



Government of the Republic of the Philippines

DAVAO DEL SUR STATE COLLEGE

PHILIPPINE BIDDING DOCUMENTS

PROCUREMENT OF INFRASTRUCTURE PROJECTS

For the

**Design and Build of 3 Storey with Roofdeck; Green
Technology Earthquake-Resilient Agriculture and
DevCom Academic Building, 24 Classrooms
(8m x 9m) Including Roofdeck
(Super Structure Only)**

**Sixth Edition
July 2020**

Preface

These Philippine Bidding Documents (PBDs) for the procurement of Infrastructure Projects (hereinafter referred to also as the “Works”) through Competitive Bidding have been prepared by the Government of the Philippines for use by all branches, agencies, departments, bureaus, offices, or instrumentalities of the government, including government-owned and/or -controlled corporations, government financial institutions, state universities and colleges, local government units, and autonomous regional government. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

The PBDs are intended as a model for admeasurements (unit prices or unit rates in a bill of quantities) types of contract, which are the most common in Works contracting.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract; (ii) the eligibility requirements of Bidders; (iii) the expected contract duration; and (iv) the obligations, duties, and/or functions of the winning Bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Works to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be insd when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Infrastructure Projects. However, they should be adapted as necessary to the circumstances of the particular Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, BDS, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, and Bill of Quantities are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.
- d. The cover should be modified as required to identify the Bidding Documents as to the names of the Project, Contract, and Procuring Entity, in addition to date of issue.

- e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.
- f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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Glossary of Terms, Abbreviations, and Acronyms

ABC – Approved Budget for the Contract.

ARCC – Allowable Range of Contract Cost.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

CDA – Cooperative Development Authority.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

Contractor – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

CPI – Consumer Price Index.

DOLE – Department of Labor and Employment.

DTI – Department of Trade and Industry.

Foreign-funded Procurement or Foreign-Assisted Project – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PCAB – Philippine Contractors Accreditation Board.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

UN – United Nations.

Section I. Invitation to Bid

Notes on the Invitation to Bid

The Invitation to Bid (IB) provides information that enables potential Bidders to decide whether to participate in the procurement at hand. The IB shall be posted in accordance with Section 21.2 of the 2016 revised IRR of RA No. 9184.

Apart from the essential items listed in the Bidding Documents, the IB should also indicate the following:

- a. The date of availability of the Bidding Documents, which shall be from the time the IB is first advertised/posted until the deadline for the submission and receipt of bids;
- b. The place where the Bidding Documents may be acquired or the website where it may be downloaded;
- c. The deadline for the submission and receipt of bids; and
- d. Any important bid evaluation criteria.

The IB should be incorporated into the Bidding Documents. The information contained in the IB must conform to the Bidding Documents and in particular to the relevant information in the Bid Data Sheet.

Invitation to Bid for Design and Build of 3 Storey with Roofdeck; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, 24 classrooms (8m x 9m)including roofdeck (super structure only)

1. The **Davao del Sur State College**, through the 2021 General Appropriation Act **Fund 101** intends to apply the sum of **FIFTY-ONE MILLION FIVE HUNDRED THIRTY- FOUR THOUSAND PESOS** only being the Approved Budget for the Contract (ABC) to payments under the contract for “**Design and Build of 3 Storey with Roofdeck; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, 24 classrooms (8m x 9m)including roofdeck (super structure only)**”. Bids received in excess of the ABC shall be automatically rejected at bid opening.

| Name of Project | Location | Brief Description | Approved Budget for the Contract (ABC) | Contract Period |
|---|-----------------------------|--|--|-----------------|
| Design and Build of 3-Storey with Roofdeck and 50 KVA Solar Panel System; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, complete design (24 classrooms) of the Proposed Building with Winding Staircase, Airconditioning Units and Elevator at least 20m x 50m per floor. | Davao del Sur State College | <ul style="list-style-type: none"> • Complete Design of the Proposed Building • Construction Work (Fully finished 12 classroom, 3-storey building with roofdeck, airconditioning units, winding staircase and elevator). | P51, 534,000.00 | 240 days |

2. The **Davao del Sur State College** now invites bids for the above Procurement Project. Completion of the Works is required within **240 calendar days**. Bidders should have completed a contract similar to the Project. The description of an eligible



bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders).

3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “*pass/fail*” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Interested bidders may obtain further information from *Davao del Sur State College* and inspect the Bidding Documents at the address given below from **08:00 A.M to 05:00 P.M (Monday to Friday)**.
5. A complete set of Bidding Documents may be acquired by interested bidders on **July 16 to August 27, 2021** from Davao del Sur State College, Matti, Digos City, Davao del Sur and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Fifty Thousand Pesos only (P 50, 000.00)**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees to Procurement Service Unit.

Bidders shall pay the applicable fee for the Bidding Documents not later than the submission of their bids in any of the following payments options:

- Over-the-counter payment at DSSC-Cashier’s office, Brgy. Matti, Digos City, Davao del Sur;
- Over-the-counter deposit at Land Bank of the Philippines (LBP) Account No. – 0332-1103-65.

Prior to payment, bidders are advised to coordinate first with the BAC Chairperson, Engr. EDUARDO F. AQUINO, through mobile phone at (+63)948 270 7001 for the issuance of the “Payment Order” and instructions.

6. The **Davao del Sur State College** will hold a Pre-Bid Conference on **July 27, 2021, 01:00 P.M** at the **Davao del Sur State College, Brgy. Matti, Digos City, Davao del Sur**, which shall be open to prospective bidders but limited to one (1) physically present representative per bidder only. The Pre-bid Conference is likewise accessible online via **Zoom through the following link:**

<https://us02web.zoom.us/j/88330773342?pwd=eXNic0kwcCttMHcveGhldVFMeHhFdZ09>

7. Bids must be duly received by the BAC Secretariat through manual submission at the office address as indicated below, on or before **August 27, 2021, 01:00 P.M.** Late bids shall not be accepted.
8. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB Clause 16**.
9. Bid opening shall be on **August 27, 2021, 01:00 P.M** at the given address and/or through the following Zoom link:

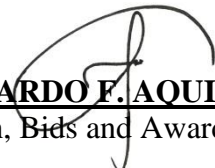


<https://us02web.zoom.us/j/88330773342?pwd=eXNic0kwcCttMHcveGhIdVFMelhFdZ09>

Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. The **Davao del Sur State College** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
11. For further information, please refer to:

EDUARDO F. AQUINO, MS.
Chairperson, Bids and Awards Committee
Brgy. Matti, Digos City, Davao del Sur
Mobile No. (+63)948-270-7001
E-mail Address: **psu@dssc.edu.ph**


EDUARDO F. AQUINO, MS
Chairperson, Bids and Awards Committee

Section II. Instructions to Bidders

Notes on the Instructions to Bidders

This Section on the Instruction to Bidders (ITB) provides the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Procuring Entity. It also provides information on bid submission, eligibility check, opening and evaluation of bids, post-qualification, and on the award of contract.

1. Scope of Bid

The Procuring Entity, **Davao del Sur State College** invites Bids for the

- a. Design of 3-Storey with Roofdeck and 50 KVA Solar Panel System; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, 24 classrooms (8m x 9m) of the Proposed Building with Winding Staircase, Airconditioning Units and Elevator at least 20m x 50m per floor.
- b. Build of 3-Storey with Roofdeck; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, complete design (12 classrooms) of the Proposed Building with Winding Staircase, Airconditioning Units and Elevator at least 20m x 28m per floor.

with Project Identification Number **DSSC PSU 2021-07-006**.

The Procurement Project (referred to herein as “Project”) is for the construction of Works, as described in Section VI (Specifications).

2. Funding Information

- 2.1. The GOP through the source of funding as indicated below for *2021* in the amount of **Fifty-One Million Five Hundred Thirty-Four Pesos only (P 51,534,000.00)**.
- 2.2. The source of funding is:
 - a. NGA, the National Expenditure Program.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and

execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA’s CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.

A contract is considered to be “similar” to the contract to be bid if it has the major categories of work stated in the **BDS**.

- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address { **Davao del Sur State College, Brgy. Matti, Digos City, Davao del Sur** and/or through videoconferencing/webcasting} as indicated in paragraph 6 of the **IB**.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents Comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.
- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.
- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

11. Documents Comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

13. Bid and Payment Currencies

- 14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 14.2. *Payment of the contract price shall be made in:*
 - a. Philippine Pesos.

14. Bid Security

- 15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 15.2. The Bid and bid security shall be valid until **120 days** from the opening of bids Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

16. Deadline for Submission of Bids

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

17. Opening and Preliminary Examination of Bids

17.1 The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

17.2 The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Detailed Evaluation and Comparison of Bids

18.1 The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.

18.2 If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.

18.3 In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

19. Post Qualification

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

20. Signing of the Contract

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Section III. Bid Data Sheet

Notes on the Bid Data Sheet (BDS)

The Bid Data Sheet (BDS) consists of provisions that supplement, amend, or specify in detail, information, or requirements included in the ITB found in Section II, which are specific to each procurement.

This Section is intended to assist the Procuring Entity in providing the specific information in relation to corresponding clauses in the ITB and has to be prepared for each specific procurement.

The Procuring Entity should specify in the BDS information and requirements specific to the circumstances of the Procuring Entity, the processing of the procurement, and the bid evaluation criteria that will apply to the Bids. In preparing the BDS, the following aspects should be checked:

- a. Information that specifies and complements provisions of the ITB must be incorporated.
- b. Amendments and/or supplements, if any, to provisions of the ITB as necessitated by the circumstances of the specific procurement, must also be incorporated.

Bid Data Sheet

| ITB Clause | |
|------------|--|
| 5.2 | <p>For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:</p> <ul style="list-style-type: none"> a. Design of 3-Storey with Roofdeck and 50 KVA Solar Panel System; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, 24 classrooms (8m x 9m) of the Proposed Building with Winding Staircase, Airconditioning Units and Elevator at least 20m x 50m per floor. b. Build of 3-Storey with Roofdeck; Green Technology Earthquake-Resilient Agriculture and DevCom Academic Building, complete design (12 classrooms) of the Proposed Building with Winding Staircase, Airconditioning Units and Elevator of at least 20m x 28m per floor. |
| 7.1 | Sub-contracting is not allowed. |
| 10.1 | <p>The following documents shall be part of the Technical Documents under Technical Component Envelope:</p> <ol style="list-style-type: none"> 1. Attachment for Ongoing Government and Private Contracts such as Notice of Award and/or Contract, Purchase Order and Delivery receipt or Sales Invoice. 2. The statement of the Bidder's SLCC shall be supported by the Notice of Award and/or Notice to Proceed, Project Owner's Certificate of Final Acceptance issued by the Owner other than the Contractor or the Constructors Performance Evaluation System (CPES) Final Rating, which must be at least satisfactory. In case of contracts with the private sector, an equivalent document shall be submitted 3. Duly Signed Manpower Utilization Schedule 4. Duly Signed Key Personnel Certificate / Contract of Employment 5. Duly Signed Key Personnel Bio-Data with PRC License/ Accreditation & Latest Professional Tax Receipt (PTR) 6. Duly Signed Equipment Utilization Schedule 7. Duly Signed Construction Schedule & S-Curve 8. Duly Signed Narrative Description of Construction Method 9. Certificate of Site Inspection 10. Duly Signed Construction Safety and Health Programs System. |

| | |
|------|---|
| | <p>11. Certificate of Testing of Materials (during the contract implementation)</p> <p>The following documents shall be part of the Financial Documents under Technical Component Envelope:</p> <p>1. Joint Venture Agreement (If applicable) - IF NOT APPLICABLE: Attach a Statement that the company has NO JOINT VENTURE AGREEMENT for this project, with signature of Authorized representative to be included in the Financial Documents of the Technical Component Envelope</p> |
| 10.3 | <p>Prospective Bidder should possess a valid PCAB license minimum category requirement category for this Project is license category B or size range Medium A</p> |
| 10.4 | <p>The key personnel must meet the required minimum years of experience set below:</p> <p>For the Pre-Detailed Design and Detailed Design portion of the contract, the Bidder is required to have or required to enter into a joint venture agreement with an architectural firm that will design the project with the minimum number of professionals as shown below:</p> <ol style="list-style-type: none"> 1. DESIGN/PRINCIPAL ARCHITECT (1) <ol style="list-style-type: none"> a. Licensed Architect b. At least 10 years of experience in related projects 2. STRUCTURAL/CIVIL ENGINEER (1) <ol style="list-style-type: none"> a. Licensed Structural/Civil Engineer b. At least 10 years experience in structural design of medium-rise structures c. Proficient in AutoCAD Software and other structural analysis software 3. PROFESSIONAL ELECTRICAL ENGINEER (1) <ol style="list-style-type: none"> a. Licensed Professional Electrical Engineer (PEE) b. At least 10 years of experience in related projects c. Proficient in AutoCAD Software 4. PROFESSIONAL MECHANICAL ENGINEER (1) <ol style="list-style-type: none"> a. Licensed Professional Mechanical Engineer (PME) b. At least 10 years of experience in related projects c. Proficient in AutoCAD Software 5. SANITARY ENGINEER (1) <ol style="list-style-type: none"> a. Licensed Professional Sanitary Engineer (PSSE) b. At least 10 years of experience in hospital-related projects c. Proficient in AutoCAD Software 6. CADD OPERATOR (4) (preferably one for Architecture and one for each engineering specialty) <ol style="list-style-type: none"> a. At least Bachelor's Degree in Architecture or Engineering b. Proficient in AutoCAD Software |

7. OTHERS AS REQUIRED FOR THE PROJECT

a. The bidder is required to prioritize the hiring of locally-based architects, engineers, and draftsmen especially if such have had experience and training in health facilities projects and design.

For the construction portion of the contract, the Bidder must assign to the project professionals as shown below:

1. PROJECT MANAGER (1)

- i. Licensed Engineer or Architect
- ii. At least 10 years of experience in construction management

2. PROJECT ENGINEER (1)

- i. Licensed Civil Engineer
- ii. At least 5 years of experience in construction management

3. CONSTRUCTION SAFETY OFFICER (1)

- i. Certified COSH, BOSH, HIRAC officer
- ii. DOLE accredited/trained

4. ELECTRICAL ENGINEER (1)

- i. Licensed Electrical Engineer
- ii. At least 5 years of experience

5. SANITARY ENGINEER (1)

- i. Licensed Sanitary Engineer
- ii. At least 5 years of experience

10.5

The minimum major equipment requirements are the following:

| <u>Equipment</u> | <u>Number of Units (of at least)</u> |
|----------------------------|--|
| Excavator equipment | 1 |
| Pumpcrete | 1 |
| Concrete Truck Mixer | 1 |
| 1 bagger Cement Mixer | 1 |
| Cut-off Machine | 1 |
| Drill Machine | 1 |
| Grinder Machine | 1 |
| Vibrator Machine | 1 |
| Welding Machine | 3 |
| Compactor Machine (Roller) | 1 |

12

The Bidder shall submit a Complete Design of the Proposed Building in accordance to Detailed Engineering Design Analyses and to the degree of

details as provided herein:

I Design

a. Architectural details

- Perspective
- Floor Plan
- Building Elevation 4 sides

b. Structural details

- Foundation plans
- Schedule of footing, columns, beams and slab

c. Electrical Plans

- Electrical construction notes
- Lighting layout
- Power layout
- Schedule of loads
- Single line diagram
- Riser Diagram
- Intranet Network Connectivity Layout
- Solar Panel System Details and Design (on-grid type)
- Fire Detection and Alarm System Layout

d. Plumbing

- General notes and specifications
- Water line layout
- Plumbing layout
- Rainwater Harvester plan

e. Mechanical

- Floor plan
- Fire Fighting Layout
- Elevator Layout Plan

Plans shall be drawn on 20 x 30 drawing sheets in suitable scale and drawings are to be presented clearly.

II Building Components for the Construction of 12 Classrooms

a. Ground Floor

- 4 classrooms
 - a.1. Academic Offices (Dean's & department offices) with receiving /info counter
- Winding Stairway
- See Parameters (1.4.6)

b. Second Floor

- 4 classrooms
 - b.1. Internet Laboratory
 - b.2. Learning Commons
 - b.3. 2 Standard Classrooms
- Winding Stairway

| | |
|------|--|
| | <ul style="list-style-type: none"> • See Parameters (1.4.6) <p>c. Third Floor</p> <ul style="list-style-type: none"> • 4 classrooms <ul style="list-style-type: none"> c.1. Multimedia Laboratory c.2. Integrated Laboratory c.3. Classroom c.4. Crop Protection Laboratory • Winding Stairway • See Parameters (1.4.6) <p>d. Roof Deck</p> <ul style="list-style-type: none"> • Covered Function Hall • Solar Panels (roof) • See Parameters (1.4.6) |
| 15.1 | <p>The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:</p> <p>a. The amount of not less than Php 1,030,680.00, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</p> <p>b. The amount of not less than Php 2,576,700.00, if bid security is in Surety Bond.</p> |
| 16 | <p>Each Bidder shall submit:</p> <p>TECHNICAL COMPONENT</p> <ul style="list-style-type: none"> • One (1) Original copy and Two (2) certified true copies <p>FINANCIAL COMPONENT • One (1) Original copy and two (2) certified true copies (Indicate Component/Document/Copy Number)</p> |
| 19.2 | Not applicable |
| 20 | <p>a. Latest and updated Tax Clearance</p> <p>b. Latest and updated PhilGEPS Platinum Membership Certificate</p> <p>c. Bidders must submit latest and updated tax returns filed through the Electronic Filing and Payments System (EFPS).</p> |
| 21 | <p>The following documents shall be submitted by the winning bidder within ten (10) calendar days from the receipt of the Notice of Award for the design and construction works:</p> <ol style="list-style-type: none"> 1. 3- copies of duly signed GANTT Chart with Cash Flow and S-curve; 2. 3- copies of duly signed PERT/CPM; 3. 3- copies of duly signed List of Manpower with Manpower Deployment Schedule; 4. 3- copies of duly signed List of Equipment with Equipment Utilization Schedule; 5. 1- copy of duly signed Design and Construction Methodology in narrative |

form;

6. 1- copy of Construction Safety and Health Program approved by the DOLE;

7. Contractor's All Risk Insurance Policy.

Items 1 to 4 of the foregoing documents are subject to approval of the Procuring Entity or his duly authorized representative.

Section IV. General Conditions of Contract

Notes on the General Conditions of Contract

The General Conditions of Contract (GCC) in this Section, read in conjunction with the Special Conditions of Contract in Section V and other documents listed therein, should be a complete document expressing all the rights and obligations of the parties.

Matters governing performance of the Contractor, payments under the contract, or matters affecting the risks, rights, and obligations of the parties under the contract are included in the GCC and Special Conditions of Contract.

Any complementary information, which may be needed, shall be introduced only through the Special Conditions of Contract.

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

2. Sectional Completion of Works

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

3. Possession of Site

4.1. The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

4.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

4. The Contractor's Obligations

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

5. Performance Security

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

6. Site Investigation Reports

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

7. Warranty

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the **SCC**.

8. Liability of the Contractor

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

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

9. Termination for Other Causes

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

10. Dayworks

Subject to the guidelines on Variation Order in Annex “E” of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Procuring Entity’s Representative has given written instructions in advance for additional work to be paid for in that way.

11. Program of Work

11.1. The Contractor shall submit to the Procuring Entity’s Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.

11.2. The Contractor shall submit to the Procuring Entity’s Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

12. Instructions, Inspections and Audits

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor’s accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

13. Advance Payment

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex “E” of the 2016 revised IRR of RA No. 9184.

14. Progress Payments

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity’s Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.

15. Operating and Maintenance Manuals

- 15.1. If required, the Contractor will provide “as built” Drawings and/or operating and maintenance manuals as specified in the **SCC**.
- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity’s Representative’s approval, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

Section V. Special Conditions of Contract

Notes on the Special Conditions of Contract

Similar to the BDS, the clauses in this Section are intended to assist the Procuring Entity in providing contract-specific information in relation to corresponding clauses in the GCC found in Section IV.

The Special Conditions of Contract (SCC) complement the GCC, specifying contractual requirements linked to the special circumstances of the Procuring Entity, the Procuring Entity's country, the sector, and the Works procured. In preparing this Section, the following aspects should be checked:

- a. Information that complements provisions of the GCC must be incorporated.
- b. Amendments and/or supplements to provisions of the GCC as necessitated by the circumstances of the specific purchase, must also be incorporated.

However, no special condition which defeats or negates the general intent and purpose of the provisions of the GCC should be incorporated herein.

Special Conditions of Contract

| GCC Clause | |
|------------|---|
| 2 | Not Applicable |
| 4.1 | The Procuring Entity shall give possession of all parts of the Site to the Contractor Upon receipt of Notice to Proceed. |
| 6 | The site investigation reports are: none |
| 7.2 | In case of permanent structures, such as buildings of types 4 and 5 as classified under the National Building Code of the Philippines and other structures made of steel, iron, or concrete which comply with relevant structural codes (e.g., DPWH Standard Specifications), such as, but not limited to, steel/concrete bridges, flyovers, aircraft movement areas, ports, dams, tunnels, filtration and treatment plants, sewerage systems, power plants, transmission and communication towers, railway system, and other similar permanent structures: Fifteen (15) years. |
| 10 | a. Dayworks are applicable at the rate shown in the Contractor's original Bid. |
| 11.1 | The Contractor shall submit the Program of Work to the Procuring Entity's Representative within 14 calendar days of delivery of the Notice of Award. |
| 11.2 | The amount to be withheld for late submission of an updated Program of Work is Twenty Thousand Pesos (P 20,000.00) . |
| 13 | The amount of the advance payment is fifteen (15%) percent of the Contract Price upon approval of the Notice to Proceed. |
| 14 | Materials and equipment delivered on the site but not completely put in place shall be included for payment. |
| 15.1 | The date by which "as built" drawings and operating and maintenance manuals are required is upon request for final payment. |
| 15.2 | The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is remaining balance as of final payment. |

Section VI. Specifications

Notes on Specifications

A set of precise and clear specifications is a prerequisite for Bidders to respond realistically and competitively to the requirements of the Procuring Entity without qualifying or conditioning their Bids. In the context of international competitive bidding, the specifications must be drafted to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, and performance of the goods and services to be procured. Only if this is done will the objectives of economy, efficiency, and fairness in procurement be realized, responsiveness of Bids be ensured, and the subsequent task of bid evaluation facilitated. The specifications should require that all goods and materials to be incorporated in the Works be new, unused, of the most recent or current models, and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.

Samples of specifications from previous similar projects are useful in this respect. The use of metric units is mandatory. Most specifications are normally written specially by the Procuring Entity or its representative to suit the Works at hand. There is no standard set of Specifications for universal application in all sectors in all regions, but there are established principles and practices, which are reflected in these PBDs.

There are considerable advantages in standardizing General Specifications for repetitive Works in recognized public sectors, such as highways, ports, railways, urban housing, irrigation, and water supply, in the same country or region where similar conditions prevail. The General Specifications should cover all classes of workmanship, materials, and equipment commonly involved in construction, although not necessarily to be used in a particular Works Contract. Deletions or addenda should then adapt the General Specifications to the particular Works.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for goods, materials, and workmanship, recognized international standards should be used as much as possible. Where other particular standards are used, whether national standards or other standards, the specifications should state that goods, materials, and workmanship that meet other authoritative standards, and which ensure substantially equal or higher quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the SCC.

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Contract to specific standards and codes to be met by the goods and materials to be furnished, and work performed or tested, the provisions of the latest current edition or revision of the relevant standards and codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national, or relate to a particular country or region, other authoritative standards that ensure a substantially equal or higher quality than the standards and codes specified will be

accepted subject to the Procuring Entity's Representative's prior review and written consent. Differences between the standards specified and the proposed alternative standards shall be fully described in writing by the Contractor and submitted to the Procuring Entity's Representative at least twenty-eight (28) days prior to the date when the Contractor desires the Procuring Entity's Representative's consent. In the event the Procuring Entity's Representative determines that such proposed deviations do not ensure substantially equal or higher quality, the Contractor shall comply with the standards specified in the documents.

These notes are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final Bidding Documents.

Section VI. Specifications

| Item No. | Parameters |
|----------|--|
| 1 | Clearing <ul style="list-style-type: none"> • Uprooting of Trees |
| 2 | Excavation Works <ul style="list-style-type: none"> • Structure Excavation • Back Filling |
| 3 | Embankment Works <ul style="list-style-type: none"> • Mountain Mix • 100 mm thick gravel base |
| 4 | Reinforced Concrete Works <ul style="list-style-type: none"> • Footings • Tie Beams • Pedestals • On fill Slab and Suspended Slabs • Staircases and Winding Staircase |
| 5 | Reinforcing Steelworks/Metal Structures <ul style="list-style-type: none"> • DRB 12mm dia. and below should be grade 40 • DRB 16mm dia. and above should be grade 60 • Structural steel shapes, plates and bars shall conform to A36/A6M |
| 6 | Masonry Works <ul style="list-style-type: none"> • Exterior Walls- 6" CHB (1000 psi) • Interior Walls- 4" CHB (600 psi) |
| 7 | Doors <ul style="list-style-type: none"> • Main Entrance Doors - Double Door (12 mm thick Frameless Glass-Tempered) • Office/Conference/Classroom/Laboratory/Broadcast Doors - Wood Panel Doors (Kiln Dried) with viewing glass in compliance to GAD requirement. • Toilet Doors - Flush door Marine Plywood with Stainless Steel Kick Plate • Door Knobs shall be lever type stainless steel • Door hinges shall be 3.5" x 3.5" ball bearing • Magnetic Door stoppers - either wall or floor mounted • Provide door closer - Main, office, conference and toilet |
| 8 | Windows <ul style="list-style-type: none"> • 6mm dark gray glass on power coated aluminum frames |
| 9 | Ceiling Works <ul style="list-style-type: none"> • Interior - 4.5mm thick fiber cement board on metal framings • Exterior (roof eaves) - metal soffit on metal framings • ** Metal rod hangers with adjustable clips, and NOT galvanized iron wires, shall be used to support and suspend the carrying channel and light gauge metal furrings • ** Cove light, special connections and design, mouldings, valances (required) |

| | |
|----|--|
| 10 | <p>Roof Framing</p> <ul style="list-style-type: none"> • Trusses <ul style="list-style-type: none"> ➤ Use 2-6mm thick angle bar for Top/bottom Chords ➤ Use 1-6mm thick angle bar for vertical/diagonal web members • Purlins <ul style="list-style-type: none"> ➤ Use 1.5mm thick x 2" x 6" CEE Purlins spaced at 700 mm O.C. ➤ Use 2-12mm dia. Plain Round Bars for Sag Rods ➤ Use 16mm dia. Plain Round Bars for Cross Bracings with Turn Buckles • Fascia Frame <ul style="list-style-type: none"> ➤ Use 2-4mm thick angle bar for Fascia Frame ➤ Use 12mm thk Fiber Cement Board for Fascia Board |
| 11 | <p>Roofing</p> <ul style="list-style-type: none"> • Use 0.50mm thk Pre-painted Roofing Sheets, Rib-Type, Blue • Use Aluminum Radiant Heat Insulation MF 800 6-layer double-sided aluminium foil laminate with superior strength and puncture resistant properties on Galvanized Iron Wire Ga. 16 spaced at 300mm O.C. diagonals • All bended panels shall be 0.50mm thick prepainted, pre-moulded |
| 12 | <p>Tileworks</p> <ul style="list-style-type: none"> • Use 600mm x 600mm non-skid floor tile for comfort rooms. • Use 600mm x 600mm glazed wall tile 4 layers for comfort rooms. • Use 600mm x 600mm synthetic granite tiles - all floor areas • Use aluminum step nosing and aluminum tile trims |
| 13 | <p>Plumbing Works</p> <ul style="list-style-type: none"> • Use series 1000 for sanitary/storm drainage pipings and fittings • For cold waterlines, use Polypropylene Pn16/Pn20 Fusion Weld Pipes with trims and fittings • Septic vault shall be of sufficient volume capacity consisting of three chambers • Water closets shall be 1.6 gpf. ADA manual flush valve, powerful direct-fed siphon jet action • Use ceramic under counter-type lavatory with stainless c-spout faucet • Kitchen Sink shall be of stainless steel seamless bowl with gooseneck faucet • Use waterless, replacesable cartridge wall hung urinal • Use standard stainless steel faucet for comfort rooms • Use 2 - horizontal stainless steel tank , capacity 2000 liters • Use booster pump 2-hp, pressure tank bladder type should be compatible to 2-hp booster pump |
| 14 | <p>Elevator Shaft</p> <ul style="list-style-type: none"> • Must be prepared and ready for the future installation of MRL type (Machine roomless) Passenger Elevator (transparent) that has a 1- person capacity |
| 15 | <p>Fire Detection and Alarm System (FDAS)</p> <ul style="list-style-type: none"> • The building shall be equipped with an addressable fire detection and alarm system (FDAS). Smoke/Heat detectors shall be installed on all suitable rooms, hallways and any place which deemed necessary. |

| | |
|----|---|
| 16 | <p>Mechanical Works</p> <ul style="list-style-type: none"> • Use electric motor driven fire pump that is designed specifically designed for an automatic water sprinkler system • Use electric motor driven jockey pump • Sprinkler head shall be pendant, upright or sidewall unit, 83 LPM flow capacity per head and temperature fusing at 57.5° C to 74°C. • Pipes shall be G.I. Schedule 40. • |
| 17 | <p>Electrical Works</p> <ul style="list-style-type: none"> • The use of LED (Light-Emitting Diode) lighting fixtures recommended by DOE (Department of Energy) is highly recommended. • Use THHN copper wire (UL Listed) of size not smaller than 3.5 sq. mm. • No conduit of dia. less than 20mm shall be installed. PVC conduit shall be rigid. Rigid steel pipes (RSC, RMC, EMT, IMC, EMT) shall be zinc coated or galvanized. • Panel boards shall be flush mounted with certain main and din-rail type miniature circuit breakers for branch circuits. Panel boards shall have earth and neutral terminals/bus. • All boxes shall be uPVC type and approved products of reputable manufacturers. The size shall be 50mm x 100mm for utility boxes and 100mm octagonal for junction boxes • Switches shall be LED illuminated, wide series and product of reputable manufacturer with ratings 10A, 250V or as noted and approved • General use receptacles shall be wide series and product of reputable manufacturer with ratings 15A, 250V grounding type or as noted and approved • Adopt an energy-saving design. The lightning design shall be adequate for the size, type, and in conformance to illumination standards for institutional buildings (250 – 500 lux) • The building shall be protected against lightning. • The building shall be equipped with grid-tied solar power system with net-metering at least 50 KVA |
| 18 | <p>Information and Communication Design</p> <ul style="list-style-type: none"> • Category 5e and/or 6 Shielded Twisted Pair (TP) copper wires will be used for LAN and shall be served from Telephone Terminal Cabinet (TTC) or Intermediate Distribution Frame (IDF) within 90 meters • LAN Socket with 2-gang face plate for LAN • Fiber optic cables • Telephone system shall consist of cat5e Shielded Twisted Pair (TP) copper wires • Raceways, conduits and wire ways • Sizing of pull boxes shall be computed based on code requirements |
| 19 | <p>Painting</p> <ul style="list-style-type: none"> • Apply concrete neutralizer for all concrete surfaces. • Apply concrete primer for all concrete surfaces and ceiling boards. • All painting works shall be fully-putty. • Painted ceiling shall be in at least latex finish, while cornices and mouldings shall be in gloss enamel finish • Painted interior wall shall be at least two (2) coats in semi-gloss latex finish for |

| | |
|----|---|
| | <p>ordinary rooms, e.g. offices, unless specified to higher type of paint.</p> <ul style="list-style-type: none"> • Painted exterior wall shall be at least two (2) coats in moisture-resistant/water-repellant solvent-based paint finish, textured or smooth, unless otherwise specified. • Apply emulsion clear paint on all exterior concrete surfaces • Paint color and shade shall be approved first before application. |
| 20 | <p>Stairs and Corridors</p> <ul style="list-style-type: none"> • Regular stairs shall have risers at least 150mm high and treads at least 300mm wide. Handrails shall be 1100mm high. Clearances shall confirm with the requirements of the Fire Code of the Philippines. • Corridors shall have a minimum unobstruction width of 4000mm. This shall be measured clear from the surface of the finished wall and not on-center of the rough CHB wall. • Handrails must be 304 stainless steel (1.5" diameter) • Railings must be 16mm square bars space at 150mm O.C. • Use aluminum step nosing 2" wide |
| 21 | <p>LAN - Local Area Network</p> <ul style="list-style-type: none"> • Roughing-in of backbone Hard Fiber optic cables - Installation per floor with 16 Cores - to be measured by number of cored imbeded complete SFP connectivity with color coded lines up to 8 different colors with PDU-Power Distribution Unit • Newtork Tray Wall mounted - Wallmounted cable tray with openbay Standard cable layers connecting the entire building from 1st to 3rd floor for Internet, PBX-Phone and CCTV. • Wallmounted Data-cabinet 2 feet per rooms - this will distribute the individual node of rooms from ISP-Source to I/O ports with complete nodes with PDU-Power Distribution Unit • Openbay network cabinet 7" and 4" cabinet rackfeet - This shall connect the entire Nodes of the Building with PDU-Power Distribution Unit • Nodes distribution per rooms - this shall be measured by the connectivity of OpenBay and end nodes with 60 nodes for the 1st floor, 100 nodes for computer laboratory in the 2nd floor and 100 nodes for 3rd floor connecting internet, PBX-Phone and CCTV compelte network fittings. • CCTV wallmounted I/O - this shall be measured by the number of CCTV connectivity from 1st to 3rd floor. • Wireless Access Point in every room from 1st to 3rd floor - this shall be measured by connectivity of AP to openbay 7" and 2" in every rooms of the building with PDU-Power Distribution Unit. |

Section VII. Drawings

[Insert here a list of Drawings. The actual Drawings, including site plans, should be attached to this section, or annexed in a separate folder.]

Section VIII. Bill of Quantities

Notes on the Bill of Quantities

Objectives

The objectives of the Bill of Quantities are:

- a. to provide sufficient information on the quantities of Works to be performed to enable Bids to be prepared efficiently and accurately; and
- b. when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works should be itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost. Consistent with these requirements, the layout and content of the Bill of Quantities should be as simple and brief as possible.

Daywork Schedule

A Daywork Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Entity of the realism of rates quoted by the Bidders, the Daywork Schedule should normally comprise the following:

- a. A list of the various classes of labor, materials, and Constructional Plant for which basic daywork rates or prices are to be inserted by the Bidder, together with a statement of the conditions under which the Contractor will be paid for work executed on a daywork basis.
- b. Nominal quantities for each item of Daywork, to be priced by each Bidder at Daywork rates as Bid. The rate to be entered by the Bidder against each basic Daywork item should include the Contractor's profit, overheads, supervision, and other charges.

Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the SCC should state the manner in which they will be used, and under whose authority (usually the Procuring Entity's Representative's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Bidders in respect of any facilities, amenities, attendance, etc., to be provided by the successful Bidder as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Bidder to quote a sum for such amenities, facilities, attendance, etc.

Signature Box

A signature box shall be added at the bottom of each page of the Bill of Quantities where the authorized representative of the Bidder shall affix his signature. Failure of the authorized representative to sign each and every page of the Bill of Quantities shall be a cause for rejection of his bid.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They should not be included in the final documents.

Section IX. Checklist of Technical and Financial Documents

Notes on the Checklist of Technical and Financial Documents

The prescribed documents in the checklist are mandatory to be submitted in the Bid, but shall be subject to the following:

- a. GPPB Resolution No. 09-2020 on the efficient procurement measures during a State of Calamity or other similar issuances that shall allow the use of alternate documents in lieu of the mandated requirements; or
- b. any subsequent GPPB issuances adjusting the documentary requirements after the effectivity of the adoption of the PBDs.

The BAC shall be checking the submitted documents of each Bidder against this checklist to ascertain if they are all present, using a non-discretionary “pass/fail” criterion pursuant to Section 30 of the 2016 revised IRR of RA No. 9184.

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class “A” Documents

Legal Documents

- ☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or
- ☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and
- ☐ (c) Mayor’s or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and
- ☐ (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- ☐ (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- ☐ (g) Statement of the bidder’s Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules;
and
- ☐ (h) Philippine Contractors Accreditation Board (PCAB) License;
or
Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; **and**
- ☐ (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; **and**
- ☐ (j) Project Requirements, which shall include the following:
 - ☐ a. Organizational chart for the contract to be bid;
 - ☐ b. List of contractor’s key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
 - ☐ c. List of contractor’s major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- ☐ (k) Original duly signed Omnibus Sworn Statement (OSS);

and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- ☐ (l) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**
- ☐ (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

- ☐ (n) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

- ☐ (o) Original of duly signed and accomplished Financial Bid Form; **and**

Other documentary requirements under RA No. 9184

- ☐ (p) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- ☐ (q) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- ☐ (r) Cash Flow by Quarter.





PARAMETERS ON THE DESIGN AND BUILD OF 3- STOREY GREEN TECHNOLOGY EARTHQUAKE- RESILIENT AGRICULTURE AND DEVCOM ACADEMIC BUILDING

Section VI. Performance Specifications and Parameters

In 2017, two separate house bills were passed the reason why this two-year old college was given birth. The creation of this college coupled with the experience of calamity brought about by series of tremors as well as the COVID 19 pandemic has sat the need for the institution to adapt to the new normal. While the Davao del Sur State College (DSSC) is in its infancy stage, it poses a huge challenge of realizing its vision amidst the tests of times.

The College per Republic Act 11220 is mandated to primarily provide advance instruction and professional training in education, agriculture, engineering and technology, agribusiness, information technology and other related fields of study. It shall also undertake research, extension services, and production activities in support to the socioeconomic development of Davao del Sur and provide progressive leadership in its areas of specialization.

In 1989, SPAMAST as the mother college of Davao del Sur State College, through the initiative of the second president - Dr. Francisco C. Ladaga, Sr has acquired a total of 17.5 hectares for laboratory and instruction in different locations through acquisition and donations from private and the Provincial Local Government Unit (PLGU) of Davao del Sur. This started the addition of the new campus which is the Digos Campus.

Six (6) years later, in 1995, an additional 28-hectare land in Matanao, Davao del Sur was possessed intended for production, research and extension services to create a significant niche in the agricultural development of the province.

As the academic offerings grew, SPAMAST in 2000, repositioned itself by reorganizing the campuses into colleges which renamed Digos Campus became the College of Agricultural Sciences (CAS) with laboratory and production site in Matanao.

In 2006, three (3) programs such as the Bachelor in Agri-Business, Bachelor in Agricultural Technology and secondary teacher education received first level accreditation status in Digos Campus. Emerged during this time the offering of new programs like the Bachelor of Science in Information Technology and short-term courses with TESDA.

In 2017, a bill was filed by Congresswoman Lorna B. Bandigan for the removal of SPAMAST-Digos Campus from the SPAMAST-Malita, and to have a better set-up for Digos Campus in the possible removal, a separate bill was filed by Congresswoman Mercedes C. Cagas of Davao del Sur, converting SPAMAST- Digos



Campus to Davao del Sur State College. Finally, on February 21, 2019, by virtue of the President of the Philippines, Rodrigo Roa Duterte, the law entitled “An Act Separating the Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST) – Digos Campus in the City of Digos, Davao del Sur from the SPAMAST in the Municipality of Malita, Davao Occidental, and Converting it into a State College to be Known as the Davao del Sur State College and Appropriating Funds Therefor” was signed as Republic Act 11220.

Having complied with all the requirements, the conversion of the college was approved by the Commission on Higher Education (CHED) en banc through Resolution No. 494-2019, on August 13, 2019.

Dr. Maricar Casquejo, the Regional Director of the CHED Region XI was designated as the officer In-charge of DSSC from December 12, 2019 to September 27, 2020.

On September 28, 2020, after an extensive search process, the DSSC Board of Trustees approved the appointment of Dr. Augie E. Fuentes as the first president of the institution.

Offering of Programs

Davao del Sur State College (DSSC) which envisions to become an “internationally-recognized quality driven state institution of higher learning”, will pursue excellence in all its actions providing a safe place for its learners to hone their potentials to innovate and create meaningful learning experiences. Part of this is putting up of facilities which could enhance the avenue for a conducive learning environment.

The College has initially started to widen its competitive advantage over its rival neighbouring colleges in terms of program compliance, accreditation and ISO certification. Besides, having the geographical advantage of extension campuses in Sulop and Matanao which captures the markets from South General Santos City and from the West-North Cotabato.

There are 16 programs offered (Table 1) by the college and several consortium programs in graduate level in highly recognized state colleges and university in Mindanao. The table includes new programs.

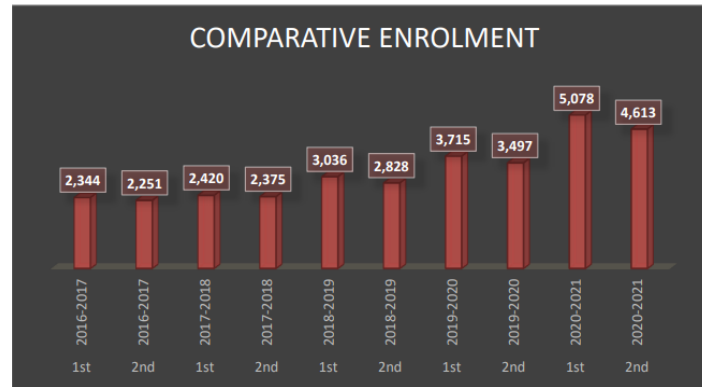
At present, there are six (6) or 46% of academic programs are program complaint by the Commission on Higher Education Region XI.

Table 1. Programs Offered

| <i>Undergraduate Programs Offered in DSSC</i> | |
|--|---|
| • Bachelor of Science in Agroforestry | • Bachelor of Secondary Education Major in English |
| • Bachelor of Science in Agriculture Engineering | • Bachelor of Secondary Education Major in Biological Science |
| • Bachelor of Science in Information Technology | • Bachelor of Secondary Education Major in Technology and Livelihood Education |
| • Bachelor of Science in Agriculture | • Bachelor of Technology and Livelihood Education Major in Home Economics |
| • Bachelor of Science in Agri- Business (BSAB): major in Enterprise Management | • Bachelor in Public Administration |
| • Bachelor of Science in Agricultural and Biosystem Engineering | • *Bachelor of Science in Development Communication |
| • Bachelor of Elementary Education | • *Bachelor of Science in Accounting Technology |
| • Bachelor of Secondary Education Major in Mathematics Major in General Science Major in Agri-Fishery Education | • *Bachelor of Science in Accounting Information Systems |
| <i>Graduate Programs</i> | |
| • Master of Arts in Education (MAEd) Major in Educational Management Major in Language Teaching Major in Mathematics Teaching Major in Science Teaching | • Master in Business Administration (MBA) Major in Agri-business Management • Teacher Certificate Program |

Enrolment Trends

It was 2nd semester of SY 2019-2020 that Davao del Sur State College begun operating separately from the mother institution (SPAMAST). The enrollees then counts to 3,497. The next school year (SY 2020-2021), there was an increase of 1,580 (45%), though there was a decrease of 465 (9%) during the 2nd semester as anticipated. However, the next semester, SY 2021-2022 given the new programs offered, the college foresee more or less than 5,000 as projected. The figure on comparative enrollment includes 1st semester SY 2016-2017 to 1st semester 2019-2020 which is the enrollment trends in SPAMAST Digos Campus.



The main campus library has the following current amenities and features with the limited floor area in spite of fast growing population:

- General Circulation 20 seaters
- Carrels 5 seaters
- Learning Commons 20 seaters
- Reading Area 80 seaters

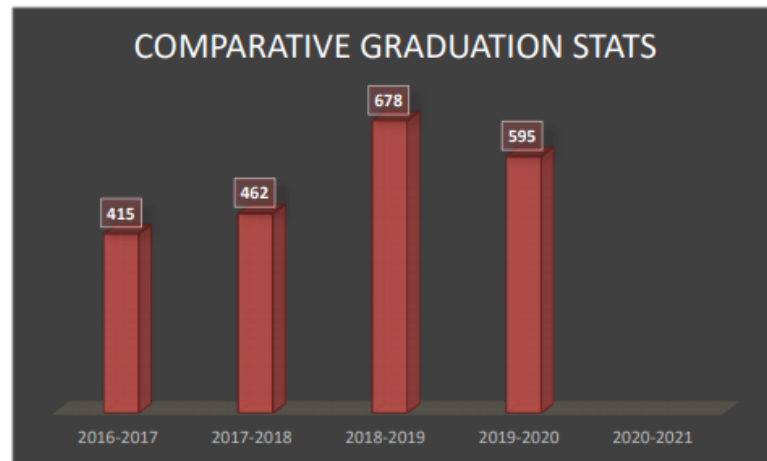
The minimum space requirement of AACCUP accreditation is 10% of the entire population that is supposedly 460 seating capacity the library should provide. Given the current condition, the actual capacity of the DSSC main library could only cater 125 seaters. In addition, the Regional Quality Assurance Team (RQuAT) from CHED has required the minimum of 15% seating capacity for reading areas of the college library.

Graduation Trend

For the past four years, DSSC (formerly SPAMAST- Digos Campus) has an increasing number of graduates. However, due to pandemic, graduates decreased in SY 2019-2020. However, looking at the statistic, library facility could still not suffice the required space to offer conducive learning for the students.

Comparative Report on Graduation
 SY 2016-2017 TO SY 2020-2021

| School Year | No. of Graduates |
|-------------|------------------|
| 2016-2017 | 415 |
| 2017-2018 | 462 |
| 2018-2019 | 678 |
| 2019-2020 | 595 |
| 2020-2021 | |



The Davao del Sur State College (DSSC) functions dynamically in a fast-changing environment. Given the Universal Access to Quality Tertiary Education Act of 2017 (R.A. 10931) that intends to promote and protect the rights of all Filipinos to accessible quality education, the college has to accommodate as many enrollees and give priority to academically able students from poor families.

In congruence with this, the college intends to adapt the paradigm shift in delivering services, from traditional reading area to adapting learning commons and e-library.

The project will be implemented using the guidelines for the **design-and-build scheme** for the procurement and contract implementation of infrastructure projects as per R.A.9184 and its Implementing Rules and Regulations.

I. Project Description

1. General

The Agri & DevCom Building is a three-storey with roof deck of modern-type structure design that adheres with *Earthquake Resilient, Green Building or Green Architecture and GAD Sensitive* providing the most conducive environment for studying, research, group discussions, conferences for students, faculty members and other users. It shall contain winding reinforced concrete staircase at the center and two (2) staircases on both ends from ground to third floor with function hall and solar panels. The building shall be intelligently planned that captures the desire of every student to spend more time in their classrooms maximizing the use of its

resources. Ground floor shall contain area for receiving/information counter, academic offices (Agri-institute dean's office, Agriculture Dept, Agroforestry Dep't. and DevCom Dept.), faculty lounge, Lecture Hall (tiered seating with pitched floor). Second floor will primarily serve as venue for classrooms (5 classrooms standard), learning commons, student lounge and computer laboratory. Third floor is intended for the Development Communication classrooms (1 classroom), computer/multi-media room, integrated lab and broadcast lab/studio (bigger room-twice as large as a classroom) and laboratory rooms (AnScie Lab, Horticulture Lab, Crop Protection Lab, Soils Lab and Agricultural Laboratory and Instrumentation Room). (See Section 1.4 of Item VI for detailed information and requirements.)

2.Scope of Work

In accordance with the Design and Build Scheme for the Procurement of Infrastructure Projects of RA 9184, the Contractor shall perform both the planning and implementation phases of the project. As such, he shall be solely responsible for the general integrity of the detailed engineering design of the building structure. Likewise, he shall also be responsible for the general design and liable for any structural defects and/or failures that may be found in the completed Project.

The Contractor shall be aware that the Procuring Entity does not guarantee that the preliminary data provided herein are fully correct, up to date and are applicable to the project. He shall be solely responsible for the accuracy and applicability of all data that he will use in his design and build proposal and services.

By submitting his proposal, the Contractor expresses that he has thoroughly examined, carefully reviewed and fully understands all the information including governing laws, standards, conditions and requirements pertinent to the implementation of the project and that his proposal is in agreement therewith.

- 2.1 Preliminary Design.** Prospective bidders shall submit in 20"x 30" blueprint. (For the drawings/designs) the **development proposal** containing the design drawings based on the design concept provided in section VI: All measurements shall be expressed in metric units.
- i. Site Development Plan of scale not smaller than 1:200
 - ii. Perspective View of the Building, Photorealistic Presentation
 - iii. Floor Plans, clearly labelled
 - iv. Building Elevations, four (4) views, clearly labelled
 - v. Building Sections, two (2) sections, clearly labelled
 - vi. Interior Designs, in perspective view, clearly labelled
 - vii. Engineering Plans and Schematic Diagrams
 - viii. **3D walkthrough (Interior & Exterior of the Building)**

The winning bidder shall submit in both electronic (1 copy) and hard (3 copies: 1 orig., 2 reproduced copies) copies the result of **Detailed Engineering Surveys and investigations**. This shall include but not limited to the following:

- i. Site Elevation Contour Mapping at 0.5 m interval with raw data
- ii. Soil Investigation at the construction site
- iii. Mapping of Mature Trees affected by the development

- iv. Location of Existing Utility Lines
- v. Location, Floor Elevation, Dimension and Distribution of Existing Buildings and Facilities
- vi. Field surveys on the factors that may directly affect the cost, duration and the implementation of the project

2.2 Detailed Design. The winning bidder shall submit the detailed plans and designs for the project at the specified timeframe following the design concept provided in section VI **including any revisions and refinements** as approved and required by the Head of Procuring Entity/DSSC. These shall be submitted in both electronic (1 copy) and hard (3 copies: 1 orig., 2 reproduced copies) copies. The hard copies of the Detailed Designs/Drawings shall be printed on 20” x 30” paper size. All measurements shall be expressed in metric units. For clarity and ease of appreciation, use different lineweights (and linetype and colors if necessary), appropriate drawing scales as per applicable building codes and standards, and appropriate font style and height for both the printed and electronic copies of the drawings. The following documents shall be deemed complete and comprehensive:

- i. Detailed Architectural Plans and Design (Refer to section VI)
- ii. Detailed Structural Plans and Design(Refer to section VI)
- iii. Detailed Electrical Plans and Design(Refer to section VI)
- iv. Detailed Mechanical Plans and Design(Refer to section VI)
- v. Detailed Sanitary and Plumbing Plans and Design(Refer to section VI)
- vi. Detailed Information and Communication Systems Design and Layout(Refer to section VI)
- vii. Structural Design Computations including Soil Exploration/Test Results, Seismic Analysis and Electrical Design Computations
- viii. General Notes on the manner under which the working plan is to be executed
- ix. Technical Specifications of works and type and quality of construction materials to be used
- x. Bill of Quantities following the prescribed format given in section VIII, Detailed Cost Estimates indicating the unit prices of construction materials, labor rates and equipment rentals and Detailed Unit Price Analysis

2.3 Construction. As a rule, contract implementation guidelines for the procurement of Infrastructure projects shall comply with Annex “E” of this IRR. The following provisions shall supplement these procedures:

- 2.3.1 No works shall commence unless the Contractor has submitted the required documentary requirements and the Procuring Entity has given written approval. Work execution shall be in accordance with reviewed and approved documents.
- 2.3.2 The Contractor shall be responsible for obtaining all necessary information as to risks, contingencies and other circumstances which may affect the works and shall prepare and submit all necessary documents specified by the Procuring Entity to meet all regulatory approvals as specified in the contract documents.

- 2.3.3 The Contractor shall submit a detailed program of work within fourteen (14) calendar days after the issuance of the Notice to Proceed for approval by the Procuring Entity that shall include, among others:
- 2.3.3.1 The order in which it intends to carry out the work including anticipated timing for each stage of design/detailed engineering and construction;
 - 2.3.3.2 Periods for review of specific outputs and any other submissions and approvals;
 - 2.3.3.3 Sequence of timing for inspections and tests as specified in the contract documents;
 - 2.3.3.4 General description of the design and construction methods to be adopted;
 - 2.3.3.5 Number and names of personnel to be assigned for each stage of the work;
 - 2.3.3.6 List of equipment required on site for each major stage of the work; and
 - 2.3.3.7 Description of the quality control system to be utilized for the project.
- 2.3.4 Any errors, omissions, inconsistencies, inadequacies or failure submitted by the Contractor that do not comply with the requirements shall be rectified, resubmitted and reviewed at the Contractor's cost. If the Contractor wishes to modify any design or document which has been previously submitted, reviewed and approved, the Contractor shall notify the Procuring Entity within a reasonable period of time and shall shoulder the cost of such changes.
- 2.3.5 As a rule, changes in design and construction requirements shall be limited only to those that have not been anticipated in the contract documents prior to contract signing and approval. The following guidelines shall govern approval for change or variation orders:
- 2.3.5.1 Change Orders resulting from design errors, omissions or non-conformance with the performance specifications and parameters and the contract documents by the Contractor shall be implemented by the Contractor at no additional cost to the Procuring Entity.
 - 2.3.5.2 Provided that the Contractor suffers delay and/or incurs costs due to changes or errors in the Procuring Entity's performance specifications and parameters, he shall be entitled to either one of the following:
 - 2.3.5.2.1 An extension of time for any such delays under Section 10 of Annex "E"; or
 - 2.3.5.2.2 Payment for such costs as specified in the contract Documents, provided, that the cumulative amount of the variation order does not exceed ten per cent (10%) of the original contract price.
- 2.3.6 The contract documents shall include the manner and schedule of payment specifying the estimated contract amount and instalments in which the contract price will be paid.
- 2.3.7 The Contractor shall be entitled to advance payment subject to the provisions of Section 4 of Annex "E".
- 2.3.8 The Procuring Entity shall define the quality control procedures for the design and construction in accordance with agency guidelines and shall issue the proper certificates of acceptance for sections of the works or the whole of the works as provided for in the contract documents.

- 2.3.9 The Contractor shall provide all necessary equipment, personnel, instruments, documents and others to carry out specified tests.
- 2.3.10 This design and build projects shall have a minimum Defects Liability Period of one (1) year after contract completion or as provided for in the contract documents. This is without prejudice, however, to the liabilities imposed upon the engineer/architect who drew up the plans and specification for a building sanctioned under Section 1723 of the New Civil Code of the Philippines.
- 2.3.11 The Contractor shall be held liable for design and structural defects and/or failure of the completed project within the warranty periods specified in Section 62.2.3.2 of the IRR.

2.4 Completion. Upon completion, the Contractor shall submit a complete set of As-Built (AB) Documents to the Procuring Entity as described in their contracts. These shall be submitted in both electronic (AutoCAD File) (1 copy) and hard (3 copies: 1 orig., 2 reproduced copies) copies. The hard copies of the Detailed Designs/Drawings shall be printed on 20” x 30” paper size.

II. Time Frame

Upon receipt and signing of Notice to Proceed (NTP), the Contractor shall commence implementing the Contract. The Contractor is required to complete the Project within the schedule prescribed below:

| Activity | Months | | | | | | | | | | |
|--|-----------|---|---|---|---|---|---|---|---|----|------------|
| | June 2021 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | April 2022 |
| Planning, Detailed Design and approval | | | | | | | | | | | |
| Construction and acquisition of all applicable permits | | | | | | | | | | | |

III. Approved Budget for the Contract (ABC)

The total Approved Budget for the Contract (ABC) of this Design and Build Project is One Hundred Million Two Hundred Thousand Pesos only (PhP 100, 200, 000.00).

IV. Project Site

1. General

The building is to be constructed within the property of Davao del Sur State College, Matti, Digos City, Davao del Sur. The campus is approximately seven (7) kilometers away from the City proper and is accessible via paved road network. The total land area of the campus is five (5) hectares with existing buildings and facilities so distributed that the effect of construction activities on their functions would be minimal.

The proposed construction site has a setback of approximately five (5) meters from the other existing building line and is situated at the back of the General Education (GenEd) building.

Form longitudinal line at the back of the GenEd building, a twelve (12) meters set back shall be made to provide enough space for the construction of interior road network. The propose site is situated near the river embankment where the proposed building will be facing.

The development planning shall be exercised in such a way that the resulting design is sensitive to the environment; integrating more existing trees in the Site Development Plan as much as possible.

All toilets shall be provided with industrial exhaust fans with ducting directed outside the building.

2. Preliminary Survey and Mapping

The Contractor is required to conduct actual site survey and mapping so that the reference points/benchmarks needed for the final construction layout will be intelligently established. The establishment of all reference points/benchmarks and all decisions related thereto shall be subject to the approval of the Head of the Procuring Entity or his representative.

2.1 Boundaries. The land occupied by the DSSC is a government-donated property. If in the opinion of the Contractor there is a need to verify/check the orientations and/or measurements of the existing perimeter lines for benchmarking/referencing and other purposes related to the planning for the project, a copy of the title and technical descriptions of the land shall be readily made available by the administration of DSSC.

2.2 Terrain Condition. The terrain in the project site generally level with notable slope characteristics that would mainly concern the design. This, however, shall be verified by the Contractor

3. Preliminary Investigation

The Contractor shall conduct field investigations on the matters that would affect the designs and cost estimates for the project. As deemed necessary, the Contractor shall validate the applicability of the data provided in this section;

3.1 Soil and Geotechnical Data.

Data shall be provided right after the conduct of Soil Exploration.

3.2 Seismic. The Digos City is located in seismic zone 4 as per NSCP 2010. Within the City premise is the Central Digos Siemic Fault traversing from barangay Goma, Kiagot and up to the northern part of the city. Around eight (8) kilometers of the south-west part of Digos is the Tangbulan Fault traversing from the municipality of Bansalan, Matanao and up to the municipality of Hagonoy based on the latest data from HazardHunterPH (2019) of DOST-Phivolcs. The structural designer shall refer to the 2010 edition of NSCP volume 1 and other applicable seismic design codes and manuals to obtain complete seismic design parameters for the structural analysis, design and detailing of the project. (Structural Design)

3.3 Wind. As presented in the NSCP 2010 Edition, Digos City is situated in wind zone III with the basic wind speed 150 kph. The Contractor shall be aware

that Digos is not a typhoon-free city. In lieu of the given basic wind speed provided in table 207-1 of the NSCP 2010 regional climatic data may be used provided the provisions cited in section 207.5.4.2 of the Code are satisfied.

- 3.4 Climate.** The Digos City belongs to type II climate and is characterized by no dry season with very pronounced maximum rainfall from November to January. The annual rainfall based on climatological data ranges from 1,673.3 mm to 1,941.8mm. Over the course of the year, the temperature typically varies from 75°F to 91°F and is rarely below 73°F or above 95°F.

4. Utility Locations

The project area has existing pipe network for potable water and aerial network of electrical wiring. But due to the absence of public storm drainage lines outside its perimeter, DSSC has yet to construct its own storm drainage network. The contractor shall evaluate the effects of these conditions and if necessary, make adjustments to his Design and Build proposal.

V. Design Concepts and Requirements

1. Architectural Design

1.1 Laws, Codes and Standards. Architectural designs and specifications shall conform to the following Laws, Codes and Standards:

- i. National Building Code of the Philippines, latest edition
- ii. RA 9266 or Architecture Law, latest edition
- iii. BP 344 or Accessibility Law, latest edition
- iv. RA 9514 or New Fire Code of the Philippines
- v. Bureau of Product Standards (BPS)
- vi. Applicable Local Codes and Ordinances
- vii. Other Applicable Laws

1.2 Materials. The use of materials not specified herein shall be subject to prior approval of the Head of the Procuring Entity or his representative.

- i. All materials shall be fire and moisture resistant, non-toxic and non-attractive to termite attack.
- ii. Concrete hollow block 6" thick (1000 psi) on all external walls. Interior CHB walls 4" thick (600 psi) cement plastered finished.
- iii. Glass windows shall be of dark gray type with a minimum thickness of six (6) millimetres on powder coated aluminum frames.
- iv. Main entrance shall be made of double door frameless glass (tempered). Office and classroom doors shall be made of wood panel with viewing glass in compliance to GAD requirements. Toilet doors must be flush door marine plywood.
- v. Door Knobs shall be lever type stainless steel. Door hinges shall be 3.5" x 3.5" ball bearing. Magnetic Door stoppers - either wall or floor mounted. Provide door closer - Main, office, conference and toilet.
- vi. Glass partitions/walls must be of clear type (tempered) on powder coated aluminum frame and shall have a minimum thickness of twelve (12) millimetres except otherwise as required/stated in Section 1.4.6.

- vii. Use laminated boards complete with accessories for office cubicles and built-in cabinets/furniture of colors complementing the office walls color scheme.
- viii. All railings including grab rails shall be made of stainless steel (304) with dimensions conforming to the applicable codes, laws, and standards.
- ix. Apply concrete neutralizer for all concrete surfaces. Apply concrete primer for all concrete surfaces and ceiling boards. All painting works shall be fully-putty. Painted ceiling shall be in at least latex finish, while cornices and mouldings shall be in gloss enamel finish. Painted interior wall shall be at least two (2) coats in semi-gloss latex finish for ordinary rooms, e.g. offices, unless specified to higher type of paint. Painted exterior wall shall be at least two (2) coats in moisture-resistant/water-repellant solvent-based paint finish, textured or smooth, unless otherwise specified. Apply emulsion clear paint on all exterior concrete surfaces. Paint color and shade shall be approved first before application.
- x. Floor finish for wet areas shall be of non-skid tile finish. Synthetic granite 600mm x 600mm for all floor areas.
- xi. Regular stairs shall have risers at least 150mm high and treads at least 300mm wide. Handrails shall be 1100mm high. Clearances shall conform with the requirements of the Fire Code of the Philippines. Corridors shall have a minimum unobstruction width of 4000mm. This shall be measured clear from the surface of the finished wall and not on-center of the rough CHB wall. Handrails must be 304 stainless steel (1.5" diameter). Railings must be 16mm square bars space at 150mm O.C. Use aluminum step nosing 2" wide.
- xii. Ceiling Works - Interior - 4.5mm thick fiber cement board on metal framings. Exterior (roof eaves) - metal soffit on metal framings. Metal rod hangers with adjustable clips, and NOT galvanized iron wires, shall be used to support and suspend the carrying channel and light gauge metal furrings.
- xiii. Trusses - use 2-6mm thick angle bar for Top/bottom Chords. Use 1-6mm thick angle bar for vertical/diagonal web members.
- xiv. Purlins - Use 1.5mm thick x 2" x 6" CEE Purlins spaced at 700 mm O.C. Use 2-12mm dia. Plain Round Bars for Sag Rods. Use 16mm dia. Plain Round Bars for Cross Bracings with Turn Buckles.
- xv. Fascia Frame - Use 2-4mm thick angle bar for Fascia Frame. Use 12mm thick Fiber Cement Board for Fascia Board.
- xvi. Roofing- use 0.50mm thick Pre-painted Roofing Sheets, Rib-Type, Blue. Use Aluminum Radiant Heat Insulation MF 800 6-layer double-sided aluminium foil laminate with superior strength and puncture resistant properties on Galvanized Iron Wire Ga. 16 spaced at 300mm O.C. diagonals. All banded panels shall be 0.50mm thick prepainted, pre-moulded.
- xvii. Plumbing Works - Use series 1000 for sanitary/storm drainage pipings and fittings. For cold waterlines, use Polypropylene Pn16/Pn20 Fusion Weld Pipes with trims and fittings. Septic vault shall be of sufficient volume capacity consisting of three chambers. Water closets shall be 1.6 gpf. ADA manual flush valve, powerful direct-fed siphon jet action. Use ceramic under counter-type lavatory with stainless c-spout faucet. Kitchen Sink shall be of stainless steel seamless bowl with gooseneck faucet. Use waterless, replacesable cartridge wall hung urinal. Use standard stainless steel faucet for comfort rooms. Use 2 - horizontal stainless steel tank, capacity 2000 liters. Use booster

pump 2-hp, pressure tank bladder type should be compatible to 2-hp booster pump.

1.3 Site Plan. The layout of the Site Development Plan shall be in agreement with the following concepts:

- (a) The main entrance and façade of the building shall be oriented perpendicular access road.
- (b) The building shall have parking spaces and road networks that are harmoniously aligned with Campus Site Development Plan of the State College.
- (c) The Site Development Plan shall preferably integrate existing trees in its design. Wide entrance approach shall be incorporated.

1.4 Floor Plan. For aesthetics and other architectural considerations, the general floor layout need to be earthquake resilient in shape i.e rectangular shape.

1.4.1 Open, Flexible Floor Plan. To facilitate the arrangement of the Agriculture & DevCom activities and to allow for any potential future rearrangement to accommodate new or expanded services, the Agriculture & DevCom building should be free of interior load-bearing walls and closely spaced columns.

1.4.2 Adequate Floor Space.

Adequate space for Agriculture & DevCom building should contain enough floor space for the personnel to function and enough setting for students in their class rooms, laboratories and necessary equipment.

1.4.3 Logical Relationship of Function Areas. The building shall be planned and arranged so that functional areas of activities are properly related to one another for most intelligent use of the building by the public and most efficient use of the faculty, students and other stakeholders. Organization of space and signage shall encourage self-service use.

1.4.4 Appealing Building Environment. In both its interior and exterior appearance, the Agriculture & DevCom building shall project an inviting and attractive atmosphere, shall be well lighted and properly ventilated or cooled during the changes of weather.

The furnishings shall be comfortable and attractive in appearance with sufficient balance between informal and study type seating. Materials of which the building is constructed and finished shall be attractive and easy to maintain. It is advantageous for the Agriculture & DevCom building and its services if those passing by on foot or in a vehicle can easily see the building and view persons using this community resource.

As a requirement, the floor plan shall comply with the minimum floor space and/or floor area allocation given in the table below. The designer shall exercise his expertise as to the determination of the appropriate floor areas required based on the given expected occupants. Provisions for floor spaces deemed necessary but not specifically listed in the table (e.g. lobbies, hallways, waiting area, public assistance/information area, electrical room, server room, etc.) shall be provided.

Drawing Requirement:

Reflect floor space designations and occupancy, floor elevations and finishes, Doors and windows with labels/callout. Detailed plans showing fixture locations and other features shall be made if necessary to avoid detailing congestion.

Table 1. Minimum Floor Space Allocation

| Space Allocation | Preferred Location | Occupants or Capacity (pax)* | Floor Area |
|---|---------------------|------------------------------|--|
| | Ground floor | | |
| <ul style="list-style-type: none"> Receiving /info counter | -do- | 3 | Ground Floor total area 1000 sq. m. (20m x 50m) |
| <ul style="list-style-type: none"> Academic Offices (Dean's & department offices) (4 standard classroom) | -do- | 48 | |
| <ul style="list-style-type: none"> Faculty lounge (1 standard classroom) | -do- | 50 | |
| <ul style="list-style-type: none"> Lecture hall (tiered seating with pitch floor) (2 standard classroom) | -do- | 80 | |
| <ul style="list-style-type: none"> 1 standard classrooms | -do- | 45 | |
| | Second floor | | |
| <ul style="list-style-type: none"> 5 standard classrooms | -do- | 45 | Second Floor 1000 sq.m. (20m x 50m) |
| <ul style="list-style-type: none"> Learning commons | -do- | 45 | |
| <ul style="list-style-type: none"> Student lounge | -do- | 45 | |
| <ul style="list-style-type: none"> Computer lab | -do- | 45 | |
| | Third Floor | | |
| <ul style="list-style-type: none"> Multimedia Laboratory | -do- | 45 | Third Floor total area 1000 sq. m. (20m x 50m) |
| <ul style="list-style-type: none"> Integrated Laboratory | -do- | 45 | |
| <ul style="list-style-type: none"> Broadcast Studio (TV and Radio) /Laboratory/Strong Room | -do- | 20 | |
| <ul style="list-style-type: none"> 1 classroom | -do- | 45 | |
| Laboratory Rooms (Basic lab- An Sci, Horti, Soil Scie , Crop Prot lab and Stock Room) | -do- | 45 | |

| | | | |
|--------------------------|--|--|--------------------------------|
| • Roof Deck | | | ROOF DECK total area 500 sq.m. |
| 1. Solar panels (roof) | | | |
| 2. Covered Function Hall | | | |

* Designed number of permanent occupants.

1.4.5 Clustering of offices

The offices of the same cluster shall be *partially* partitioned through installation of partition panel 1.5m in height and in lamination finish of colours complementing the approved interior colour scheme. Access shall be provided between *partially* partitioned offices through gaps or installation of double-swinging doors (if necessary) of the same height as the partition panel.

1.4.6 Minimum Room Requirements

- **Office of the Institute Dean**

- a) Provide and conspicuously display printed texts of 80mm height, colored blue, on white 4mm thick plastic board indicating the title **OFFICE OF THE DEAN** outside the room.
- b) Provide 3m length built-in wall cabinet on lamination finish. The cabinet shall be a combination of open and closed book shelves, desk drawers and open shelves for pictures and plaques display. The design shall be of modern and executive type.
- c) Provide ceiling-height built-in open shelves of at least 1.2m total length for books and files storage. The lower half of the shelves shall have a width of 600mm, the upper half shall have a width of 300mm. The shelves shall be installed on a wall with ease of access by the Head Librarian.
- d) The Dean work station shall have a space for accommodation of at least 6 visitors and a small conference room that can cater at least 8 persons.
- e) The office shall have an exclusive toilet room and an anteroom. The toilet shall have at least 5.0 sq.m. clear area, with non-skid floor and wall tile finishes, stainless grab bars, urinals and complete toilet sets.
- f) Provide pantry with a length of 2 linear meter made of granite countertop with kitchen sink and cupboards on marine plyboard laminated finished.
- g) Provide cubicle-type work station for office staff with provisions for desktop or laptop computer equipped with convenience outlet.
- h) Provide Conference/Accreditation Room with build-in cabinets of at least 8 linear meter.

- **Office of the Department Head and Faculty**

- Provide and conspicuously display printed texts of 80mm height, colored blue, on white 4mm thick plastic board indicating the title **OFFICE OF THE AGRICULTURE DEPARTMENT/ OFFICE OF THE**

AGROFORESTRY AND OFFICE OF THE DEVELOPMENT COMMUNICATION DEPARTMENT outside the room.

- Provide 3m length built-in wall cabinet on lamination finish. The cabinet shall be a locker type for faculty at one side of the room
- Provide Office cubicle for the department chair to accommodate at least 2 faculty members.
- The office shall have a toilet and an anteroom shared with the adjacent office. The toilet shall have at least 5.0 sq.m. clear area, with floor and wall tile finishes, stainless grab bars, urinals and complete toilet sets.

- **Receiving/Information Counter**
 - a) The receiving/information counter serves as the first point of contact for the public with the Agri & DevCom building. Provide and conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **INFORMATION**.
 - b) Area provided shall be adequate for display of (2' x 3') posters or other relevant informative display items. **Lightings shall be provided to highlight display items.**
 - c) Provide electrical outlets and roughing-in for PABX Lines.

- **Faculty lounge**
 - a. The Faculty lounge is intended as a resting and working area for faculty and administrative staff.
 - b. Provide Sofas, working tables and chairs with electrical and space provisions for laptops.

- **Learning Commons/Server Rooms for Institute Automation Files**

This room shall be less accessible to the public for security reason. The floor area for server room is preferably not less than 15sq.m.

 - a) Provide and conspicuously display printed texts of 40mm height, colored blue, on white 4mm thick plastic board indicating the title **LEARNING COMMONS/SERVER ROOM**.
 - b) Provide ceiling-height cabinet of 3.0m length in a combination of open and closed book shelves on lamination finish. The upper 1/3 of the cabinet shall be dedicated to open book shelves and other printed files. The lower 2/3 shall be for closed book shelves secured with high quality door locks.
 - c) Provide workstation for three (3) office staff with electrical provision for desktop computers.

- **GAD Toilet (Male and Female)**
 - a) The GAD (Gender and Development) toilet shall consist of two toilet rooms; one for male (gay) and the other one for female (lesbian).
 - b) For toilet identification, printed texts of 30mm height, colored blue, on 4mm thick plastic boards indicating the titles **GAD Toilet – Male** and **GAD**

Toilet - Female shall be installed at the main entrance of each respective toilet.

- c) Each toilet shall have complete sets of toilet fixtures including stainless grab rail. Provide tiles finishes for interior walls and floors. (From Floor to ceiling. Ceiling height – 2.4 m)

- **PWD Toilet**

- a) The design of PWD (Person with Disabilities) toilet shall be compliant to BP 344 (accessibility law).
- b) For identification, handicapped symbol (with printed texts if necessary) shall be displayed on the entrance door.

- **Shared Comfort rooms, Male and Female**

- a) Comfort rooms shall be furnished with complete sets of fixtures including stainless grab bars and urinals (for males). Floors and walls shall be tiled finish (with trims) of colors and pattern as approved by the Procuring Entity or his representative (From Floor to ceiling. Ceiling height – 2.4 m).
- b) Provide common undercounter-type lavatories for each room (male and female). Countertops shall be made of granite slab of colors complementing the interior color of the room.
- c) The designer shall determine the appropriate sizes and quantity of lavatories and toilet sets required in proportion to all floors and expected number of users. There shall be separate provisions of comfort rooms for general public/clientele use and for employees.
- d) Each comfort room (male and female) shall be identified through posting of appropriate symbols/signage. Employee toilets shall be identified through additional posting printed texts of 30mm in height, colored blue, on white background plastic card indicating the message **For Employee Use Only**.

- **Agricultural Laboratory and Instrumentation Room**

The Stock Room (one standard classroom) this is used for storage of equipment and re-agents.

- a. Provide a conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **AGRICULTURAL LABORATORY AND INSTRUMENTATION ROOM** at the entrance.
- b. This room/area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- c. Provide built-in cabinets at least 60 cm depth by 240 cm high by 21 meters long (total length).
- d. Provide built-in cabinets at least 60 cm depth by 85 cm high by 7.8 meters long.
- e. Provide 90cm by 200cm sliding window opening along hallway with counter (inner & outer).

- f. Provide 60 x 60 cm unglazed floor tiles.

- **Animal Science Laboratory**

The Animal Science Laboratory will house animal science related specimens. It is where the students perform basic laboratory activities and the conduct of classes related to Animal Science.

- a. Provide a conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **ANIMAL SCIENCE LABORATORY** at the entrance.
- b. This room/area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- c. Room shall accommodate 35 students for laboratory activities.
- d. Provide 12 linear meter phenolic resin counter top with 16 inches high backsplash with 2- deep single tub large sinks with stainless steel flexible kitchen faucet (wall mounted).
- e. Provide 60 x 60 cm unglazed floor tiles.

Requirements:

1. Space shall be able to accommodate the 35 students.
2. Lecture space shall have a roughing-in for interactive projector.
3. Provide circuit breaker control for electrical connections of tables.
4. Provide roughing-in for eight (8) electrical convenience outlet, three (3) duplex convenience outlet and two (2) single convenience outlet (flush type) for laboratory equipment.
5. Good ventilation (refer to NATIONAL BUILDING CODE OF THE PHILIPPINES) and illumination (refer to NEC).

- **Crop Science Laboratory**

The Crop Science Laboratory will house crop science related specimens. It is where the students perform basic laboratory activities and the conduct of classes related to Crop Science.

- a. Provide a conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **CROP SCIENCE LABORATORY** at the entrance.
- b. This room/area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- c. Room shall accommodate 40 students for laboratory activities.

- d. Provide 12 linear meter phenolic resin counter top with 16 inches high backsplash with 2- deep single tub large sinks with stainless steel flexible kitchen faucet (wall mounted).
- e. Provide 60 x 60 cm unglazed floor tiles.

Requirements:

1. Space shall be able to accommodate the 40 students.
2. Lecture space shall have a roughing-in for interactive projector.
3. Provide circuit breaker control for electrical connections of tables.
4. Provide roughing-in for twelve (12) electrical convenience outlet and four (4) duplex convenience outlet (flush type) for laboratory equipment.
5. Good ventilation (refer to NATIONAL BUILDING CODE OF THE PHILIPPINES) and illumination (refer to NEC).

- **Soil Science Laboratory**

The Soil Science Laboratory will house soil science related specimens. It is where the students perform basic laboratory activities and the conduct of classes related to Soil Science.

- a. Provide a conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **SOIL SCIENCE LABORATORY** at the entrance.
- b. This room/area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- c. Room shall accommodate 40 students for laboratory activities.
- d. Provide 12 linear meter phenolic resin counter top with 16 inches high backsplash with 2- deep single tub large sinks with stainless steel flexible kitchen faucet (wall mounted).
- e. Provide 60 x 60 cm unglazed floor tiles.

Requirements:

1. Space shall be able to accommodate the 40 students.
2. Lecture space shall have a roughing-in for interactive projector.
3. Provide circuit breaker control for electrical connections of tables.
4. Provide roughing-in for twelve (12) electrical convenience outlet and four (4) duplex convenience outlet (flush type) for laboratory equipment.
5. Good ventilation (refer to NATIONAL BUILDING CODE OF THE PHILIPPINES) and illumination (refer to NEC).

- **Crop Protection Laboratory**

The basic Crop Protection Laboratory will house crop protection related specimens. It is where the students perform basic laboratory activities and the conduct of classes related to Crop Protection.

- a. Provide a conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **CROP PROTECTION LABORATORY** at the entrance.
- b. This room/area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- c. Room shall accommodate 32 students for laboratory activities 10m x 10m room size.
- d. Provide 11 linear meter phenolic resin counter top with 16 inches high backsplash with 2- deep single tub large sinks with stainless steel flexible kitchen faucet (wall mounted).
- e. Provide 1.5m x 3m Bio Assay Room 12mm glass tempered walls with 12mm glass tempered door.
- f. Provide 1.5m x 3m Isolation Room CMU walls with cement plastered finish and painted finish with fix glass windows dark gray type with a minimum thickness of six (6) millimetres on powder coated aluminum frames.
- g. Provide 60 x 60 cm unglazed floor tiles.

Requirements:

1. Space shall be able to accommodate the 40 students.
2. Lecture space shall have a roughing-in for interactive projector.
3. Provide circuit breaker control for electrical connections of tables.
4. Provide roughing-in for twelve (12) electrical convenience outlet and four (4) duplex convenience outlet (flush type) for laboratory equipment.
5. Good ventilation for window openings (refer to National Building Code of the Philippines) and illumination (refer to NEC).
6. Provide mechanical ventilator for proper disposal of fumes (refer to National Building Code of the Philippines).

- **Multimedia Laboratory**

The Multimedia laboratory is where students can learn to produce/create digital outputs.

- a) Provide and conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **MULTIMEDIA LABORATORY** at the entrance.
- b) This room/area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- c) Room shall accommodate 40-45 students for laboratory activities. It shall have provisions for at least 40 computers and at least 10 printers to be used for the digital outputs of students.
- d) Room shall be airconditioned using the latest split type inverter technology.

Requirements:

1. Space shall be able to accommodate the 45 students with 40 computer terminals and 10 printers with room for a lecture area.
2. Lecture space should have a roughing-in for whiteboard and an interactive projector.

3. Networking provisions shall be provided for the computers and printers.
4. Electrical provisions shall be provided for laboratory equipment.

- **Integrated Laboratory**

The Integrated Laboratory is mainly used for subjects with recitation and laboratory, small lecture classes, workshop, training space and those with non-digital outputs.

Provide and conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **Integrated Laboratory** at the entrance.

- a) This room/area shall be enclosed with cmu walls with cement plastered finish and painted finish.
- b) Room shall accommodate 40-45 students for laboratory activities. It shall have a roughing-in for a whiteboard with interactive projector, collapsible chairs and tables.
- c) Room shall be airconditioned using the latest split type inverter technology.

Requirements:

1. Space shall be able to accommodate the 45 students with collapsible tables and chairs and shall have a lecture space.
2. Lecture space should have a roughing-in for whiteboard with interactive projector.
3. Electrical provisions shall be provided for laptops and other equipment that may be used in the Lab.

- **Broadcast Studio/Laboratory**

- a. The Broadcast studio/Laboratory is the space where students learn the fundamentals in broadcasting- both TV and Radio. It shall house both the Radio Station and Television Studio. This Laboratory will be used in producing development-oriented TV and Radio programs. The space can also be used for Audio and Video recording and production of video of learning materials for online and distance learning.
- b. Provide and conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **Broadcast Studio/Laboratory** at the entrance.
- c. This area shall be enclosed with CMU walls with cement plastered finish and painted finish.
- d. The studio should have sound absorbing acoustic panels placed on walls and ceilings.
- e. The Studio/Lab shall have twice the floor area of the typical classroom/lab as it needs to have separate area for Radio and another separate area for TV/Video production.
- f. A small receiving area shall be provided for visitors and guests.
- g. Provide pantry with a length of 2 linear meter made of granite countertop with kitchen sink and cupboards on marine plyboard laminated finished.

- h. A small enclosed, very cold airconditioned room shall be provided for the radio transmitter. It will have a redundant airconditioning unit as back up in case the primary aircon malfunctions.
- i. A closed editing /recording room for both audio and video shall be provided. It will be sound proofed. It will house separate computers for Audio and video recording and editing. It will have split-type inverter airconditioning.
- j. A shooting area will be provided with provisions for overhead and side-lighting, and sound proofing. It will have a cyclorama/green screen wall and will occupy a large portion of the TV/Video area. It will have a separate split-type inverter airconditioning.
- k. The Radio Broadcast booth will be another enclosed sound proofed room that is enough to occupy a radio host/DJ and at least 4 guests and the radio console,microphones,mixers, processors,3 computers and other equipment.. It will also have provisions for light and camera placements for the streaming/online programs. It will have a separate split-type inverter airconditioning.
- l. Provide a strong room (vault type) used for storage of high valued equipment.

Requirements:

1. Provisions for cabling of various equipment and also to the broadcast antenna shall be provided.
2. Electrical provisions shall be provided for all equipment.

- **DevCom Classrooms**

The DevCom classrooms are mainly used for lecture classes.

- a) Provide and conspicuously display printed texts of 75mm height, colored blue, on white 4mm thick plastic board indicating the title **DC 301 until DC 308** at the front door.
- b) First two classrooms will have a movable wall in between, which when removed, both rooms can have a seating capacity of 80 students. The space can be used for larger groups, departmental activities or exams.
- c) Areas shall be enclosed with cmu walls with cement plastered finish and painted finish.
- d) Rooms shall accommodate 40-45 students for lecture activities. It shall have a roughing-in for a whiteboard, armchairs, and lecturer's table
- e) The rooms should have a roughing-in for a smart TV for projection of lecture materials
- f) Roughing -in for ceiling fans

Requirements:

3. Space shall be able to accommodate the 45 students
4. Lecture space should have a roughing-in for whiteboard
5. Electrical provisions shall be provided for laptops and other equipment that may be used in the lecture rooms.

- **Shared Comfort rooms, Male and Female**

Requirements are the same as for ground floor.

- **Conference/Seminar Hall with Pantry**

- a) Provide and conspicuously display printed texts of 40mm height, colored blue, on white 4mm thick plastic board indicating the title **CONFERENCE/SEMINAR HALL** at the main entrance.
- b) The hall room shall accommodate at least 80 participants.
- c) Provisions shall be made for sound system and IT equipment mountings. There shall be a dedicated wall area for multimedia presentations.
- d) The pantry shall be furnished with kitchen sink and cupboards on lamination finish.
- e) Tiered design seats similar to an amphitheatre.

1.5 Furniture and Fixtures

- a) Unless otherwise specified, the appropriate design of built-in cabinets, shelves, bookshelves, cupboards, and other furniture and fixtures shall be referred to the expertise of the designing architect subject to the approval of the Head of procuring Entity. The materials to be used shall be of modern lamination finish.

1.6 Building Elevations and Sections

The building shall promote “*earthquake resilient and green architecture*” without compromising the aesthetics of its appearance. Maximize utilization of natural lighting through reflecting more dark gray/ clear glass windows and/or wall openings on the exterior and interior walls. Likewise, take advantage of natural ventilation for interior spaces (lobbies and hallways) not covered by the artificial air-conditioning system.

Drawing Requirement:

Building elevations shall be drawn in the same orientation as the floor plan. Building sections shall be detailed consistently as marked by section line callouts on the floor plan. Reflect complete, clear and consistent vertical measurements and specification labels/callouts. Drawing scale shall not be smaller than 1:100m

1.7 Ceiling Plans

Ceiling needs not be plain. Integration of drop ceilings, curves and other aesthetically pleasing designs are recommended for floors with special aesthetic treatment provided, however, that such designs appropriately complement the distribution and arrangement of lighting fixtures and ceiling-concealed air-condition vents.

Drawing Requirement:

Clearly reflect ceiling mounted fixtures (**lighting, smoke detectors, vents, exhaust fans**) on the ceiling plan. The description, distribution and location of these fixtures shall be consistent with the electrical and mechanical plans. Callouts or labels for specification of finishes, materials to be used, attached fixtures and framing shall be clearly indicated. Main ceiling height relative to the finished floor line shall be in proportion to the floor area but not be less than 3m.

1.8 Roof Plan

Drawing Requirement:

Clearly reflect slope direction and downspout locations on the roof plan. Indicate roofing material description through clear labels/callouts. Downspout location and description shall be consistent with plumbing plan.

1.9 Tile Pattern

All floors shall be trowelled finish except comfort rooms, conference room, laboratories and offices. The size and type of tiles shall be proportionate to the area of floor being considered. It shall be preferable to use synthetic granite tiles not smaller than 600mm x 600mm for floor area exceeding or equal to 8sq.m. Tile size and type for floor area smaller than 8sq.m. shall be subject to the decision of the designing architect with the approval of the Head of Procuring Entity but in no case be the size smaller than 300mm x 300mm.

Drawing Requirement:

Provide details/drawings for the tile pattern design. The drawing shall indicate the size, type, arrangement pattern and colors of the tiles used. For ease of appreciation it is preferable to present the design fully rendered.

1.10 Elevator Shaft

Elevator Shaft must be prepared and ready for the future installation of MRL type (Machine roomless) Passenger Elevator (transparent) that has a capacity of 10 persons.

Drawing Requirement:

Provide details/drawings for the elevator shaft. The drawing shall indicate the dimensions, placing of girder and lintel beams and the location of the elevator shaft.

2. Structural Design

The structural framing shall be so configured that a building structure with high degree of redundancy is obtained. The structure shall be made of reinforced concrete pedestals and structural steel columns and beams. Use locally available materials to avoid inconvenience and delay and to encourage local industry participation. Adopt economical design without sacrificing the strength and serviceability of the building structure. The design shall be compliant to the governing codes and standards listed below.

2.1 Laws, Codes and Standards. Structural design and specifications shall conform to the following Laws, Codes and Standards:

- i. National Structural Code of the Philippines (NSCP) 2010 edition
- ii. American Concrete Institute (ACI Code)
- iii. National Building Code of the Philippines, latest edition
- iv. Local Codes and Ordinances
- v. American Society for Testing Materials (ASTM)
- vi. American Welding Society
- vii. Bureau of Product Standards (BPS)
- viii. Philippine National Standards (PNS)
- ix. DPWH Blue Book

- 2.2 Materials.** Listed below are the minimum quality specifications for the construction materials. Utilization of items and material quality not described in the list shall be subject to prior approval by the Head of Procuring Entity or his Representative.
- i. Concrete shall have a minimum 28-day compressive strength of 21 Mpa.
 - ii. Fine aggregates shall consist of hard, tough, durable and uncoated particles of natural sand.
 - iii. Coarse aggregates shall consist of crushed stone or rock, or a combination thereof conforming to ASTM C33.
 - iv. Use Portland cement conforming to ASTM C150, Type I or Type II. All cement shall be a product of one reputable manufacturer.
 - v. Reinforcing steel shall be deformed billet steel bars conforming to PNS Grade 40 for 12mm dia. and below. Use PNS Grade 60 for 16mm dia. and larger bars.
 - vi. Concrete hollow block 6" thick (1000 psi) on all external walls. Interior CHB walls 4" thick (600 psi) cement plastered finished.
 - vii. Structural steel shapes, plates and bars shall conform to ASTM specification A36/A6M.
 - viii. Welding Electrodes shall be E60, or E70, WAS specs D1.1.
- 2.3 Structural Detailing.** Provide details on structural joints/connections, lengths and locations of bar splices and cutoff points. Use seismic hooks for ties and stirrups. Structural detailing shall apply the provisions for *Earthquake Resistant Structures* per NSCP 2010 Section 421.

3. Electrical Design

Electrical design shall anticipate future electrical expansion and development. Building's Electrical Service Entrance connection shall have underground roughing-in provisions (electrical manholes) for the underground cabling distribution from the Electrical Three-phase Power house situated nearest to the library building structure. Use 400-Volts line to line, 230 volts line to neutral service 3-phase, 4-wire entrance connection for the building. Entrance wires shall be in rigid steel conduit embedded and protected sufficiently underground. Likewise, there shall be a grounding system that is compliant to the provisions of the Philippine Electrical Code. Building's Electrical distribution system shall have Normal power and Emergency power distribution.

- 3.1 Laws, Codes and Standards.** Electrical installations of the equipment shall conform to a well-recognized engineering practice and the Laws, Codes and Standards listed below:
- i. Philippine Electrical Code (PEC)
 - ii. National Electrical Code (NEC)
 - iii. New Fire Code of the Philippines
 - iv. National Building Code of the Philippines and Its New IRR
 - v. Existing Local Codes and Ordinances
 - vi. American Society for Testing Materials (ASTM)
 - vii. Bureau of Product Standards (BPS)
 - viii. Underwriters Laboratory (UL)
 - ix. National Fire Protection Association
 - x. International Electrotechnical Commission (IEC)
 - xi. Illumination Engineering Society (IES)

- xii. National Electrical Manufacturer's Association (NEMA)
- xiii. IEEE Standards

3.2 Materials. All materials to be installed shall be brand new conforming to the applicable standards.

- i. The use of LED (Light-Emitting Diode) lighting fixtures recommended by DOE (Department of Energy) is highly recommended.
- ii. Use THHN copper wire (UL Listed) of size not smaller than 3.5 sq. mm.
- iii. No conduit of dia. less than 20mm shall be installed. PVC conduit shall be rigid. Rigid steel pipes (RSC, RMC, EMT, IMC, EMT) shall be zinc coated or galvanized.
- iv. Panel boards shall be flush mounted with certain main and din-rail type miniature circuit breakers for branch circuits. Panel boards shall have earth and neutral terminals/bus.
- v. Electrical tapes shall be of electrical friction or rubber with insulation and protection rating of 600V.
- vi. All boxes shall be uPVC type and approved products of reputable manufacturers. The size shall be 50mm x 100mm for utility boxes and 100mm octagonal for junction boxes.
- vii. Switches shall be LED illuminated, wide series and product of reputable manufacturer with ratings 10A, 250V or as noted and approved.
- viii. General use receptacles shall be wide series and product of reputable manufacturer with ratings 15A, 250V grounding type or as noted and approved.
- ix. Special purpose receptacles shall be product of reputable manufacturer with ratings as indicated on the drawings and specifications with provision for earth terminal.

3.3 Power System

Electrical room shall be provided in every floor with complete signage. Building's Main Distribution Panel and Floor Distribution Panels shall have LED Digital Panel Multi-Function Meter for Current, Frequency, On Hour, RPM, Run Hour and Voltage. All Panel boards shall be power-coated, ground-bonded and with lockable doors. Panel boards shall be flush-mounted. All Panel boards and all Branch circuits shall be properly labelled and tagged. The system shall be ready for emergency power (alternate source) connection in case of brownout.

Power outlets shall be adequate for office functions. Outlets shall be installed on ceilings as outlet provision for Display projectors. Supply and install floor outlets if space and room utilization so require (discourage the use of extension wires for power connection).

3.4 Lighting System

Adopt an energy-saving design. The lighting design shall be adequate for the size, type, and in conformance to illumination standards for institutional buildings (250 – 500 lux). Lighting fixtures shall be flush mounted on ceilings. Ornamental lighting designs may be considered if deemed necessary. Emergency lights shall be provided in every habitable rooms, stairways and hallways. Emergency Exits shall be labelled with illuminated doubled faced exit lights and signage.

3.5 Auxiliary System

Provide and install Auxiliary systems for communication (telephone, LAN, PABX, etc.) and security system.

3.6 Lightning Protection System

The building shall be protected against lightning. Provide and install adequate lightning protection system.

3.7 Solar Power System

The building shall be equipped with grid-tied solar power system with net-metering at least 50 KVA. A room shall be provided to house the solar power equipment. Smart Solar inverters shall be used for efficient utilization of power distribution of Solar-produced electrical power and Utility-sourced electrical power. Solar power shall be used primarily for the lightings and secondly for security systems and fire detection and alarm systems.

3.8 Fire detection and alarm system (FDAS)

The building shall be equipped with an addressable Fire detection and alarm system (FDAS). Smoke/Heat Detectors shall be installed on all suitable rooms, hallways and any place which deemed necessary.

4. Information and Communication Design

Provide suitable design and details of local area network for voice and data connectivity. The complete cabling system to be installed for the building shall be suitable to support analog and digital voice applications, data, local area networks (LAN), video and low voltage devices for building controls and management on a common cabling platform. The systems supported include telecommunications (telephone, facsimile, telecom leased lines/dedicated) and data networks.

Voice and data system requirements shall be readily available for all tables and cubicles for each office/rooms. The conference rooms shall be ready for presentation devices such as built-in projectors and the like. For security purposes, installation of cabling for CCTV is required. All works shall be executed under the direct supervision of a full time Electronics and Communication Engineer (ECE).

4.1 Laws, Codes, and Standards. The information and communications design shall be compliant to the governing codes and standards identified below.

- i. IEEE Standards
- ii. Philippine Electrical Code (PEC)
- iii. Underwriters Laboratory (UL)
- iv. ANSI/TIA-568-C.2: “Balanced Twisted Pair Telecommunications Cabling Systems Standard”.
- v. ANSI/TIA-568-C.3: “Optical Fiber Telecommunications Cabling Systems Standard”.
- vi. ANSI/TIA-606-B “Administration Standard Telecommunications Infrastructure”
- vii. CCTV Standards & Codes of Practice

- viii. Any local mandatory regulations
- ix. R.A. 9282

4.2 Materials. Installation of materials shall be brand new conforming to applicable standards.

- i. Category 5e and/or 6 Shielded Twisted Pair (TP) copper wires will be used for LAN and shall be served from Telephone Terminal Cabinet (TTC) or Intermediate Distribution Frame (IDF) within 90 meters.
- ii. LAN Socket with 2-gang face plate for LAN
- iii. Fiber optic cables
- iv. Telephone system shall consist of cat5e Shielded Twisted Pair (TP) copper wires
- v. Equipment/Station Patch Cords
- vi. Raceways, conduits and wire ways
- vii. Sizing of pull boxes shall be computed based on code requirements

4.3 Local Area Network. LAN installations shall be in accordance with the following scope and specifications:

- i. Installation of structured cabling system for data and voice connectivity and wireless network.
- ii. LAN main distribution should utilize fiber optic technology for future development.
- iii. Provisions for LAN expansion and development.
- iv. Perform end-to-end results for all data cables and information outlets and document the test results.
- v. Shall label all cables, information outlets and patch panels according to standards.
- vi. Shall provide complete documentation including schematic diagrams and drawings showing cable routing, cable runs, location of information outlet and patch panel configurations.
- vii. Shall provide any necessary screws, anchors, clamps, tie wraps, distribution rings, wire moldings, miscellaneous grounding and support hardware, etc., necessary to facilitate the installation of cabling system.

4.4 Security System.

Provide cabling and CCTV security system of at least 16 channel Digital Video Recorder (DVR) with 16 IP cameras installed at all public areas such as entrance, exit, hallways, corridors, elevator, driveways, lobby, parking, loading/unloading area, waiting areas, tellers and frontlines.

4.5 Other Requirements

Supply of readily made communication cabinets (intermediate distribution frame) for each floor of the building. Telecommunication Terminal Cabinet shall be wall-mounted and has sufficient space or dimension to accommodate required wiring components. Network and Data Center Server Room cabling shall be ready for different devices and other connections since it will be the place where the server will be housed.

Voice and Data Wiring shall be separated from any other building or power wiring to prevent humming and electromagnetic interference (EMI) to meet or exceed the ANSI/TIA 568A cabling standard.

- 4.6 Wireless Local Area Network.** WLAN **roughing-in only** shall be provided on every floor and shall meet or exceed IEEE 802.11ac standard and have the same source with the LAN data connection. WLAN **roughing-in** shall be as efficient as LAN connection and can be utilized throughout the whole building.

5. Mechanical Design

The use energy-efficient and cost-saving technology is highly recommended for all mechanical designs and installations. The design shall be compliant to applicable Laws, Codes, and Standards listed below.

- 5.1 Laws, Codes, and Standards.** The mechanical design shall be compliant to the governing codes and standards identified below.

- i. National Building code of the Philippines and its new IRR
- ii. New Fire Code of the Philippines
- iii. Mechanical Engineering Code of the Philippines
- iv. Existing Local Codes and Ordinances
- v. Bureau of Product Standards (BPS)
- vi. Philippine National Standards (PNS)
- vii. Underwriters Laboratory (UL) and Factory Mutual (FM)
- viii. National Fire Protection Association
- ix. International Electrotechnical Commission (IEC)
- x. American Society of Heating, Refrigeration and Air-conditioning Engineers

- 5.2 Materials.** The materials to be used for mechanical installations shall be brand new and of superior quality conforming to and recognized by applicable standards. Installation of items not listed below shall be subject to prior approval.

- i. Use electric motor driven fire pump that is designed specifically for an automatic water sprinkler system.
- ii. Use electric motor driven jockey pump.
- iii. Sprinkler head shall be pendant, upright or sidewall unit, 83 LPM flow capacity per head and temperature fusing at 57.5° C to 74°C.
- iv. Pipes shall be G.I. Schedule 40.

5.3 Fire Protection and Detection System

Provide and install for fire protection, detection and suppression system on locations as specified by the applicable codes, standards and local building laws. This shall include fire sprinkler, fire hydrants, firehoses with cabinets, wet and dry stand pipe system, fire detection and alarm system(FDAS).

5.4 Ventilation and Air-conditioning System

Provide and install for split-type inverter air-conditioning system (Conference Room, Offices, Devcom Laboratories and Learning Commons) in accordance with the latest air-conditioning technology.

6. Sanitary /Plumbing Design

Design and install a *maintenance-friendly* sanitary/plumbing system. There shall be sufficient, reachable and workable valves, clean outs and manholes for system maintenance. Piping network shall be free of unnecessary bends and section reductions. The storm draining system shall allow flow redirections in case of clogged downspouts so as not to cause overflow on the eave ceilings.

6.1 Laws, Codes and Standards. The sanitary/Plumbing Design shall conform with the following Laws, Codes and Standards

- I. National Building Code of the Philippines and Its New IRR
- II. National Plumbing Code of the Philippines (NPCP)
- III. Sanitation Code of the Philippines
- IV. Existing Local Codes and Ordinances.
- V. Bureau of Product Standards (BPS)
- VI. Philippine National Standards for Drinking-Water
- VII. National Plumbers Association of the Philippines (NAMPAP)
- VIII. Philippine Society of Sanitary Engineers, Inc. (PSSE)

6.2 Materials. Sanitary/plumbing materials including fixtures shall be brand new and product of reputable manufacturers conforming to applicable standards.

- I. For sewer/waste lines, vents and downspouts, use uPVC extra series 1000 complete with trims and fittings.
- II. Use 250mm dia. CDP for drainage pipes.
- III. Drainage manholes shall be made of plastered CHB with steel grating cover.
- IV. Floor Drains shall be 150mm x 150mm stainless steel with strainer.
- V. For cold waterlines, use Polypropylene Pn16/Pn20 Fusion Weld Pipes with trims and fittings.
- VI. Water closets shall be tank-type with lever flush.
- VII. Use ceramic under counter-type lavatory with stainless c-spout faucet.
- VIII. Kitchen Sink shall be of stainless steel seamless bowl with gooseneck faucet.
- IX. Use waterless wall hung urinal.
- X. Use standard stainless faucet for comfort rooms.

6.3 Water Lines

Provide adequate branches of water lines. When site conditions so allow, the main distribution lines shall not be embedded to the structure so as to favour future connection expansions and easy diagnosis of connection leakage. Gate valves and check valves shall be strategically located and distributed so as to permit localized shutoff in case of repairs.

6.4 Sewer Lines

There shall be sufficient branches of sewer lines. Fixture and floor drain pipes shall not be connected to water closet pipes. It shall be recommended to conceal vertical sewer pipes in false columns for ease of access in case of repairs. Sewer lines on the ground shall have sufficient slope to allow draining by gravity. Such lines shall be sufficiently covered with earth.

6.5 Storm Drainage Lines



The roof storm drainage shall allow flow redirections so that in case of clogged downspouts, storm water will not overflow on the eave ceilings. Likewise, there shall be a provision for surface drainage and temporary storm water storage as the College does have a drainage outlet at present.

6.6 Septic Vault

The septic vault shall be of sufficient volume capacity consisting of three chambers; two primary sedimentation chambers, which serve as a digestion chambers, and the final sedimentation chamber, which receives the overflow water from the digestion chamber. The design of the septic vault shall conform to the applicable codes and standards.

7. Landscaping

Provide landscaping and hardscaping around the building perimeter at least 282 sq.m. Plants and ground cover varieties will be subject to Procuring Entities' approval.

Prepared by:

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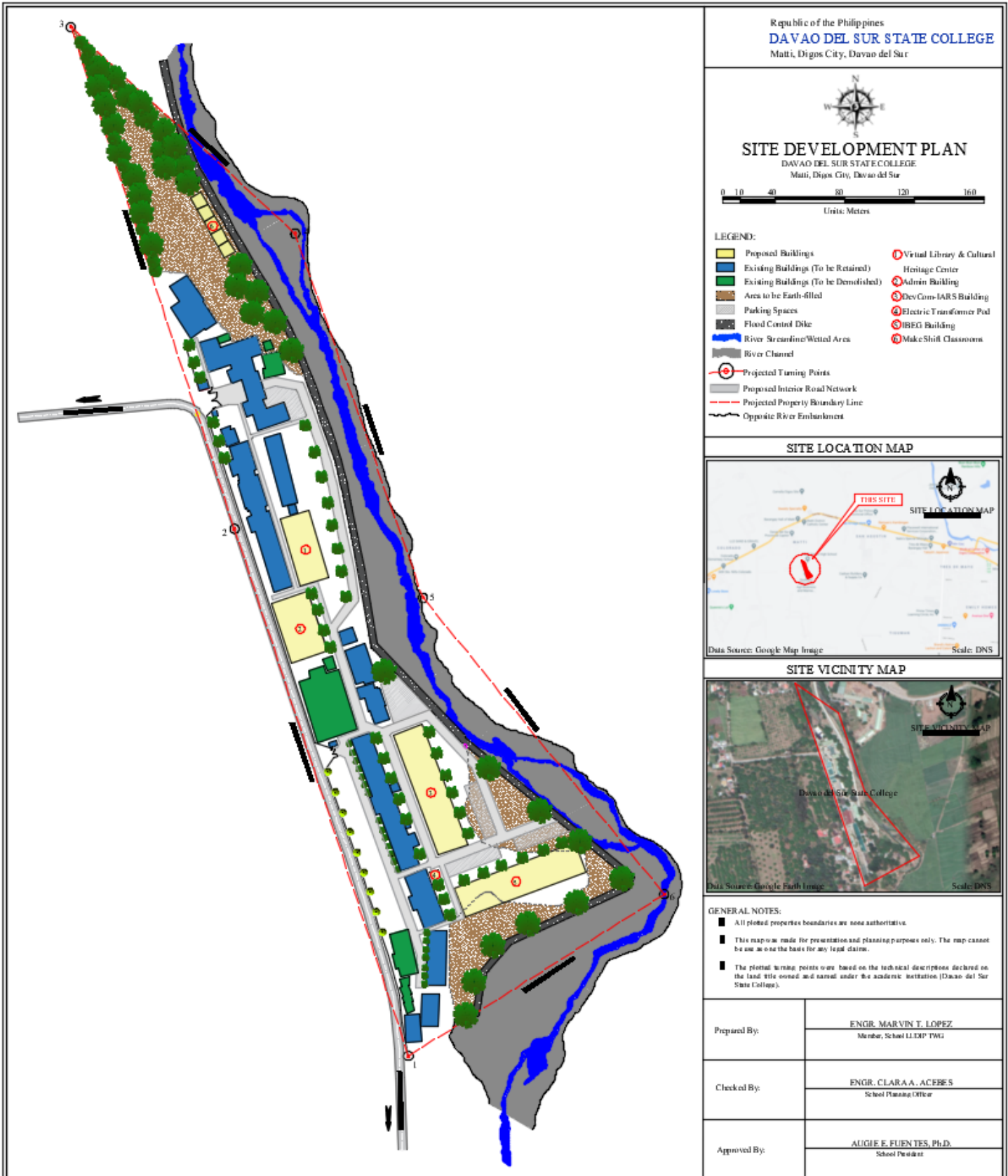
Noted:

AR. JASON B. SANTOS
Head, Infra

Approved:

AUGIE E. FUENTES, PhD
College President

Section VII. Drawings





Section VIII. Bill of Quantities

The Bill of Quantities (BOQ) shall be presented in a format prescribed below. Provide subtotal for every pay item.

| Republic of the Philippines AO ORIENTAL STATE COLLEGE OF SCIENCE AND TECHNOLOGY Dahican, City of Mati, Davao Oriental Tel Fax – (087) 3883-195 | | | | | |
|--|-------------|------|------|------------------|-------|
| Project Title: Design and Build of DOSCST Library Building II Location: DOSCST Main Campus, Dahican, City of Mati, Davao Oriental | | | | | |
| BILL OF QUANTITIES | | | | | |
| ITEM NO. | DESCRIPTION | QTY. | UNIT | UNIT COST | TOTAL |
| A. GENERAL REQUIREMENTS | | | | | |
| | | | | | |
| | | | | | |
| | | | | <i>Sub total</i> | |
| B. CONSTRUCTION | | | | | |
| | | | | | |
| | | | | | |
| | | | | <i>Sub total</i> | |
| TOTAL COST | | | | PhP | |

Submitted by :

 Name of the Representative of the Contractor

 Position

 Name of the Contractor

 Date



Republic of the Philippines
DAVAO DEL SUR STATE COLLEGE
Brgy. Matti, Digos City, Davao del Sur, Philippines 8002

DSSC

