment, or on the [date] day of [month], [year]³, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revisions, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.⁴

.....
[Signature(s) and seal of bank (where appropriate)]

¹ The guarantor shall insert an amount representing the amount of the advance payment denominated either in the currency(ies) of the advance payment as specified in the Contract, or in any freely convertible currency acceptable to the Employer.

² Footnote 1.

³ Insert the expected expiration date of the time for completion. The Employer should note that in the event of an extension of the time for completion of the contract, the Employer would need to request an extension of this guarantee from the guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [6 months] [1 year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

⁴ Or the employer may use "Uniform Rules for Demand Guarantees (URDG), ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded" as appropriate.

-- Note to Bidder --

If the bank issuing advance payment security is located outside the Employer's country, it shall be counter-guaranteed or encashable by a bank in the Employer's country.