



TERMS OF REFERENCE

PROCUREMENT OF ICT EQUIPMENT

I. RATIONALE

The Philippine Science High School – Zamboanga Peninsula Region Campus (PSHS-ZRC) as growing campus continues to adheres to its vision to prepare scholars to become globally competitive Filipino scientists. In doing so, PSHS-ZRC commits to provide state of the art facilities especially in the field of interconnectivity and computer technology.

Through the approved allocation for the capital outlays under General Appropriations Act 2020, PSHS-ZRC intends to apply the sum of FOUR MILLION PESOS (P4,000,000.00) as the approved budget for *the supply and delivery of ICT equipment*.

II. OBJECTIVES

The project aims to:

- Improve interconnectivity through the installation of Wifi system.
- Increase productivity and efficiency through the availability of high-end facilities.
- Enhance the delivery of instructions through the use of ICT equipment.

III. Technical Specifications

1 Lot	Supply, Delivery of ICT Equipment and Installation of Outdoor Wi-Fi Access Point			P 4,000,000.00
Item No.	Unit	Specification/Description		Qty
1	set	SMALL FORM FACTOR DESKTOP PC AND LED MONITOR (Branded) <ul style="list-style-type: none"> - At least 9th Generation Intel Core i5 processor with at least 3.0 GHz with a thermal design power that does not exceed 65 watts and supports hyper-virtualization - At least 2GB Dedicated Graphics Card - Pre-installed 64-bit Windows 10 operating system - At least 8 GB DDR4 memory, Up to 64GB - At least 500 GB HDD - Gigabit Ethernet 10 / 100 / 1000 - 802.11 a/b/g/n/ac Wireless connection - 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 - With USB Keyboard and USB Optical Mouse - At least 20" LED Monitor with at least 1920 x 1080 resolution, VGA and DVI-D/HDMI/ Display port compatible - AVR - Power Supply: Rating 80+ bronze minimum (non-generic) - At least 18 months on desktop and 3 years for monitor (warranty) - Hard disk shall be formatted in the manner of 40% for the system disk and 60% data disk. 	Supply and Delivery	34



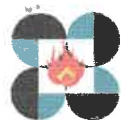
2	unit	Slim Lightweight Laptop At least 1.8GHZ quad-core with Turbo boost (up to 4.6GHZ) and 8MB cache or better At least 8GB DDR4 At least 256 SSD At least 2GB Video Card Pre-installed 64-bit operating system Preferably - 13.3" LED-backlit Full HD (1920 x 1080) 16:9 slim-bezel NanoEdge display - Four-sided frameless NanoEdge design with 95% screen-to-body ratio - 3.0 mm-thin side bezel and 4.5mm bottom bezel - Wide 100% sRGB color gamut - 178° wide-view technology Interfaces: - 1 x USB 3.1 Gen 2 Type-C™ (up to 10Gbps) - 1 x USB 3.1 Gen 2 Type-A (up to 10Gbps) - 1 x USB 2.0 - 1 x Standard HDMI - 1 x MicroSD card reader - 1 x Audio combo jack - 1 x DC-in Keyboard - Full-size backlit, with 1.4mm key travel Weight: At least approximately 1.22 kg Wireless Connectivity - Wi-Fi - Dual-band gigabit-class Wi-Fi 5 - Bluetooth® - Bluetooth 5.0 Battery and Power - Up to 14 hours battery life - 50Wh 3-cell lithium-polymer battery - 65W power adapter - Plug Type: ø4 (mm) - (Output: 19V DC, 65W) - (Input: 100-240V AC, 50/60Hz universal) Supplied with - Wired mouse - Laptop bag (Manufactured issued) - Power Adaptor (Manufacturer's standard) Hard disk shall be formatted in the manner of 40% for the system disk and 60% data disk.	Supply and Delivery	1
3	lot	Wifi System Set (PtoP) – including installation	Supply, Delivery and Installation	1
		UTP cat5e; 100 ohm twisted pair copper cables; High Performance		2
		Wireless receiver: Frequency: 5150 - 5875 MHz; Output Power: 25 dBm; Gain: 23dBi; Networking Interface: (1) 10/100/1000 Ethernet Port; Processor Specs: MIPS 74 Kc; Memory: 64 MB DDR2; Channel Sizes: - PtP Mode: 10/20/30/40/50/60/80 MHz; - PtMP Mode: 10/20/30/40 MHz; ESD/EMP Protection: ± 24 kV Contact/Air; Operating Temperature: -40 to 70° C (-40 to 158° F); Throughput: up to 450+ Mbps real TCP/IP		4
		8 ports switch (US-8) with PoE: 60W; Fully Managed Gigabit Switch; • (8) Gigabit RJ45 Ports; • (4) Auto-Sensing IEEE 802.3af		1



		PoE Ports; • Non-Blocking Throughput: 8 Gbps; • Switching Capacity: 16 Gbps; • Forwarding Rate: 11.9 Mpps; • Maximum Power Consumption: 12W		
		802.11ac Dual-Radio Access Points; Environment: Indoor; 2.4 GHz Speed*: 300 Mbps; 2.4 GHz MIMO: 2 x 2; 5 GHz Speed*: 867 Mbps; 5 GHz MIMO: 2 x 2; PoE Mode: 802.3af/A PoE & 24V PoE; Ports: (1) 10/100/1000 Ethernet		2
		Enterprise Gateway Router with Gigabit Ethernet; • (3) 10/100/1000 RJ45 Ports*; • (1) RJ45 Serial Console Port; • Quiet, Fanless Operation; • Wall-Mounting Capability; • Layer 3 Forwarding Performance; • Packet Size of 64, Bytes: 1,000,000 pps; • Packet Size of 512 Bytes or Larger: 3 Gbps (Line Rate)		1
		Hybrid Cloud Device Management; Processor: Quad-Core SoC; Memory: 1 GB DDR; Networking Interface: (1) 10/100/1000; Ethernet Port; Power Method: - PoE: 48V 802.3af or Passive PoE (Pairs 4, 5+; 7, 8 Return); - Micro-USB: 5V; Featuring Hybrid Cloud technology; securely runs a local instance of the UniFi Controller software and features cloud Single Sign-On for remote access.		1
		(150W) 16-Port Managed PoE+ Gigabit Switch with SFP; • (16) Gigabit RJ45 Ports; • (2) SFP Ports • (1) Serial Console Port • Non-Blocking Throughput: 18 Gbps • Switching Capacity: 36 Gbps • Forwarding Rate: 26.78 Mpps • Maximum Power Consumption: 150W • Supports POE+ IEEE 802.3at/af and 24V Passive PoE • Rack-Mountable or Wall-Mountable with Rack-Mount Brackets (Included)		1
		NTC License		1
4	unit	Outdoor Wi-fi Access Point "802.11AC AP with Plug & Play Mesh Technology; Environment: Indoor / Outdoor: 2.4 GHz Speed*: 300 Mbps 2.4 GHz MIMO: 2 x 2; 5 GHz Speed*: 867 Mbps; 5 GHz MIMO: 2 x 2; PoE Mode: 24V Passive PoE 802.3af PoE: Alternative A; Antennas: (2) External Dual-Band Omni Antennas; - 2.4 GHz: 3 dBi; 5 GHz: 4 dBi; WiFi Standards: 802.11 a/b/g/n/ac; Ports: (1) 10/100/1000 Ethernet; Operating Temperature: -30 to 70° C (-22 to 158° F); Concurrent Clients: 250+"	Supply, Delivery and Installation	2
5	unit	UPS Capacity: 1200 VA / 720 W; Input Voltage and Frequency: 162 to 270 VAC 60 Hz; Output Sockets: Four 220-volt output sockets; Output AC Voltage Regulation (Batt. Mode): +/- 10%; Output Frequency Range: (Batt. Mode): 60 Hz +/- 1 Hz; Battery Type & Number: 12 V / 7 Ah x 2; Typical Recharge Time: 6 hours up to 90% capacity; Full Protection: Overload, discharge, and overcharge protection; Indicators: AC Mode (Green lighting), Battery Mode (Yellow flashing), Fault (Red lighting); Alarm: Battery Mode (Sounding every 10 seconds), Low Battery (Sounding every second), Overload (Sounding every 0.5 second), Fault (Continuously sounding); Dimension (D x W x H): 350 mm x 146 mm x 160 mm	Supply and Delivery	50
6	unit	Managed Switch 16 ports; 150W	Supply and Delivery	2
7	Unit	49" Smart TV - 4K UHD Processor - Dimension of TV with Stand (W x H x D): Approx. 1101 x 705 x 279 mm; Resolution: 3,840 x 2,160	Supply and Delivery	6



		<p>Video:</p> <ul style="list-style-type: none"> - Picture: UHD Engine - Motion Rate: 100 - Picture Quality Index: 1300 - High Dynamic Range - Micro Dimming: UHD Dimming - w/ Contrast Enhancer, Auto Motion Plus and Film Mode <p>Audio:</p> <ul style="list-style-type: none"> - Dolby Digital Plus - Sound Output (RMS): 20W - Speaker Type: 2CH - w/ Multiroom Link <p>Smart Service:</p> <ul style="list-style-type: none"> - Smart TV w/ Web Browser - Connectivity: Wifi Standard; <p>Supports Mobile to TV Mirroring, 360 Video Player, 360 Camera Support, Wifi Direct, and Sound Mirroring</p> <p>HDMI Inputs: 3 (2Side,1Rear);</p> <p>USB Ports: 3 (side);</p> <p>USB Playback</p> <p>Codecs: -</p> <p>1/MPEG2PS/MPEG2TS/AVCHD/MP4Part10/MP4Part2/AVI(XVID) /AVI(MotionJpeg)/WMV9/MKV/WEBM/WAV/MP3/WMA/JPEG;</p> <p>Clarity Enhancement: 4K X-Reality™ PRO</p> <ul style="list-style-type: none"> -Vesa wall support capable -Accessories includes remote control with batteries, wall mounting and power cable 		
8	Unit	<p>Led Wall Display</p> <p>P3.9 OUTDOOR LED DISPLAY- MOVABLE and Expandable</p> <p>Cabinet Size:</p> <p>.5m(h) x .5m(w)</p> <p>Required Size</p> <p>1.5m(h) x 2.5m(w)</p> <p>Actual Size/Set</p> <p>1.5m(h) x 2.5m(w) = 3.75sqm</p> <p>3(h) x 5(w) = 15 panels</p> <p>INCLUSIONS</p> <ul style="list-style-type: none"> ✓ Laptop with LED Software ✓ Power Distribution Box ✓ Complimentary Spare parts ✓ Flight Boxes ✓ Free Training (Operation & Maintenance) ✓ Delivery to PSHS-ZRC, Brgy. Cogon, Dipolog City 	Supply and Delivery	1
9	Set	<p>DSLR Camera</p> <p>(Body) Megapixel & Sensor: 24.3MP FX-Format CMOS Sensor; Mount: F mount, (with AF coupling and AF contacts); LCD Screen: 3.2" Rear Screen Tilting LCD (1,229,000); Video Recording: 1920 x 1080p (Full HD) / 1280 x 720p (HD); Focus: Auto / Manual / Continuous Auto; ISO: Auto, 100-12800 (Extended Mode: 50-51200); Continuous Shooting: Up to 6.5 fps; Shutter Speed:</p>	Supply and Delivery	1



		1/4000–, 30s, in steps of 1/3 or 1/2 EV, bulb, time, X200; Card Slot: Double slot: Slot 2 can be used for overflow or backup storage or for separate storage of copies created using NEF+JPEG; pictures can be copied between cards. SD / SDHC / SDX /; Product Dimension: Approx. 140.5, x113, x78mm (5.6, x4.5, x3.1in.); Battery: EN-EL15 rechargeable Li-ion battery; (Lens): Focal Length: 35mm; Aperture: f/1.4 - f/16; Lens Mount: Nikon F; Format Compatibility: Full-Frame; Angle of View: 63.4°; Maximum Magnification: 0.19x; Minimum Focus Distance: 11.81" / 30 cm; Optical Design: 13 Elements in 11 Groups; Diaphragm Blades: 9, Rounded; Focus Type: Autofocus; Filter Size: 67 mm (Front); Dimensions: (ø x L) 3.03 x 3.7" / 77 x 94 mm; Weight: 1.5 lb		
10	Unit	Firewall 7 x GE RJ45 ports (including 2 x WAN port, 5 x Switch ports), Max managed Access Points (Total / Tunnel) 10 / 5 Bundled with Unified (Unified Threat Management) Protection - 24x7 access to telephone, email and web-based support for configuration and troubleshooting assistance - Application Control, Intrusion Prevention System, Antivirus, Web Filtering and Antispam, and sandboxing detection control - Include in the submission the price for the annual subscription (if there are any)	Supply, Delivery and Installation	1
11	Unit	Router • 12x SFP ports for 1 Gigabit connectivity • 1x SFP+ port for 10 Gigabit connectivity • 16 core Tiler CPU, 1.2GHz clock per core • 12 Mbytes total on-chip cache • TILE GX architecture • Ports directly connected to CPU • 1U rackmount case • Color touchscreen LCD display • two power supplies for redundancy, 2x IEC C14 standard PSU units built in, 110/220V • Memory 2GB built-in RAM w/ - Expansion microUSB port - Storage: 128MB Onboard NAND - Serial: port One DB9 RS232C asynchronous serial port - Extras: Beeper; voltage, current and temperature monitoring, fan, SD Card slot Included with 2x IEC power cables, RJ45 SFP coper module, rackmount ears	Supply, Delivery and Installation	1

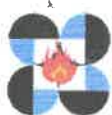


IV. Other Requirements

1. The bidder must submit original brochure of **ALL** deliverables.
2. Within the warranty period, repairs should be done within the campus.
3. On warranty and after sales support, **ALL** delivered items should have a minimum of one (1) year warranty on parts and labor.
4. The bidder must provide a free training program to qualified employee of the PSHS-ZRC in installation, configuration, administration of **OUTDOOR LED WALL DISPLAY, FIREWALL, and ROUTER**. In the case of the firewall and the router, policy creation and implementation should be included in the training as well.
5. The bidder must provide at least one (1) copy of the technical manual/documentation (English) in printed hard copy and electronic (soft copy) formats. The documents include equipment installation, operation, configuration and testing.
6. Training and Technology Transfer should be conducted before final project acceptance.
7. The bidder must render support services to PSHS-ZRC within the warranty period as follows:
8. Render support services to PSHS-ZRC within the warranty period as follows:
 - a. Technical support will be provided through phone calls or email within regular working hours from Monday to Friday, 8:00AM to 5:00PM
 - b. If the supplied equipment is found defective and need to be pulled-out, the contractor shall provide replacement with the same or higher specifications.
 - c. Rectify and or/replace any part that fail to pass any test/inspection or make alteration necessary to meet the specification.
9. On the installation of the **WIFI System**, in the event that the implementers did damaged school properties or facilities, restoration of the affected properties or facilities shall be coordinated, reconstructed and repaired immediately at their own expense.

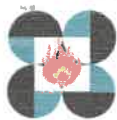
V. ELIGIBILITY AND TECHNICAL COMPONENTS

CLASS "A" DOCUMENTS
PhilGEPS Certificate of Registration and Membership in accordance with Section 8.5.2 of the IRR
<p>Statement of the prospective Bidder of all its on-going 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</p> <p>Statement of the bidder's SLCC similar to the contract to be bid, in accordance with ITB Clause 5.4, within the relevant period as provided in the <u>BDS</u>.</p> <p>The two (2) statements required shall indicate for each contract the following:</p> <ul style="list-style-type: none"> (a) Name of the contract; (b) Date of the contract; (c) Contract duration; (d) Owner's name and address; (e) Kinds of Goods; (f) For Statement of On-going Contracts – amount of contract and value of outstanding contracts; (g) For Statement of SLCC – amount of completed contracts, adjusted by the Bidder to current prices using PSG's consumer price index, if necessary, for the purpose of meeting the SLCC requirements; (h) Date of delivery; and (i) End-user's acceptance or official receipt(s) or sales invoice issued for the contract, if completed, which shall be attached to the statements
<p>NFCC computation in accordance with ITB Clause 5.5 or a committed Line of Credit from a universal or commercial bank.</p> <p>(Attach: latest audited financial statements stamped "received" by the BIR which should not be earlier than two (2) years from the date of bid submission).</p>
CLASS "B" DOCUMENTS
If applicable, the Joint Venture Agreement (JVA) in case the joint venture is already in existence, or duly notarized statements from all the potential joint venture partners in accordance with Section 23.1L(b) of the IRR
TECHNICAL DOCUMENTS
The Bid Security or Bid Securing Declaration in accordance with ITB Clause 18.
Conformity with technical specifications, as enumerated and specified in Sections VI and VII of the Bidding Documents.
Sworn statement in accordance with Section 25.3 of the IRR of RA 9184 and using the form prescribed in Section VIII. Bidding Forms.
Bidder must have been engaged in the business of Supply and Delivery of ICT Equipment in good standing in the Philippines for at least five (5) years from the date of the invitation to bid.



FINANCIAL COMPONENT

Financial Bid, which includes Bid Prices in the prescribed Bid Form and the Cost Distribution.
--



Prepared by:

Anne Fatima T. Pelayre
TWG, Chair

Andy S. Wong
TWG, Member

Mearsk V. Diaz
TWG, Member

Rodel G. Deguiñon
TWG, Member

Noted by the members of the Management Committee:

CARLO M. SALIMBANGON

Chief, Curriculum and Instruction Division

HAZEL R. LAGAPA

Chief, Student Services Division

MILO S. SALDON

Chief, Finance and Administrative Division

Approved:

Engr. Louie C. Jamora
Campus Director