



## SCOPE OF WORK

### CONSTRUCTION OF DORMITORY BUILDING III (MALE)- (NEGOTIATED PROCUREMENT)

OF

### PHILIPPINE SCIENCE HIGH SCHOOL - ZAMBOANGA PENINSULA REGION CAMPUS BRGY. COGON, DIPOLOG CITY (DESIGN AND BUILD SCHEME)

#### I. BACKGROUND AND OBJECTIVE

The Dormitory 1 and the Dormitory 2 have a total of only sixty-eight (68) dormers' rooms as some of the areas are allocated for offices, guest rooms and study area, and for utility and spiritual needs.

With the growing number of scholars from faraway places, there is a high possibility that more of them want to stay in the dormitories. With this consideration, the present available rooms cannot suffice for the need. Thus, a third dormitory is necessary.

The PHILIPPINE SCIENCE HIGH SCHOOL-ZAMBOANGA PENINSULA REGION CAMPUS (PSHS-ZRC), through an approved allocation for capital outlays under FY 2020 General Appropriation Act, intends to apply the sum of FIFTEEN MILLION PESOS (₱15,000,000.00) being the approved budget for the **CONSTRUCTION OF DORMITORY BUILDING III (MALE)-Negotiated Procurement** on a **Design and Build** scheme. This first of the three phases to finish the project will have a work duration of 240 calendar days.

#### II. PROJECT DESCRIPTION AND LOCATION

The Dormitory Building III shall be located across the Dormitory Building I and beside the Dormitory Building II. It will be a three-storey building with basement that will be used as Indoor Recreation Area and Isolation Rooms. See attached Campus Master Plan.

The design for this building shall be a complete set of plans that are required in securing for a building permit.

The Contractor shall submit, under Section III Conceptual Design below:

- **In the Technical Documents:**
  - One (1) set for the design of the whole building with a proposed total cost of Forty-Five Million Pesos (₱45,000,000.00), AND
  - One (1) set for the design for this Phase 1 project only; and
- **In the Financial Component:**
  - One (1) set of the bill of quantities for the whole building with a proposed total cost of Forty-Five Million Pesos (₱45,000,000.00), AND
  - One (1) set for this Phase 1 project only.

**However, only the amount for the Phase 1 project shall be reflected in the Financial Bid Form.**

**This Phase 1 of the project covers the Structural Works. Integral waterproofing is included for basement construction.**

The Phase 1 project will have an Approved Budget for the Contract (ABC) of FIFTEEN MILLION PESOS (₱15,000,000.00) including all taxes and applicable permits, licenses and clearances, for the project mentioned above.

**DESIGN COST:** Maximum of 2.7% of the Dormitory Building III cost as designed (maximum of ₱45,000,000.00), all in.

**CIVIL WORKS COST:** Phase 1 total project cost as designed (maximum of ₱15,000,000.00) LESS the Design Cost (for the whole Dormitory Building III), all in.

### III. CONCEPTUAL DESIGN

#### 1. DESIGN OF THE PROJECT

The proposed DORMITORY BUILDING III (Phase 1) shall have a semblance to Dormitory 1 exterior design and Dormitory 2 floor plan. Lobby, Office, Reception and Lounge/Waiting Area designs shall be copied from Dormitory 1; Guest Rooms, Dormer's Room, Study Hall, Computer Room, EE Room and Common Toilet designs shall be copied from Dormitory 2. See attached Dormitory Buildings 1 and 2 Floor Plans.

Revisions indicated in this Scope of Work shall also be considered.

#### ARCHITECTURAL DESIGN

Main ceiling on all floors shall be fiber cement board and recessed ceiling shall be PVC panel design. Floor finish for all areas shall be porcelain tile. Toilet and shower shall be non-skid porcelain tile.

#### BASEMENT

Stairways, windows, lightings, electrical outlets and utilities, ventilation, ceiling heights and air conditioning system should be carefully designed that would emphasize functionality, safety, comfort and aesthetics. Basement waterproofing methods to be applied shall be integral waterproofing, interior waterproofing, application of bituminous water proofing on exterior and installation of buried perforated drain pipe - 6" pipe with holes along the wall length, filled with gravel around and wrap with filter cloth.

Area	Feature
Isolation Room/Indoor Recreation Area	Foundation Design, Architectural Design, Interior Design, Electrical Design and Mechanical Design shall comply to specifications and standards as to final type of recreation activities to be done in the area, but a table tennis room is a must. Should have windows.
Lobby/Reception Area/Lounge	Open area with windows and should be located near entrance/exit.

Entrance/Exit and Fire Exit	Entrance/exit shall be designed to have an access directly outside the building and a stairway access from ground floor. Panic Door design for Fire Exit.
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#### FIRST FLOOR

Area	Feature
Reception and Lounge/Waiting Area (open area)	Design shall be the same as in Dormitory 1 where these areas are enclosed with sliding doors and sliding windows.
Office	Same layout as that of Dormitory Bldg 1. New design will also be considered.
Rooms for Dormers - Two (2) Rooms	Meditation rooms design in Dormitory 2 shall be changed to Rooms for Dormers.
Study Hall - 3 Rooms	Study Hall - Shall be designed with 3 centralized air conditioning units. Partition along the hallway and between halls shall be made of tempered glass. Exterior windows shall be fixed-sliding glass and with window blinds.
Computer Room	Computer outlets shall be designed per cubicle and installed on floor. This room shall be designed with air conditioning unit (Split type ACU).
Pantry	Designed with overhead cabinets and cabinets below the sink

#### SECOND AND THIRD FLOORS

Area	Feature
Rooms for Dormers	Same features as those of Dormitory Bldg. 2. Windows shall be designed with fixed glass and jalousies.
Toilet & Bath	Sliding glass with frosted sticker (or alternative design that is of better quality)
Hallway	With 2.1m width

#### MECHANICAL DESIGN

Exhaust ventilation in toilets and bathroom shall be designed for a centralized exhaust system.

#### FIRE PROTECTION SYSTEM

The system to be applied shall be Fire Sprinkler System. Design and installation of the system shall be in accordance with NFPA 13. Fire detection and alarm system (FDAS), which play an important role in fire protection, shall be installed.

#### PLUMBING DESIGN

Potable waterline shall be designed with cistern tank - booster pump- overhead steel tank system. A bypass line shall be installed in the system to have a continuous supply of water in case of power interruption or pump damage.

Design routing of rain water pipes to provide false column/pipe chase. Routing of pipes will terminate to the Rain Water Tank. Design overflow line from the Rain Water Tank

should be discharged to the nearest proposed drainage line system. All toilets shall be designed with faucets. All water closets shall have bidets.

**ELECTRICAL AND AUXILIARY DESIGN**

Study Hall outlets shall consider floor installation aside from wall installation same design as to with Dormitory 2. Emergency line shall be designed to connect to Power House Generator.

Auxiliary plan shall include Voice Communication (Telephone) System, CCTV Television System, Data Communication System (Internet) and Cable Television System. CCTV and Internet Data cable shall use UTP CAT6 cable.

The building shall be designed with closed-circuit televisions (CCTVs) using IP Cameras.

**2. DETAILED ESTIMATES**

The bidder shall prepare and submit:

- Bill of Quantities (BOQ) and Detailed Cost Estimates of the scope of work below for (a) the whole project and (b) the Phase 1 of the project.

The labor component of the cost estimates shall follow the ranges provided in the latest wage order of DOLE Region IX.

Construction materials and equipment rental shall preferably follow the rates set by DPWH.

Lump sum or lot units in the BOQ shall be provided with breakdown cost analysis.

**Scope of Works for the whole project:**

ITEM NO.	DESCRIPTION
I.	GENERAL REQUIREMENTS/DESIGN SERVICES
	a. Mobilization/Demobilization
	b. Temporary Facilities
	c. Construction Safety and Health
	d. Permits and Clearances
	e. Design Services
II.	EARTHWORKS
III.	CONCRETE WORKS
IV.	REBAR WORKS
V.	FORMWORKS AND FALSEWORKS
VI.	MASONRY WORKS
VII.	ROOFING WORKS
	a. Roof Framing
	b. Pre-painted Roofing
VIII.	ARCHITECTURAL FINISHES
	a. Doors & Windows
	b. 10mm Tempered glass partition
	c. Tile Works
	d. Waterproofing

	- General Waterproofing
	- Basement Waterproofing
	e. Ceiling Works
	- Fiber Cement Board
	- PVC Panel
	f. Railings, Handrails and Tubular Slats
	g. Carpentry Works
	- Ground Floor Toilet partition
	- Pantry Counter top and cabinets
IX.	PAINTING WORKS
X.	PLUMBING WORKS
	a. Septic Tank
	b. Rain water tank
	c. Potable Cistern Tank
	d. Plumbing Fixtures
	e. Sanitary and Waterline
	f. Trench Drain and Catch Basin
XI.	ELECTRICAL AND AUXILIARY WORKS
	a. Fixtures, Wires & Conduits, Panel Boards and Circuit Breakers
	b. Voice Communication (Telephone) System
	c. CCTV Television System
	d. Data Communication System (Internet)
	e. Cable Television System
XII.	FIRE SPRINKLER SYSTEM & FDAS
XIII.	MECHANICAL WORKS - Centralized Exhaust System

**Note:**

1. Mobilization/Demobilization and Construction Safety & Health total cost shall be present in the three (3) phases of the project.
2. Consider that temporary facilities (temfacil) shall be constructed in a manner that the structure can be used and occupied in the next phase(s) of the project. Consider also for additional cost to repair existing structures.
3. Consider that permit and clearance costs shall be for the complete documents needed before and during construction and upon completion of the project. Amount needed for securing permits and clearances for the construction stage shall be included in Phase 1 of the project. Amount needed for securing Certificate of Occupancy and related costs will be intended for the last phase of the project.
4. Formwork material shall be phenolic board. It shall be considered in the costing and that such material shall be usable up to three (3) times during the construction.

Falseworks or scaffoldings cost shall be as RENTAL only.

## Scope of Works for Phase 1

ITEM NO.	DESCRIPTION
I.	GENERAL REQUIREMENTS/DESIGN SERVICES
	a. Mobilization/Demobilization
	b. Temporary Facilities
	c. Construction Safety and Health
	d. Permits and Clearances
	e. Design Services
II.	EARTHWORKS
III.	CONCRETE WORKS
IV.	REBAR WORKS
V.	FORMWORKS AND FALSEWORKS
VIII.	ARCHITECTURAL FINISHES
	d. Waterproofing- Basement Waterproofing (integral waterproofing only)

### Construction of the Project (Phase 1)

Design services shall be complete set of Construction Plans and an “As-Built” for Structural Plan for Phase I only, for a maximum cost of 2.7% of the total Dormitory Building III cost as designed.

Construction of the project shall cover the structural works from basement to second<sup>2nd</sup> floor area at upper construction joint of columns. Concrete pouring at termination of the columns shall be provided with reinforcement up to mid portion of columns at third (3<sup>rd</sup>) floor.

Basement shall be poured concrete wall with waterproofing. Waterproofing method to be applied shall be integral waterproofing. It is required to close the tie rod holes after construction with proper sealing material. Normal mortar mix to cover these holes shall not be accepted. Two (2) Isolation Rooms shall be designed to have an access within the basement area and direct access going inside/outside the basement.

The design and construction of the dormitory building must comply with the minimum specifications and standards set forth by the National Building Code of the Philippines (R.A. 6541); Civil Engineering Law (R.A. 544); Fire Code of the Philippines and related safety, health, labor and sanitary laws.

#### **1. Permits and Clearances**

The CONTRACTOR shall pay for all expenses necessary and incidental in securing the building permit, certifications and other clearances.

#### **2. Temporary Structures and Facilities**

The CONTRACTOR shall provide temporary office and bunkhouse/quarters with water, electricity and toilet facilities. Upon completion of the project Phase 1, the materials used in construction of these temporary facilities shall be turned over to the Procuring Entity.

### 3. Electrification and Water Source

The CONTRACTOR shall pay for the installation of/acquisition of connections for electricity and water and the monthly bills for these during the construction phase.

## IV. SELECTION OF DESIGN AND BUILD CONTRACTOR

The procurement and implementation of the project using the “Design and Build” scheme shall be in accordance with the provisions of RA 9184, specifically, its Annex G. Bidding shall be conducted by the Bids and Awards Committee (BAC) constituted to conduct the procurement of the project. The DBC and TWG shall prepare the design brief and performance specifications and parameters, review the detailed engineering design, and assist the BAC in the evaluation of technical proposals in accordance with the criteria set.

### A. Eligibility Requirements

The eligibility requirements for Design and Build infrastructure projects shall comply with the applicable provisions of Section 23-25 of the IRR of RA9184.

#### a. Eligibility Documents

##### Class “A” Documents

- i. PhilGEPS Certificate of Registration and Membership (Platinum)
- ii. Mayor’s/Business permit issued by the city or municipality where the principal place of business of the prospective bidders is located;
- iii. Registration Certificate from the Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives;
- iv. Tax clearance per E.O. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR)
- v. Statement of all on-going, completed, awarded but not yet started design/design and build-related contracts;
- vi. Single Largest Completed Contracts (SLCCs) similar to the project to be bid that must be at least fifty percent (50%) of the ABC to be bid (in a joint venture/consortia, one should have at least one similar project, both in design and construction, with at least 50% of the cost)  
SLCC must be supported by any of the following documents:
  - Owner’s Certificate of Final Acceptance issued by the project owner other than the contractor
  - Final rating of at least Satisfactory in the Constructors Performance Evaluation System (CPES). *In case of contracts with the private sector, an equivalent document shall be submitted.*
- vii. PCAB licenses and registration for the type and cost of the contract for this project; (Small B; License Category C&D)
- viii. Audited financial statements, showing, among others, the prospective bidder’s total and current assets and liabilities, stamped “received” by the BIR for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission;
- ix. NFCC computation

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

**Class “ B “ Documents**

- i. Joint Venture agreement, if applicable.
- ii. Special PCAB license in case of a Joint Venture.

**b. Technical Documents**

- i. Bid Security (in any form)
- ii. Project Requirements
  - ii1. Schematic documents. The schematic documents must be based on the approved design brief. These documents shall be scaled presentation drawings comprising, but not limited to, perspectives, site development plan, floor plans, elevations, sections and other necessary drawings to illustrate the size and character of the project. Also included in the presentation drawings is the proposed unique structural and construction system for consideration. The schematic documents shall also include an outline of specifications, illustrating the size and character of the project, and showing the kinds of materials intended to be used, the structural concept and type, the types of mechanical, electrical, sanitary and other utility systems and equipment to be installed, including other items of work that are indicated in the Scope of Work and Design Brief. Another complete set of the drawings should be printed on A4-size sheets and submitted together with the other technical documents.
  - ii2. Design and Construction Methods
  - ii3. Value engineering analysis of design and construction method. Prospective bidders shall prepare a value engineering analysis report of their proposed design and construction method to be applied for the PROJECT. Importance shall be made on the following criteria:
    - Cost-saving, measured on a per square meter average figure
    - Time-saving in design and construction duration, measured using the HOPE approved PERT-CPM of the project.
    - Operational efficiency to take advantage of natural lighting and ventilation in some areas and use of efficient toilet.
  - ii4. Organizational Chart
  - ii5. List of Contractor’s Personnel with complete qualification and experience data (with valid licenses issued by the PRC for design professionals)
  - ii6. List of Contractor’s Equipment units, which are owned, leased, and/or under purchase agreements, supported by certification of availability of equipment from the equipment lessor/vendor for the duration of the project.
  - iii. Omnibus Sworn Statement



**c. Financial Component**

- i. Financial Bid Form
- ii. Bill of Quantities
- iii. Detailed Cost Estimates
- iv. Summary Sheet indicating the unit prices of materials, labor rates and equipment rental
- v. Payment schedule

**B. Eligibility Criteria**

- a) The eligibility of design and build contractors shall be based on the legal, technical and financial requirements above-mentioned. In the technical requirements, the design and build contractor (as solo or in joint venture/consortia) should be able to comply with the experience requirements under the IRR of RA 9184, where one of the parties (in a joint venture/consortia) should have at least one similar project, both in design and construction, with at least 50% of the cost of the Approved Budget for the Contract (ABC).
- b) If the bidder has no experience in design and build projects on its own, it may enter into subcontracting, partnerships or joint venture with design or engineering firms for the design portion of the contract.
- c) The relevant provisions under Section 23.5.2 of the IRR of RA 9184 on eligibility requirements shall be observed.

**V. FOR DESIGN PERSONNEL**

The key professionals and the respective qualifications of the DESIGN PERSONNEL shall be as follows:

**A. Design Architect**

The Design Architect must duly-licensed with at least five (5) years of experience in the design of residential, academic or institutional facilities, and shall preferably be knowledgeable in the application of Green Design Technology in school construction.

**B. Structural Engineer**

The Structural Engineer must duly-licensed Civil Engineer with at least five (5) years of experience in structural design and shall preferably be knowledgeable in the application of Green Design Technology in school construction.

**C. Electrical Engineer**

The Electrical Engineer must be a registered Professional Electrical Engineer with at least five (5) years of experience in the design of lighting, power distribution, communication systems (specifically structured and local area network cabling, PABX), building management systems and preferably knowledgeable in developments in emergent efficient lighting technologies and energy management.

**D. Mechanical Engineer**

The Mechanical Engineer must be a Professional Mechanical Engineer with at least five (5) years of experience in HVAC and fire protection systems and preferably knowledgeable in emergent, alternative energy-efficient HVAC technologies.

**E. Sanitary Engineer or Master Plumber**

The Sanitary Engineer or Master Plumber must be duly-licensed with at least five (5) years of experience in the design of building water supply and distribution, plumbing, and preferably knowledgeable in waste water management/treatment, and emergent, alternative effluent collection and treatment systems.

The key professionals listed are required. The **DESIGN & BUILD CONTRACTOR** may, as needed and at its own expense, add additional professionals and/or support personnel for the optimal performance of all Architectural and Engineering Design Services, as stipulated in these Terms of Reference for the PROJECT. Prospective bidders shall attach each individual's resume and PRC license of the (professional) staff.

## **VI. CONSTRUCTION PERSONNEL**

The key professionals and the respective qualifications of the **CONSTRUCTION PERSONNEL** shall be as follows:

### **A. Project Manager**

The Project Manager shall be a licensed architect or engineer with at least three (3) years relevant experience on similar and comparable projects in different locations. The Project Manager should have a proven record of managerial capability through the directing/managing of major civil engineering works, including projects of a similar magnitude.

### **B. Project Engineer/ Architect**

The Project Engineer/Architect shall be a licensed engineer or architect with at least three (3) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of rapid construction technologies.

### **C. Materials Engineer**

The Materials Engineer must be duly accredited with at least three (3) years of experience in similar and comparable projects and shall preferably be knowledgeable in the application of rapid construction technologies.

### **D. Electrical Engineer**

The Electrical Engineer must be duly-licensed with at least three (3) years of experience in similar and comparable projects in the installation of lighting, power distribution, communication systems, building management systems.

### **E. Mechanical Engineer**

The Mechanical Engineer must be duly-licensed with at least three (3) years of experience in similar and comparable projects in Waste Water Management Systems and preferably knowledgeable in emergent, alternative effluent collection and treatment systems.

### **F. Sanitary Engineer or Master Plumber**

The Sanitary Engineer or Master Plumber must be duly-licensed with at least three (3) years of experience in similar and comparable projects in Drainage Systems and Waste Water Management Systems and preferably knowledgeable in emergent, alternative effluent collection and treatment systems.

### **G. Foreman**

The Foreman must have at least three (3) years of experience in similar and comparable projects and shall preferably be knowledgeable in Drainage Systems and Waste Water Management Systems, and emergent, alternative effluent collection and treatment systems.

#### **H. Safety Officer**

The safety officer must be an accredited safety practitioner by the Department of Labor and Employment (DOLE) and has undergone the prescribed 40-hour Construction Safety and Health Training (COSH).

The above key personnel listed are required. The **DESIGN & BUILD CONTRACTOR** may, as needed and at its own expense, add additional professionals and/or support personnel for the optimal performance of all Construction Services, as stipulated in these Terms of Reference, for the PROJECT. Prospective bidders shall attach each individual's resume and PRC license of the (professional) staff, proof of qualifications, and related documents as necessary.

### **VII. PRELIMINARY DESIGN AND CONSTRUCTION STUDIES**

No bidding and award of design and build contracts shall be made unless the required preliminary design and construction studies have been sufficiently carried out and duly approved by the Head of the Procuring Entity that shall include, among other things, the following:

- i. Project Description
- ii. Conceptual Design
- iii. Performance Specifications and Parameters
- iv. Preliminary Survey and Mapping
- v. Preliminary Investigations
- vi. Utility Locations
- vii. Approved Budget for the Contract
- viii. Proposed Design and Construction Schedule
- ix. Minimum requirements for a Construction Safety and Health Program for the project being considered
- x. Tender/Bidding Documents, including Instructions to Bidders and Conditions of Contract

The above data are for reference only. The procuring entity does not guarantee that these data are fully correct, up to date, and applicable to the project at hand. The contractor is responsible for the accuracy and applicability of all data, including the above, that it will use in its design and build proposal and services.

### **VIII. DETAILED ENGINEERING REQUIREMENT**

1. Upon award of the design and build contract, the winning bidder shall be responsible for the preparation and submission of all necessary detailed engineering investigations, surveys and designs in accordance with the provisions of Annex "A" of this IRR (with the exception of the Bidding Documents and the ABC).
2. The procuring entity shall ensure that all the necessary schedules with regard to the submission, confirmation and approval of the detailed engineering design and the details of the construction methods and procedures shall be included in the contract documents.
3. The procuring entity shall review, order rectification, and approve or disapprove - for implementation only - the submitted plans within these schedules. All instructions for rectification shall be in writing stating the reasons for such

rectification. The design and build contractor shall be solely responsible for the integrity of the detailed engineering design and the performance of the structure irrespective of the approval/confirmation by the procuring entity.

## **IX. SCOPE OF WORKS AND PROJECT IMPLEMENTATION**

### **A. Design**

The Philippine Science High School-Zamboanga Peninsula Region Campus, through the PSHS System Design and Build Committee for Design and Build Scheme, shall provide the design brief description of the project in accordance to RA 9184 Annex G Sec. 11.

In compliance with the design and build Terms of Reference, the DESIGN AND BUILD 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:

- a. The order in which it intends to carry out the work including anticipated timing for each stage of design/detailed engineering and construction;
- b. Periods for review of specific outputs and any other submissions and approvals;
- c. Sequence of timing for inspections and tests as specified in the contract documents;
- d. General description of the design and construction methods to be adopted;
- e. Number and names of personnel to be assigned for each stage of the work;
- f. List of equipment required on site for each major stage of the work;
- g. Description of the quality control system to be utilized for the project
- h. Provide geotechnical/soil investigation report which will serve as basis for the actual sizing of the column and foundation of the building.
- i. Prepare from the approved schematic design documents, the complete construction drawings and detailed technical specifications, cost estimates and the bill of quantities, setting forth in detail the work required for the architectural, structural, civil, landscape architecture, electrical, plumbing/sanitary, mechanical and other service-connected equipment, utilities, site planning aspects and related works, electronic and communications and the site development plan of the PROJECT's immediate environs.
- j. Prepare layouts, specifications and estimates of all furniture and equipment required for the fit-out of the buildings, specifically items that are owner-furnished materials.
- k. Prepare the scope of work for construction based on the prepared bill of quantities and cost estimates while fitting within the approved budget.
- l. Provide value engineering analysis on all prepared construction documents.
- m. Coordinate with all offices and agencies concerned, within and outside the Campus regarding utility connections, permits and other requirements needed.
- n. Periodically coordinate and present the status of the design phase to the Head of Procuring Entity and the PSHS Design & Build Committee.

**All drawings included in the contract documents should be drawn using CAD software and plotted on 20" x 30" sheets. All other textual submittals shall be printed and ring-bound on A4-sized sheets.**

Where required, design components shall be designed in coordination with the agencies concerned (e.g., coordinate with electric company for power lines and concerned company/agency for water and sewage lines).

Partial and earlier submission of the construction drawings, such as those affecting the preliminary stages of construction (site works, foundation works, etc.) shall be allowed. The DESIGN & BUILD CONTRACTOR may only proceed with the CONSTRUCTION PHASE after the approval of PSHS Build & Design (B&D) Committee of the drawings, designs and bill of estimates as recommended by the Technical Working Group (TWG) and upon accomplishing all necessary PRE-CONSTRUCTION tasks.

**B. Pre-Construction**

- a) Secure all necessary building permits prior to construction. All incidental fees shall be included in the cost estimate of the building.
- b) Preparation of the PERT-CPM of the construction phase.
- c) Provide all other necessary documents that shall be required by B&D Committee

**C. Construction Phase**

- a) Implement all works indicated in the approved construction drawings and documents. All revisions and deviation from the approved plans, especially if these shall impact the overall cost of the project, shall be subject for approval.
- b) Provide soil filling, grading and other soil protection measures of the building and other elements of the site including soil and materials testing.
- c) Construct the buildings and other necessary structures, complete with utilities and finishes, resulting in operable and usable structures.
- d) Provide protection or relocation of existing trees indigenous to the area, and proper removal and replacement of all introduced trees and vegetation affected by the construction.
- e) Layout piping, conduits, manholes, boxes and other lines for utilities including tapping to existing utility lines. Facilitate the connection of all utilities (power, water, sewer, structured cabling and telephone) with their corresponding utility companies. All application fees shall be included in the project cost.
- f) Preparation of shop-drawings for approval.
- g) Coordinate with the B&D Committee regarding scheduling of delivery and installation of all owner-furnished materials and equipment during construction.
- h) Conduct all necessary tests (to be required by B&D Committee) and issue reports of results.
- i) Rectification of punch-listing works to be inspected and issued by the B&D Committee and/or the End-user.
- j) Provide all other necessary documents that shall be required by the B&D Committee.

**D. Post Construction Phase**

- a) Preparation of as-built plans
- b) Turn-over of all manuals, certificates and warranties of installed items.

**E. Variation Orders**

a. 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.

- a. 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:
  - i. 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.
  - ii. 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:
    - a. an extension of time for any such delays under Section 10 of Annex "E"; or
    - b. payment for such costs as specified in the contract documents, provided, that the cumulative amount of the variation order does not exceed ten percent (10%) of the original contract

#### **F. Defects and Liability**

- a. All 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.
- b. 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 62.2.3.217 of the IRR.

#### **X. OVERALL PROJECT TIME SCHEDULE**

The DESIGN & BUILD CONTRACTOR shall propose the most reasonable time schedule for the completion of the project. **It is expected that this period will not exceed 240 calendar days from the date of the issuance of the Notice to Proceed (NTP): Thirty (30) calendar days for the Design Phase, and Two Hundred Ten (210) calendar days for the Construction Phase.**

#### **XI. THE IMPLEMENTING AGENCY'S GENERAL RESPONSIBILITY**

The implementing agency for the project is the Campus Director of PSHS-ZRC with final approval for all decisions and actions from the PSHS System Office of the Executive Director through the Build and Design Committee. The B&D Committee shall:

- a) Prepare the design brief for the project in accordance with PSHS Systems' policies, existing codes, traditions, standards, and the conditions and design criteria enumerated in the Terms of Reference.
- b) Coordinate with DESIGN & BUILD CONTRACTOR, and the Campus Director of PSHS-ZRC with regard to the design and implementation of the project.
- c) Assist in the coordination of the DESIGN & BUILD CONTRACTOR with various utility agencies during the detailed design and implementation phases of the project.
- d) Conduct regular coordination meetings between the DESIGN & BUILD CONTRACTOR and the end-user to facilitate the implementation of the project.

## **XII. THE DESIGN & BUILD CONTRACTOR'S GENERAL RESPONSIBILITY**

- a) The DESIGN & BUILD CONTRACTOR shall certify that he has, at his own expense, inspected and examined the proposed project site, its surroundings and existing infrastructure and facilities related to the execution of the work and has obtained all the pieces of information that are considered necessary for the proper execution of the work covered under these Terms of Reference.
- b) The DESIGN & BUILD CONTRACTOR shall ensure that all works at the stages of design, construction, restoration of affected areas, and testing and commissioning shall be carried out efficiently and effectively.
- c) The DESIGN & BUILD CONTRACTOR shall provide the school with complete reports such as technical analysis, maps and details regarding the existing conditions and proposed improvements within the site.
- d) The DESIGN & BUILD CONTRACTOR shall consider the academic calendar and critical dates and occasions within the School, in order to align his work schedule with the academic calendar of the school to avoid unnecessary disruption of school activities due to construction activities such as closure of water and power supply and non-usage of the existing roads.
- e) The DESIGN & BUILD CONTRACTOR shall inform the school of critical events during construction, especially when such events can potentially disrupt school activities.
- f) The DESIGN & BUILD CONTRACTOR shall be PCAB accredited and shall have a Construction Safety and Health Program approved by DOLE and designed specifically for the CONSTRUCTION OF DORMITORY I.
- g) The DESIGN & BUILD CONTRACTOR will be held accountable for accidents that might occur during the execution of the project. The DESIGN & BUILD CONTRACTOR is required to install warning signs and barriers for the safety of the general public and the avoidance of any accidents and provide appropriate and approved type personal protective equipment for their construction personnel.
- h) The DESIGN & BUILD CONTRACTOR shall be professionally liable for the design and shall submit a signed and sealed copy of the approved construction documents to form part of the Contract Documents.
- i) Only the plans approved by the Head of Procuring Entity (HOPE) shall be signed and sealed by the DESIGN & BUILD CONTRACTOR, and thereafter shall be the plans used for construction.
- j) All works designed and constructed should be guaranteed to seamlessly fit into the overall system general design standards of the PSHS System.

## **XIII. PROJECTED SUBMITTALS DURING THE PROJECT**

The following submittals and accomplished documents shall be duly completed and turned-over by the DESIGN & BUILD CONTRACTOR for the project:

### **A. FOR THE DESIGN PHASE**

- a) Construction plans (signed and sealed) that include Architectural, Civil, Structural, Electrical, Structured Cabling, Mechanical, Fire Protection and Plumbing plans (12 sets hard copy and soft copy)
- b) Technical specifications (7 sets hard copy and soft copy)

- c) Detailed cost estimate (3 sets hard copy and soft copy)
- d) Bill of quantities (3 sets hard copy and soft copy)
- e) Site survey, topographic survey, survey of existing trees, geotechnical report including soil test and all other pertinent data related to the conditions of the project site
- f) Documents required for securing the Building Permit
- g) Drawings and reports that the B&D Committee may require for the periodic update concerning the status of the design phase.

#### **B. FOR THE CONSTRUCTION PHASE**

- a) As-built plans (hard copy and soft copy)
- b) All necessary permits (Fees shall be included in the contract)
- c) Shop drawings (hard copy and soft copy)
- d) PERT-CPM
- e) Test results
- f) Guarantees, warranties and other certificates
- g) Fire and Life Safety Assessment Report 2 and 3 (FALAR 2 and 3)
- h) Certificate of Occupancy
- i) All other necessary documents to be required by B&D Committee

#### **XIV. CODES AND STANDARDS**

The project shall be designed, engineered, installed, tested, commissioned and handed over in conformity with the Building and Design Standards of the PSHS System and with the latest editions of the National Building Code of the Philippines, the National Structural Code of the Philippines, the Philippine Electrical Code, Philippine Mechanical Code, the National Plumbing Code of the Philippines, National Fire Code of the Philippines and other relevant codes and standards.

#### **XV. INSTALLATION AND WORKMANSHIP**

Personnel of the DESIGN & BUILD CONTRACTOR should be specialists highly skilled in their respective trades, performing all labor according to first-class standards. A full time Project Engineer/Civil Engineer and Construction Safety Engineer shall be assigned by the DESIGN & BUILD CONTRACTOR at the job site during the construction of the project.

All works to be subcontracted shall be declared by the DESIGN & BUILD CONTRACTOR and shall be approved by the Campus Director of PSHS-ZRC and its respective technical offices. Tapping for utilities such as power supply, water supply and sewage drainage shall be coordinated with their respective utilities / service provider / companies, and all works involved, including access to utilities tapping point, excavation, removal of obstructions, concrete breaking, backfilling and restoration of affected areas, shall be coordinated and included in the scope of work and cost of the project.

Any errors, omissions, inconsistencies, inadequacies or failure submitted by the DESIGN & BUILD CONTRACTOR that do not comply with the requirements shall be rectified, resubmitted and reviewed at the DESIGN & BUILD CONTRACTOR'S cost. If the DESIGN & BUILD CONTRACTOR wishes to modify any design or document which has been previously submitted, reviewed and approved, the DESIGN & BUILD CONTRACTOR shall notify the procuring entity within a reasonable period of time and shall shoulder the cost of such changes.



## **XVI. MATERIALS**

All materials and equipment shall be standard products of manufacturers engaged in the production of such materials and equipment and shall be the manufacturer's latest standard design.

The materials and workmanship supplied shall be of the best grade and constructed and/or installed in a practical and first class manner. It will be completed in operation, nothing being omitted in the way of labor and materials required and it will be delivered and turned over in good condition, complete and perfect in every respect.

All materials shall be in conformance with the latest standards and with inspection and approval from B&D Committee.

## **XVII. MODE OF PAYMENT**

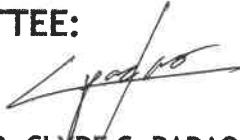
- a) The PSHS-ZRC shall pay the winning DESIGN & BUILD CONTRACTOR progress payments based on billings for actual works accomplished, as certified by B&D Committee of the PSHS System. In no case shall progress billing be made more than once every thirty (30) calendar days. Materials or equipment delivered on the site but not completely put in place or used in the project shall not be included for payment.
- b) All progress payment shall be subject to retention of ten percent (10%) based on the amount due to the winning DESIGN & BUILD CONTRACTOR prior to any deduction. The total retention money shall be released only upon Final Acceptance of the Project. The winning DESIGN & BUILD CONTRACTOR may, however, request for its release prior to Final Acceptance subject to the guidelines set forth in R.A. 9184 and its Implementing Rules and Regulations.
- c) The DESIGN & BUILD CONTRACTOR may request in writing which must be submitted to form part of the Contract Documents, for an advance payment equivalent to fifteen percent (15%) of the total Contract Price. The advance payment shall be made once the DESIGN & BUILD CONTRACTOR issues its irrevocable standby letter of credit from a reputable bank acceptable to the PSHS System, or GSIS Surety Bond of equivalent value, within fifteen (15) days from the signing of the Contract Agreement to cover said advance payment.
- d) First Payment/Billing shall have an accomplishment of at least 20%.
- e) The following documents must be submitted to the B&D Committee before processing of payments to the DESIGN & BUILD CONTRACTOR can be made:
  - i. Progress Billing
  - ii. Request for payment by the DESIGN & BUILD CONTRACTOR
  - iii. Pictures/photographs of original site conditions (for First Billing only)
  - iv. Pictures/photographs of work accomplished
  - v. Accomplishment Report
  - vi. Material Testing Results
  - vii. Payment of utilities (power and water consumption)
  - viii. DESIGN & BUILD CONTRACTOR's affidavit (if accomplishment is more than 60%)

Note: The DESIGN & BUILD CONTRACTOR can bill the PSHS-ZRC of up to a maximum of 90% accomplishment.

Prepared by:

**DESIGN AND BUILD COMMITTEE:**


  
ENGR. SHARON T. PARAGUYA  
Member

  
ENGR. CLYDE C. PADO  
Member

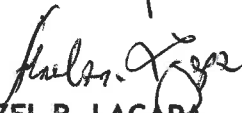
  
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ENGR. JUNE CARLO F. REYES  
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FAD Chief

  
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SSD Chief

Approved by:

  
ENGR. LOUIE C. JAMORA  
Campus Director