



Republic of the Philippines  
**DEPARTMENT OF EDUCATION**  
Region X  
Division of El Salvador City



## **TERMS OF REFERENCE**

### **REGION X - EL SALVADOR CITY**

### **ENHANCED ICT INFRASTRUCTURE IN-BUILDING SOLUTION PROJECT**

#### **I. RATIONALE**

The Department of Education (DepEd) Division Office serves as the hub for collaboration and communication among its stakeholders including administrators, division heads, school principals and teachers. It is an arm of DepEd which supports the implementation of the programs and projects for the Basic Education sector. Therefore, its role in the provision of services to support the delivery of Basic Education is crucial. We must ensure that all personnel directly and indirectly involved in the delivery of Basic Education is supported with the appropriate technological environment to ensure efficient and effective service.

The Division of El Salvador City is implementing a phase-by-phase development of its ICT Infrastructure to support the role that the Division is playing in the Department of Education. In its third phase of implementation, there are remaining systems that are not yet implemented which will be included in this project.

Considering this, a risk assessment was conducted, and it was determined that the installation of the following is necessary:

1. Setup server which can serve as domain controller and create active directory to create users, build security groups and set access rights per user in the network in compliance to network standards.
2. Enhance the existing IP Telephone System to support the various sections of the Division Office.
3. Setup display equipment in the conference room and Library Hub to facilitate the conduct of meetings and presentations needed to facilitate the implementation of different programs and projects in the Division of El Salvador City.
4. Setup Uninterrupted Supply to protect various equipment connected and ensure longevity of the appliances.
5. Setup Biometric System using Facial Recognition technology to lessen contact of personnel from each other. And its software must be able to print using the prescribed CSC Format. Connect the system in the network.
6. Upgrade the existing network setup to accommodate more devices in the network. Repair the LAN connection of 2 existing Access Point and add ethernet connection to the Dental Office.

7. Procure laptops to be used by the personnel in the Division of El Salvador City to support the day-to-day transactions.
8. Procure printers to be used by the personnel in the Division of El Salvador City to support the day-to-day transactions.

This project aims to equip the Division Office of El Salvador City with the necessary ICT infrastructure to maintain efficient and effective network connectivity, supporting the various activities of educators in the division. The goal is to provide a secure and reliable platform for communication and collaboration among all stakeholders.

### III. QUALIFICATION REQUIREMENTS

- A. The prospective bidder shall be involved in System Integration and shall have at least 10 years' experience in undertaking similar project. Must attached proof.
- B. To guarantee the responsiveness of the winning bidder for after-sales support, the bidder/participant shall preferably have a local partner in Cagayan de Oro City or nearest city and shall provide names and contact details of the persons responsible.
- C. All bidding participants should provide the implementation/project organizational structure of their project implementation team including roles, necessary information, and among others which usually consists of key management personnel like project manager, network designers, laborer, data cabling, installers, among others.
- D. Technicians or installers should be Industry-Certified Professionals or Network Cabling-Certified Installer from any Cabling System Manufacturer for Copper and Fiber Solutions and shall present necessary proof thereof.
- E. Actual site inspections and assessment by interested participants can be allowed during pre-bid conference and prior to dropping and opening of bids.
- F. Certification that the prospective bidder has conducted site survey to ensure correctness of distance and placement of equipment.
- G. Must have Employees at least one (ECE) Electronic Communications Engineer.
- H. The Prospective bidder must ensure that they have trained personnel on the devices included in the project to ensure that transfer of knowledge and configuration will be smooth and successful.
- I. Other documentary requirements to be submitted by the bidder:
  - 1) Certification of After Sales Support for the Network equipment indicating the Support should include online, telephone support, on-call, on-site and replacement if the hardware that is defective is under warranty.
  - 2) Brochures or Technical Data Sheet or equivalent document for all equipment included in the procurement.
  - 3) Items/equipment showing compliance to the specifications.

The Prospective bidder shall complete the delivery and installation of work within sixty (60) calendar days from date of receipt or Notice to Proceed.

The completion schedule provided shall be considered extended under the following:

- A. Delays caused by force majeure events.
- B. Delays caused by special cases and events beyond the control of the contractor, subject for evaluation and approval by DepEd – El Salvador City Division Office.
- C. In all cases, the period or number of days of extension shall be agreed upon with the DepEd – El Salvador City Division Office in writing.

- D. Claims for time extension of the contract period due to force majeure shall be subject to approval by the DepEd – El Salvador City Division Office.

The prospective bidder shall guarantee that the entire structured cabling and networks are free from all defective workmanship and materials, and will remain so for the period of:

1. Minimum One (1) Year Warranty on Active Components except for the server which should come with at least 3 years warranty.
2. Minimum One (1) Year Warranty on Workmanship

DepEd – El Salvador City Division Office shall not be responsible for lack of materials and equipment to be supplied by the winning Bidder. It shall be the sole responsibility of the winning bidder to assess and re-assess on the Materials to be supplied to the Agency and shall be DepEd – El Salvador City Division Office's property.

#### **IV. DUTIES AND RESPONSIBILITIES OF THE PROSPECTIVE BIDDER**

##### **A. Scope of Work and Activities**

The prospective bidder shall furnish all equipment, labor, materials, tools, and perform all operations necessary to complete the supply, delivery, installation, testing and commissioning of **All Goods and Services indicated in the Bill of Materials included in the Procurement of Network Infrastructure or Rehabilitation of Existing Network Infrastructure In-Building Solution** of DEPED EL SALVADOR CITY DIVISION OFFICE. The prospective bidder must provide demonstration and training for IT Personnel. The Prospective bidder shall provide warranty service within the warranty period. Provision of upgrades and patches to be installed must be free of charge during the warranty period. Bidder shall be responsible for all the cost related to the warranty period for hardware products.

##### **C. Installation**

- 1) Supply, deliver and install the required components as specified in the Terms and Reference of the project.
- 2) Winning bidder in close coordination with DEPED – EL SALVADOR CITY DIVISION OFFICE project manager is given the flexibility on their technical design on how the cable will route along ramps, walls, ceilings, and beams for practicality.
- 3) All installations of cables, peripherals, accessories, or electrical wires are expected to be neat, clean, or concealed using metal, aluminum, or plastic molding or concealer.
- 4) Whenever necessary, winning bidder may use metal post or metal pole enough to carry weight of the cables and its tensions. Post/Pole vertical clearance should be high enough not to be disturbed by possible highest passing vehicle especially those encompassing/crossing public streets or road right of way.

##### **D. Post-Installation**

- 1) Restore damages to property caused by excavation, installation, maintenance and/or removal of cabling equipment and other procedures conducted by the prospective bidder to accomplish the project.

- 2) Conduct free training for IT personnel of DEPED – EL SALVADOR CITY DIVISION OFFICE on the basic maintenance and operational requirements of structured cabling and the equipment.
- 3) Provide at least one (1) copy of the technical manual/documentation (English) in printed hard copy and electronic (soft copy) formats. The documents include Cabling and equipment installation, operation, configuration, and testing.
- 4) Render support services to DEPED – EL SALVADOR CITY DIVISION OFFICE within the warranty period as follow:
  - i. Technical support will be provided through phone calls or email within regular working hours from Monday to Friday, 8:00AM to 5:00PM
  - ii. Supplier must be able to respond 2 hours onsite when critical issue arises.
  - iii. Supplier must have a local office in Cagayan de Oro City.
  - iv. If the supplied equipment is found defective and need to be pulled out, the prospective bidder shall provide replacement with the same or higher specifications.
  - v. Rectify and or/replace any part that fail to pass any test/inspection or make alteration necessary to meet the specification.
  - vi. Responsible and accountable for any damage caused solely by the Prospective bidder or its agent to the DEPED – EL SALVADOR CITY DIVISION OFFICE Building as a direct result of the installation maintenance, and removal of any cabling components and devices.

#### **V. DUTIES AND RESPONSIBILITIES OF DEPED – Division of El Salvador City**

- A.** Assist prospective bidders during the conduct of Site Survey.
- B.** Grant the Prospective bidder authorized representative access to its premises and facilities located therein to perform its obligations, provided that such representative shall be accompanied by the duly assigned DEPED – EL SALVADOR CITY DIVISION OFFICE personnel.
- C.** Reject any unit or any part thereof that fail to pass any test and/or inspection or do not conform to specifications.
- D.** Pay the Prospective bidder in accordance with condition set in the Payment Scheme.
- E.** Issue a Certification of Inspection and Acceptance upon determination by the Division IT Officer and Inspectorate Team that the delivered and installed equipment and components are usable and in good working condition.

#### **VI. BILL OF MATERIALS & TECHNICAL SPECIFICATIONS**

Please refer to “Annex B” for the complete Bill of Materials.

#### **Agency Endorsement:**

We, the undersigned, have reviewed and endorsed the proposal for the project as described above.

PREPARED BY:

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**SHERRIE R. DUNGOG**  
Information and Technology Officer - I  
*Signature Over Printed Name and Date*

APPROVED BY:

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**RANDOLPH B. TORTOLA**  
Schools Division Superintendent  
*Signature Over Printed Name and Date*

**Annexes:**

Annex A: Summary of Ports

Annex B: Bill of Materials and Specification

**ANNEX A: SUMMARY OF PORTS**

<b>BUILDING</b>	<b>OFFICE</b>	<b>DATA</b>	<b>AP</b>	<b>IP PHONE</b>
DIAMOND	Doc Nurus	1		
	COA			1
RUBY BUILDING	ADAS		1	
	BUDGET		1	

**ANNEX B: BILL OF MATERIALS AND SPECIFICATION**

NO	ITEM	DETAILS	UNIT	QTY
1	Server	<p>Processor : Intel Xeon Silver 4110 2.1G, 8C/16T, 9.6GT/s , 11M Cache, Turbo, HT (85W) DDR42400</p> <p>Memory : 16GB RDIMM, 2666MT/s, Dual Rank (24 DIMM slots)</p> <p>Network Controller : Broadcom 57416 2 Port 10Gb Base-T + 5720 2 Port 1Gb Base-T, rNDC</p> <p>Hard Drive : 600GB 10K RPM SAS 12Gbps 512n 2.5in Hot-plug Hard Drive (max 8 HDD)</p> <p>Optical Drive : DVD+/-RW, SATA, Internal</p> <p>Power Supply : Single, Hot-plug Power Supply (1+0), 750W</p> <p>Form Factor : 1U Rack Server, with ReadyRails Sliding Rails With Cable Management Arm</p> <p>License : Windows Server 2019</p> <p>Warranty : 3Yr ProSupport: Next Business Day Onsite Service   must be an international brand with at least 10 years' presence in the local market and a global presence in the USA, Europe, or Japan Market and a service center available in Cagayan de Oro City or supports on-site service   Includes training</p>	Piece	1
2	Laptop	<p>AMD Ryzen™ 9 4900HS Mobile Processor (8-core/16-thread, 12MB Cache, 4.3 GHz max boost)</p> <p>NVIDIA® GeForce® GTX 1660Ti with Max-Q Design</p> <p>6GB GDDR6</p> <p>14-inch to 15.9 inches</p> <p>WQHD (2560 x 1440) 16:9</p> <p>RAM: 16GB DDR4 on board 16GB DDR4-3200 SO-DIMM Max Capacity:32GB</p> <p>1TB PCIe® 3.0 NVMe™ M.2 SSD</p> <p>Camera: FHD 1080P@60FPS external camera</p> <p>Backlit Chiclet Keyboard Single Light</p> <p>Touchpad</p> <p>Wi-Fi 6(802.11ax) (Dual band) 2*2 + Bluetooth® 5.0 (*Bluetooth® version may change with OS version different.)</p> <p>Battery: At least 76WHrs, 4S1P, 4-cell Li-ion</p> <p>Weight: 1.6 kg - 1.70 kg</p> <p>Bag</p> <p>OS: Windows 11</p> <p>NOTE: 1 year warranty on parts and services and must be an international brand with at least 10 years' presence in the local market and a global presence in the USA, Europe, or Japan Market and</p>	Piece	1

		a service center available in Cagayan de Oro City or supports on-site service		
3	Laptop	<p>Processor: Intel Core i5-1235U (or higher)  Memory: 8 GB DDR4   Upgradeable up to 32 GB (or higher)  Storage: 512 GB NVMe SSD or higher  Screen Size: Between 14" - 15.6"  Display Screen Technology: TFT LCD  Screen Resolution: Full HD 1920 x 1080  Graphics Controller: Intel® UHD Graphics Graphics Special Technology  Graphics Memory Accessibility: Shared  Audio: 2 speakers with Stereo Speaker Output Mode  Network and Communication: IEEE 802.11a/b/g/n/ac Wireless LAN Standard   Gigabit Ethernet Port   5.0 Bluetooth Standard (or higher)  Webcam: 1280x720 resolution with microphone  IO Ports: HDMI, (3) USB 3.2 Gen 1 Port, RJ-45 Port  Battery: 3 cell, Litium Ion (Li-Ion)  Battery Capacity: 40Wh  NOTE: 1 year warranty on parts and services and must be an international brand with at least 10 years' presence in the local market and a global presence in the USA, Europe, or Japan Market and a service center available in Cagayan de Oro City or a support that can service on site.   Includes Bag</p>	Piece	17
4	Printer	<p>Printer Type: Print, Scan, Copy, Fax with ADF    Print Method: On-demand inkjet (Piezoelectric)    Printer Language: ESC/P-R, ESC/P Raster Nozzle  Configuration: 180 x 1 nozzles Black, 59 x 1 nozzles per Colour (Cyan, Magenta, Yellow)  Maximum Resolution: 5760 x 1440 dpi   Automatic 2-sided Printing: No   Photo Default - 10 x 15 cm / 4 x 6 "  *1:Approx. 69 sec per photo (Border) / 90 sec per photo (Borderless)*2   Draft, A4 (Black / Colour): Up to 33 ppm / 15 ppm*2   ISO 24734, A4 Simplex (Black / Colour): Up to 10 ipm / 5.0 ipm*2   First Page Out Time from Ready Mode (Black / Colour): Approx. 10 sec / 16 sec*2   Scan Speed (Flatbed / ADF (Simplex)): 200dpi, Black: 12 sec / Up to 4.5 ipm 200dpi, Colour: 29 sec / Up to 4.5 ipm   ADF Specifications: Support Paper Thickness: 64 – 95 g/m2   Paper Capacity: 30 pages (A4), 10 pages (Legal)</p>	Piece	2



5	Uninterrupted Power Supply (UPS)	<p>Uninterrupted Power Supply   3000VA   2700W   Input: C20, Outputs: (8) C13, (1) C19, Rack, 2U   Battery type: Sealed, lead-acid   Battery replacement: Hot-swappable internal batteries and extended battery modules (EBMs)   Battery quantity: 6   Battery management: ABM &amp; Temperature compensated charging method (user selectable), Automatic battery test, Deep discharge protection, Automatic recognition of external battery units)   Battery rating: 12 V / 9 Ah   Extended battery capability: Yes   Input connection: C20   Input nominal voltage: 230V default (200/208/220/230/240/250V)   Nominal frequency: 50/60 Hz   Input power factor: &gt;.99   Input cord length: 1.8m   Input voltage range: 200-276 Vac without derating (up to 140-276 Vac with derating)   Input frequency range: 40-70 Hz   Receptacle: (8) C13, (1) C19   Voltage: 230V   Wattage:2700 W   Output power factor: 0.9   Output voltage range: 200/208/220/230/240 V +/- 2%   Output waveform: Sine wave   Output nominal voltage: 230V default (200/208/220/230/240V)  Voltage distortion output (linear load) - max: 3   Feed type: 1   Topology: Online/Double-conversion   VA rating:3000 VA   Communication: USB port (HID compliant), Serial port (RS232), Mini-terminal block for remote power off, Mini-terminal block for output relay, Dry contacts (2 outputs, 1 input, optocoupler, DB9)   User interface: Multilingual graphical LCD display   Potential free switch contact: Yes   Expansion slots: One slot for optional communication card   Package contents: UPS, Input cable, (2) IEC-IEC output cables, USB cable, Serial cable, (2) brackets for 19' mounting, (2) Rack-mounting kit, Safety instructions, Quickstart guide   Phase (output): 1   Internal bypass: Yes   Auto shutdown function: Yes   Color: Black   Efficiency: 92   Rack mounting kit: Yes   Phase (input): 1   NOTE: 3 year warranty on parts and services and must be an international brand with at least 10 years' presence in the local market and a global presence in the USA, Europe, or Japan Market and a service center available in Cagayan de Oro City or a support that can service on site.</p>	Piece	1
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6	External Battery Module	External Battery Module for UPS specified with 2000VA/3000VA that works with the UPS specified in Item No. 5	Piece	1
7	Facial Biometric	Facial Recognition Biometric   Face Capacity 1,500.00   Card Capacity 2,000.00   Record Capacity 100,000.00   Display 2.8-inch TFT Screen   Communication TCP/IP, USB-Host, Wi-Fi (Optional)   Standard Functions SMS, DST, Schedule-bell, Self-Service   Query, Automatic Status Switch, T9, Input, Photo ID, Camera, Multi-verification, RS232 Printer (Optional Cable)   Interface for Access Control 3rd Party Electric Lock, Exit Button, Alarm   Optional Functions ID / MF Card, Work Code, ADMS   Power Supply DC 12V 1.5A   Dimension 109x165.5x33.2 mm (Length*Width*Thickness) Net Weight 264g   Connect the Biometric in the network   The software of the biometric must be configured or setup to print the attendance following the CSC Form 48 format	Package	2
8	Steel Cabinet	STEEL CABINET : 12U cabinet   3 shelves   L x W x H (49cm x 52.5cm x 67cm)   2 directional wheels at the bottom + 2 universal wheels   With Doors and Drawers Mobile Cabinet (With Wheels)   Aluminum edging, aluminum alloy edging   Hole to pass through cables	Piece	1
9	Television	Screen Size: 55"   Display Technology: LED   Display Type: 4K   Display Resolution: 3840 x 2160pixels   Refresh Rate: 60Hz   HDR: HDR10   Aspect Ratio: 16:9   OS: Google TV   HDMI: 3   USB: 2.0   LAN (Ethernet): Yes   2 years warranty   HDMI: (x3) HDMI1.4, HDMI2.0, HDMI2.1   USB 2.0: x1 USB3.0   Ethernet Connection: yes x1   Composite Video Input (s): yes (AV in ADAPTER)   RF Connection Input(s): yes   Digital Audio Output (s): SPDIF (Optical)   Audio Out: Yes (Headphone)   Headphone Out: Yes   Wifi: 2.4GHz/5GHz dual-band Wi-Fi 802.11 b/g/n 2T2R   Video Search: Youtube, Netflix, BrowseHere, Prime Video, Disney+ Mobile to TV - Mirroring, DLNA: Google Chromecast, Wireless Display   Include wall mount kit	Piece	1

10	Television	Screen Size: 50"   Slim Design TV   4K QLED   HDR10+, Dolby Vision -   Dolby Atmos   Google TV   H2GB DDR + 16 GB Flash   Wi-Fi 5, Dual Band (2.4G + 5G)   Bluetooth 5.0   Display Resolution: 3840 x 2160   Screen Format: 16:9, 4:3, Cinerama, 14:9 zoom, 16:9 zoom, 16:9 zoom up   Picture Mode: Dynamic, Standard, Smart HDR, Sport, Movie (Game, PC)  HDMI: (x3) HDMI1.4, HDMI2.0, HDMI2.1   USB 2.0: x1 USB3.0   Ethernet Connection: yes x1   Composite Video Input (s): yes (AV in ADAPTER)   Wifi: 2.4GHz/5GHz dual-band Wi-Fi 802.11 b/g/n 2T2R   Include wall mount kit	Piece	1
11	IP Phone	Grandstream GRP2601P	Piece	1
12	Other Coverage	Installation, Configuration, Transfer of Knowledge for all items specified in the project, Cabling materials, cable organizers, wall brackets, delivery, labor and wiring of 1 IP Phone for COA, 2 Access Point for Budget Office and ADAS Office and 1 LAN port for the Dental Office	Lot	1
<b>TOTAL</b>				<b>1,502,000.00</b>