



SCOPE OF WORK COMPLETION OF ACADEMIC BUILDING II (REBID) OF

**PHILIPPINE SCIENCE HIGH SCHOOL – ZAMBOANGA PENINSULA REGION CAMPUS
BRGY. COGON, DIPOLOG CITY**

I. BACKGROUND

The **PHILIPPINE SCIENCE HIGH SCHOOL-ZAMBOANGA PENINSULA REGION CAMPUS (PSHS-ZRC)** through the approved allocation for capital outlay under FY 2023 General Appropriations Act (GAA) intends to apply the sum of **SEVEN MILLION PESOS (₱7,000,000.00)** being the indicated Approved Budget for the Contract (ABC) for the **COMPLETION ACADEMIC BUILDING II (REBID)** project. This project will bring more benefits to the male and female students, employees, stakeholders and visitors of PSHS-ZRC.

II. PROJECT DESCRIPTION AND LOCATION

The project will involve the Design and Build Scheme leading to the completion of the Academic Building II pursuant to the technical specifications indicated in this Scope of Work.

Completion of Academic Building II project shall cover the:

- Improvement of Audio-Visual Room
- Completion of Campus Clinic
- Architectural Works
- Information and Communication Technology Works
- Civil Works and Plumbing Works

The project will have an Approved Budget for the Contract (ABC) of **SEVEN MILLION PESOS (₱7,000,000.00)**, including all taxes and applicable permits, licenses and clearances. The project duration is 180 calendar days.

III. SCOPE OF WORK – CONCEPTUAL DESIGN

The bidder shall prepare and submit:

- ❖ Bill of Quantities (BOQ) and Detailed Cost Estimates of the scope of work for the whole project.

Note:

- The labor component of the cost estimates shall follow the ranges provided in the latest wage order of DOLE Region IX.
- The Contractor shall provide itemized breakdown of the units in lots/Lump sums given in the BOQ.

- All items should be presented first to the procuring entity prior to procurement, installation and/or construction.

1) GENERAL REQUIREMENTS

1.1. Mobilization and Demobilization

1.2. Project Billboard

1.3. Temporary Facilities

- ❖ The Contractor shall provide temporary office and bunkhouse/quarters with water, electricity and toilet facilities. Upon completion of this project, the structures made shall be torn down and the area has to be cleaned, the recovered usable materials shall be turned over to the procuring entity and the unusable ones shall be disposed of.
- ❖ The Contractor shall pay for the installation of/acquisition of separate connections for electricity and water and the monthly bills for these during the construction phase.

1.4. Construction Safety Health - Personal Protective Equipment, Medicines, First Aid Kit and others.

1.5. Design Services – Plans and/or shop drawings

2) IMPROVEMENT OF AUDIO-VISUAL ROOM

2.1. AVR Platform - Design and construction of platform and installation of theater chair to the platform.

- Design the platform with an elevation that have a safe clearance from the floor line to ceiling line.
- Install in 11 rows of the existing theater chairs
- Elevation of each row should not exceed 5 inches.
- Step riser is $\pm 0.25\text{m}$.
- Material for flooring shall be 1" Marine Plywood (high quality), with floor carpet finish (color is upon approval) with LED Strip in each step.
- **See Annex A for layout reference**



(a) Actual site condition of audio-visual room

- Blackout curtains to minimize the entry of sunlight in glass windows shall be installed at the side portion of the glass windows which also serves as soundproofing.
- 23.75m x 3.16m window opening.
- **See Annex B for layout reference**

2.3. Air Conditioning Unit System

- Three (3) sets of 3.0tr floor mounted ac, 30amp safety breaker w/ all accessories included
- Install three (3) sets 3.0TR Floor Mounted AC (3) sets at Audio Visual Room on the 3rd Floor. Power supply is already existing in area
- Should have at least 1-year warranty
- See Annex C for layout reference

2.4. Desktop Computer - One (1) set desktop computer with two (2) LED server monitor. Supply, delivery, installation, and configuration of server.

A. SYSTEM UNIT:

- Core i7
- At least 6GB Dedicated Video Card
- Pre-installed 64-bit Operating System (Preferably Windows 10 Pro Operating System)
- At least 16GB DDR4 memory, Up to 32GB
- At least 256GB SDD with 1TB HDD
- Gigabit Ethernet 10/100/1000
- Front I/O ports: USB 3.1 Gen 1 and 2.0, USB Type C
- Rear I/O ports: USB 3.1 Gen 1 and 2.0, HDMI, DVI-I/DVI-D, VGA, RJ45, Speaker and Mic Jacks

B. KEYBOARD:

- Keycaps: Round Edge
- Hotkeys: 12 FN Multimedia Hotkeys
- Character: Laser Engraving
- Adjustable Keyboard Legs: Yes
- Hardware Connectivity: USB

C. OPTICAL MOUSE:

- Report Rate: 125 Hz
- Sensor Technology: Optical
- Resolution: 5000 DPI
- Buttons No.: 4
- Ergonomic Design: Symmetric
- Size: Middle / Big Hands
- Hardware Connectivity: USB

D. Two (2) units LED Monitor:

- 24-inch Full HD monitor with 1ms (GTG) quick response time and 75Hz refresh rate for fast and smooth gaming
- Features Adaptive-Sync technology to eliminate screen tearing and choppy frame rates
- Extensive connectivity including HDMI and D-sub ports. Plus 1.5-Watt stereo speakers.

E. HEADPHONE:

- Type: Over-the-ear Headphones
- Sensitivity: 112dB +/- 4dB
- Frequency Response: 12Hz - 28kHz
- Impedance: 50ohms
- Rated Input: 30mW
- Maximum Input: 100mW
- Plug: 3.5mm Straight Plug

F. Uninterruptible Power Supply (UPS):

- One (1) unit of UPS 1500 watts; Maintenance-free sealed Lead-Acid battery with suspended electrolyte: leak-proof

2.5. Facilities for Audio Visual Room - supply and installation of the following:

A. MICROPHONE STAND

- Six (6) units of Heavy duty die case aluminum base
- Quick rise or lower by pressure of non-slip clutch
- Metal clutch for the boom provide high durability
- Strong material tube size 25 & 19

B. PROFESSIONAL WIRELESS MICROPHONE

- One (1) set with four (4) mics per set of 4 channels UHF wireless handheld microphone system
- Frequency Band 902 to 910.7 MHz
- Each microphone features an on/off switch, a battery status indicator, and a battery compartment for two AA batteries (available separately)
- 4-channel Hybrid-Quad receiver with balanced XLR outputs, an unbalanced 1/4" mix output, per-channel mic volume, and AF/RF LED indicators
- Includes power adapter, antennas, and 1/4" cable

C. PROFESSIONAL WIRED MICROPHONE

- Two (2) units of wired cardioid dynamic vocal microphone.
- Spherical Mesh Grille with Built-in Pop Filter, A25D Mic Clip

D. LAVALIER/LAPEL MICROPHONE

- Two (2) sets of directional lavalier/lapel microphone.
- Headset microphone and clip-on lavalier microphone body pack transmitter.
- Receiver with 1/4" Plug



2.6. Sound System - supply and installation of the following:

A. PROFESSIONAL SPEAKERS

- Six (6) units of 15" Two-Way Multipurpose
- Max SPL Output 127Db
- Frequency Range(-10dB) 39Hz – 20 kHz
- Frequency Response (± 3 dB) 50Hz – 20 kHz
- Coverage Pattern 90° x 60°

- Amplifier Design Class D
- Power Rating 1000W Peak (700W LF + 300W HF), 500W Continuous (350W LF + 150W HF)
- Dimension (H x W x D) 27.8 x 17.3 x 14.4 (inches)
- Onboard EQ presets allow setting the system for various application
- Bluetooth integration for convenient control of volume and EQ parameters.

B. PROFESSIONAL AUDIO PROCESSOR

- One (1) unit of professional audio processor with at least 6 months' warranty
- Available Input Processing:
 - AFS™ (Advanced Feedback Suppression), Graphic EQ, 8-Band Parametric EQs (adjusted when using the AutoEQ), Subharmonic Synthesis
- Available Output Processing:
 - Crossover (supports full range, 2-way, and 3-way system), 8-Band Parametric EQs (used for speaker turnings Driver Alignment Delays)

C. Automatic Voltage Regulator (AVR)

- One (1) unit of automatic voltage regulator (AVR) for sound system
- Servo motor grade
- Automatic Voltage Regulator: 10KVA

D. SNAKE CABLE

- One (1) unit of 50ft snake cable with 8 channels.

2.7. Entertainment System

- 75-inch Crystal UHD 4k TV
 - Smart TV
 - Wireless LAN Built-In (Wifi)
 - HDMI (3 ports)
 - USB (1 ports)
 - Real 4k Resolution
- KARAOKE PLAYER - Perfect Pitch™ Voice Coach, GV Voice Command+, Lyric Videos, HD+™ Audio, Full HD Video, and over 8,500 built-in licensed songs.

2.8. Computer Server Table

- Design and fabrication of U-shape table with drawers and cabinets at the control room
- With outlet for computer electrical supply
- Use 3/4" Marine Plywood painted finish.
- See Annex D for layout reference



(Example only)

3) COMPLETION OF CAMPUS CLINIC

- See Annex E for layout reference

3.1. Clinic Counter - Design, fabrication and installation of customized Clinic Counter. Use 3/4" Marine Plywood painted finish, with drawers and cabinets. Provide lockers for drawers and use concealed hinges for cabinets.



(Example only)

3.2. Clinic Sofa Set – Design, fabrication and installation of customized L-shape, size to fit in to intended area, gray color.



(Example only)

3.3. Clinic Privacy Curtain - Supply and installation of 4 sets curtains and curtain rods as Hospital Drape (Blue Curtains) attached to the ceiling.



(Example only)

3.4. Hospital Bed – Provision of two (2) units of Standard Hospital Bed (Heavy Duty).



3.5. Wheelchairs – Provision of one (2) units of Standard Foldable Wheelchair (Heavy Duty).



3.6. Movable Table – Provision of two (2) units of movable Table.



(Design and Specification)

3.7. Storage Cabinets - Design and construction of hanging cabinets and under sink cabinets.

3.8. Clinic Comfort Room - Construction of comfort room at the clinic with complete provision of masonry, roof, ceiling, tile, architectural, painting, electrical works with electrical fixtures and plumbing works with plumbing fixtures.

4) ARCHITECTURAL WORKS

4.1. Window Blinds – Provision and installation of basic combination window blinds (Basic Design).

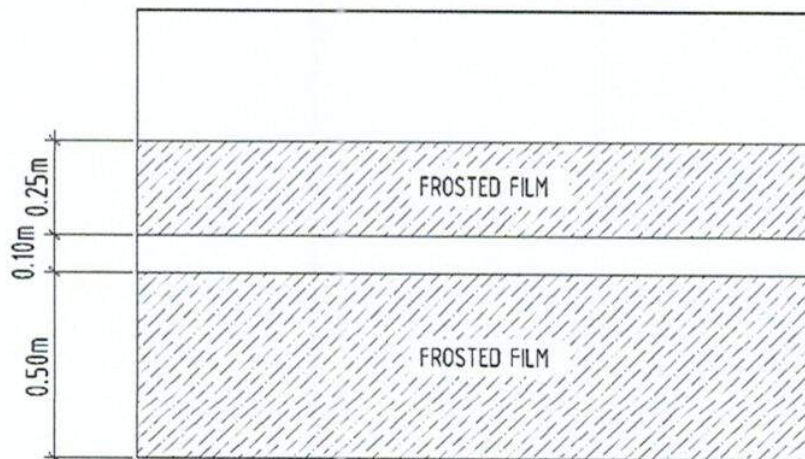
- Total estimated area: 3,783 sq.ft. (Verify actual measurement).
- The placement of the window blinds are specified on the plan with green highlights.
- **See Annexes F and G for layout reference**



(Duo Roller Blinds)

4.2. Frosted Film – Application of frosted film for hallway windows (partial) and comfort room windows (full) for privacy purposes.

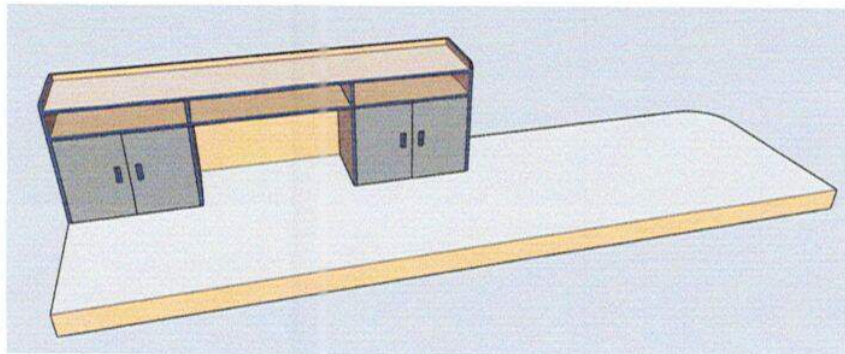
- Total estimated area: 71.25 sq.m. (Verify actual measurement).
- The placement of the window blinds are specified on the plan with blue highlights.
- **See Annexes F and G for layout reference**



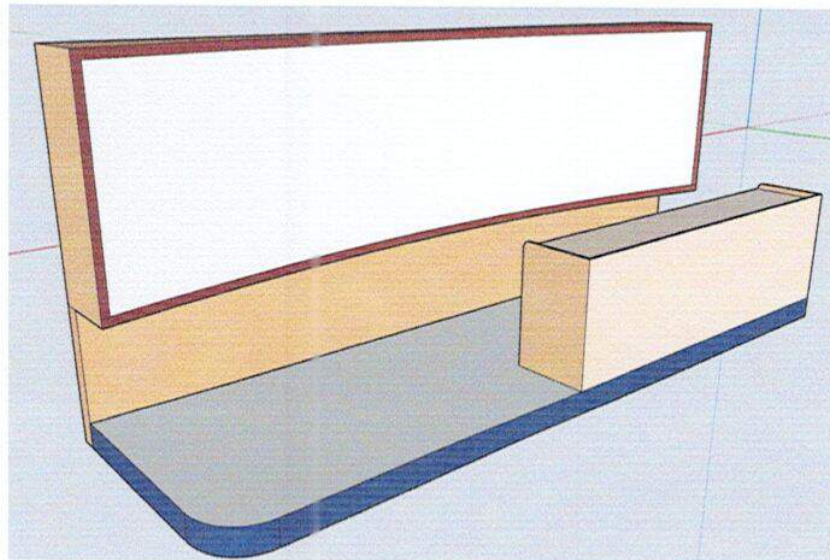
FROSTED FILM DETAILS FOR
HALLWAY WINDOWS

4.3. Classroom platform with built-in table – Construction of seven (7) sets of platform with table. This will be placed in every classroom in this building. The table must be placed away from the door.

- With lock mechanism of cabinets.
- **See Annex H for layout, details, and specification references.**



(Rear)



(Front)

4.4. 18" Wall Fan

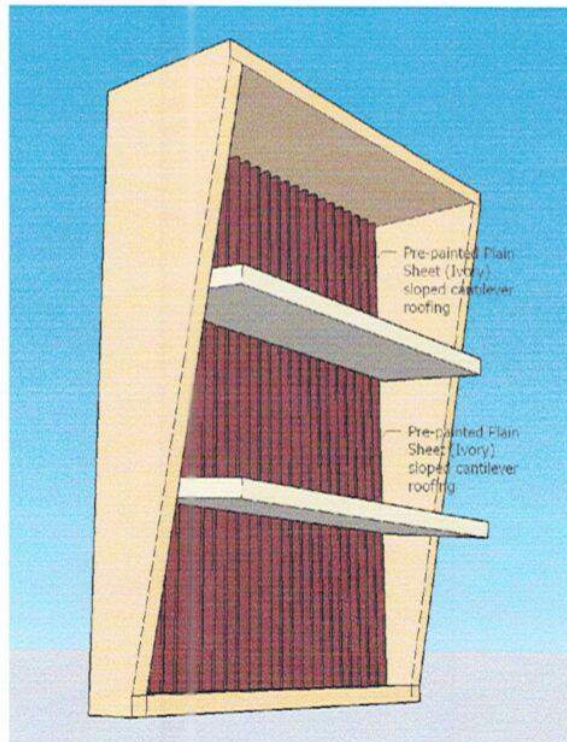
- Provision of twenty-eight (28) wall fans, 18" metal fan blade, 3 speed, fan speed: 1,600 rpm.
- To install four (4) units of wall fans in each classroom at side of columns.
- Provision of electrical molding and wires for the supply of the unit.



(Example only)

4.5. Sloped Cantilever Roofing

- Design and construction of sloped cantilever roofing at vertical slats around the building that causes rainwater to enter the building.



(Design concept example)

4.6. Movable White Board

- Provision of fourteen (14) magnetic movable white board with stand, roller, and stopper in aluminum frame.
- 4ft x 8ft size of white board.
- With erasers of each white boards.

4.7. Architectural Rehabilitation

- Replacement of twenty-five (25) units of damaged water closet covers in male and female comfort rooms. These should be compatible with the existing water closet brand.



Damaged Water Closet Cover

- Repaint peeled-off paints on vertical slats and canopies of the building.



Peeled-off Paints on Vertical Slats

- Restoration/deep cleaning/polishing of Stainless Railings of the building.



Stainless Steel Railings

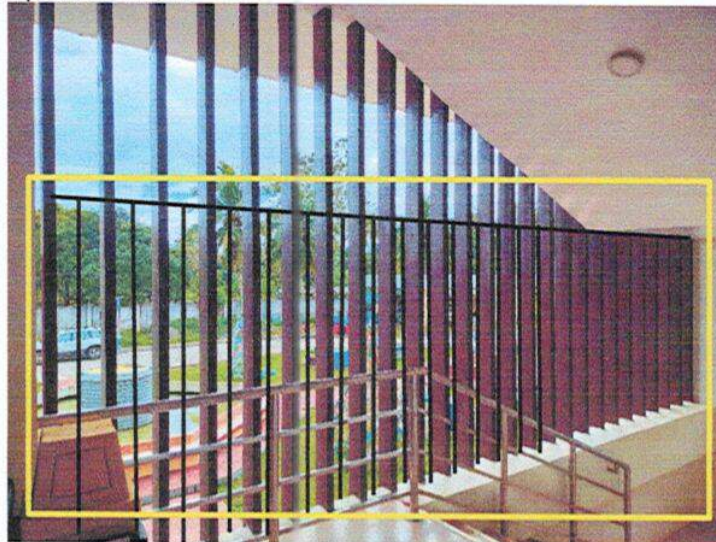
- Covering up the wall-to-window gap for soundproofing purposes each of the classrooms and in between of guidance office and guidance counseling room. It should be completed with paint.



- Mortar topping on the canopies to route the stagnant rainwater to the canopy drain.



- additional vertical slats using 1" x 1" Square Tube (S-40) in between of the existing slats in this area with painted finish.



5) INFORMATION AND COMMUNICATION TECHNOLOGY WORKS

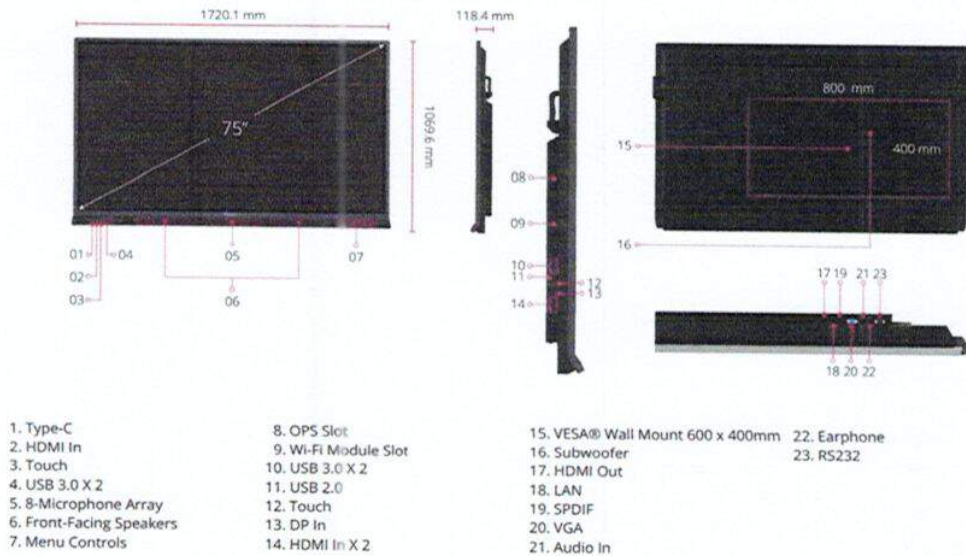
- 5.1. Bell System** – Provision and installation of a programmable school bell system on every floor of the building. Each floor should have at least two (2) bells. All bells must be synchronized with no delays.



(Example only)

5.2. Interactive Flat Panel with Mobile Cart

Provision of Interactive Flat Panel



(Details)

Specifications:

- Display:

Display Type:	LCD
Display Size (in.):	75
Viewable Area (in.):	64.5
Light Source:	LED
Resolution:	3840 x 2160
Refresh Rate (Hz):	60
Static Contrast Ratio:	1,200:1
Dynamic Contrast Ratio:	4,000:1
Backlight Life (Hours):	50,000
Brightness:	350 cd/m2
Response Time (Typical GTG):	8ms
Viewing Angles:	178° horizontal, 178° vertical
Panel Surface:	9H

- Networking:

Ethernet LAN:	10/100/1000 Mbps
Wifi:	Optional LB-WIFI-001 adapter, 802.11AC + Bluetooth 4.0

- Embedded Player:

OS:	ViewBoard OS based on Android 9.0
GPU:	ARM Mali-G52
CPU:	ARM Quad Core A73
CPU Processor Speed:	1.8GHz

- | | |
|--------------------|--|
| Memory: | 4GB LPDDR4 |
| Storage: | 32GB eMMC |
| Audio: | |
| Microphone: | Beamforming array x 8, noise cancelation |
| Internal Speakers: | 15W (x2) |

Subwoofer: 15W (x1)

□ Connector:
HDMI 2.0 In(3), VGA(1), SPDIF(1), USB 3.0(4), USB 2.0 Type B(2), USB 3.1 Type C(1), OPS PC Slot(1), RS232(1), Ethernet LAN (RJ45)(1)

□ Power:
Voltage: 100-240 VAC

Stand-by: <0.5W

□ Operating Conditions:
Temperature: 32-104° F (0 - 40° C)
Humidity (non-condensing): 10-80%

□ Touch:
Touch Technology: Infrared

Touch Points: Windows: 33-Point Touch, Android: 20-Point Touch

Tip Detection: Dual tips, 2mm and 8mm

Other: Palm rejection, objection awareness

▪ **Provision of Mobile Cart**

- Height Adjust: Yes
- LOADING
 - Wall mount: 110 kg max. / 264.6 lb max.
 - Plate: 45 kg max. / 99.2 lb max.
- DIMENSIONS
 - Physical (WxHxD): 1170 x 1600 x 704 mm / 46.2" x 71.0 x 27.6 in
 - Packaging (WxHxD): 1550 x 770 x 165 mm / 61 x 30.3 x 6.5 in
- WEIGHT
 - Net: 29.5 kg / 65.0 lb
 - Gross: 43.5 kg / 95.9 lb

6) CIVIL WORKS AND PLUMBING WORKS

6.1. Storm Drainage System - Design and construction of the drainage system shall cover the FRONT, REAR, and LEFT side portions of the Academic Building 2.

- 150mm-200mm opening of trench drain.
- Hot-dip Galvanized Steel grating will be used for the cover of the trench.
- **See annex I for the layout reference.**

6.2. Improvement of Building's Perimeter Area – Design and construction of the following around the Academic Building II:

A. Steps, walkways, stairs, covered pathway and softscape/ground improvement in between the Administration Building and the Academic Building 2.

- Sub-base preparation
- Covered pathway between the Administration Building and the Academic Building 2.
 - 2.40 meters wide for the pathway
 - 1.00 meter for the roofing overlap
 - 2.60 meters for the roof apex, inclined roofing
- Planting of ideal tress, flowering plants, shrubs, and grass
- Continuation of existing ramp from Administration Building to Academic Building 2
- **See Annex J for layout reference**