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. Also, it is imperative in every organization to ensure security in the office and so there is a need to strengthen the CCTV system.

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.   Upgrade the CCTV network separating its connectivity from the existing Internet connection of the personnel in the Division to ensure balanced network traffic especially that videos consume bandwidth.
2.   Repair the existing wiring in the Library Hub to restore functionality of various equipment such as cameras, access points, data ports and IP telephones. Restore the Fiber connection from the Library Hub to the Diamond Building.
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.   Procure tools needed to maintain the ICT Infrastructure of the Division and facilitate the installation of various equipment and components needed to implement a relevant technological environment.
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.

II. OBJECTIVES

General objective:
- To upgrade and modernize the existing network infrastructure of the Department of Education – Division of El Salvador City to provide a secure and reliable platform for communication and collaboration among all stakeholders, support online interactions, and efficiently support the various activities of educators in the schools and others.
- To implement support systems that will improve overall ICT infrastructure reliability and mitigate possible downtime of connectivity.

III. QUALIFICATION REQUIREMENTS

A. The prospective bidder shall be involved in System Integration and shall have at least 10 years' experience in undertaking a 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 cablers, 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 the following:
   a) Active Networking Devices
   b) Category 6 UTP
   c) Other Equipment included in the Bill of Materials
3) Items/equipment showing compliance with the required Technical Specifications:
   a) Active Networking Devices
   b) Category 6 UTP
   c) Other Equipment included in the Bill of Materials
4) Proposed design, configuration, and specification of offered design, systems and technology shall show compliance, compatibility, and best fit to the desired systems subject for evaluation of the procuring entity.

The Prospective bidder shall complete the delivery and installation of work within 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 Two (2) Year Warranty on Active Components.
   2. Minimum Two (2) 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, the 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 A" 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:

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

APPROVED BY:

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

Annexes:

Annex A: Bill of Materials and Specification

ANNEX A: BILL OF MATERIALS AND SPECIFICATION
LOT 1

NO	ITEM	DETAILS	UNIT	QTY
1	Laptop for ICT Unit	Laptop for ICT Unit: 1 Unit Processor: 13th Generation Intel® Core™ i9 processor or Higher OS: Windows 11 RAM: 32 GB DDR5 or Higher Hard Drive: 1 TB SSD Graphics: 8 GB GDDR6 or Higher Display: 14 " - 16.2" Brightness: 300 nits or Higher Weight: 1 kg - 2.35 kg Battery Life: 4 hours or higher Wireless: Wi-Fi 6E 2x2 or Higher Bluetooth: Yes supporting Gigabit Data Rate M.2 Slot: 2 with minimum capacity of 1 TB each Ports: USB Type A, USB Type C, HDMI, RJ 45, Headphone/Microphone or more Camera: 1080P FHD or higher Audio: High quality sound for conference and other functions requiring best audio quality Warranty: 1 year or more Inclusion: Bag for laptop for travels NOTE: Must be an international brand with at least 10 years' presence in the local market and with global presence in the USA, Europe, or Japan Market	Unit	1
2	Laptop for SDO Personnel	Laptop for SDO Personnel: 4 Units Processor: 12th Generation Intel® Core™ i5 processor or Higher OS: Windows 11 RAM: 16 GB DDR4 or Higher Hard Drive: 512 GB SSD or Higher Graphics: At least 4 GB GDDR6 or Higher Display: 15.6" Brightness: 250 Nits or Higher Weight: 1 kg - 2.35 kg Wireless: Wi-Fi 6 (2x2) or Higher Bluetooth: Yes Ports: USB Type A, USB Type C, HDMI, RJ 45, Headphone/Microphone or more Camera: 1080P FHD or higher Audio: High quality sound for conference and other functions requiring best audio quality Warranty: 1 year or more Inclusion: Bag for laptop for travels NOTE: Must be an international brand with at least 10 years' presence in the local market and with global presence in the USA, Europe, or Japan Market	Unit	4

3	Laptop for Engineer	Laptop for Engineer: 1 Unit Processor: 12th Generation Intel® Core™ i7 processor or Higher OS: Windows 11 RAM: 16 GB DDR4 or Higher Hard Drive: 512 GB SSD or Higher Graphics: Supports rendering using 3D Autocad Application Display: 14" or higher Wireless: Wi-Fi 6E or Higher | IEEE 802.11 a/b/g/n/ac/ax Standard Bluetooth: Yes | Standard - 5.2 or Higher Ports: USB Type A, USB Type C, HDMI, RJ 45, Headphone/Microphone or more Camera: 1080P FHD or higher Audio: High quality sound for conference and other functions requiring best audio quality Warranty: 1 year or more Inclusion: Bag for laptop for travels NOTE: Must be an international brand with at least 10 years' presence in the local market and with global presence in the USA, Europe, or Japan Market	Unit	1
4	Printer	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)	Unit	11
5	Facial Biometric	Face Capacity: 1500 | Fingerprint Capacity: 2000 | Card Capacity: 2000 | Record Capacity: 100,000 | Display: 2.8-inch TFT Screen | Communication: TCP/IP, USB-Host, Wi-Fi (Optional) | Standard Functions: SMS, DST, Scheduled-Bell, Self-Service Query, Automatic Status Switch | T9 Input, Photo ID, Camera, Multi-Verification, 12V Output | Power Supply: DC 12V 1.5A | Verification Speed: <_1 sec| **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 and if software license is not for free, it should cover at least 5 years.**	Package	2
6	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 DrawersMobile Cabinet (With Wheels) | Aluminum edging, aluminum alloy edging | Hole to pass through cables	Unit	1

7	Smart 4K Television	Size: 55" Backlight: Direct LED Display Resolution: Ultra HD 3840x2160 | 4K Resolution Brightness: 500 cd/m2 Audio: Surround Sound System Connectivity: Screen Sharing | DLNA/Content Sharing | Wi-Fi/LAN | Bluetooth | USB 2.0 - JPG, MP3, MKV x2 | HDMI Input - x3 (2.0) | Invisible Speakers | Wake On LAN General: Power Consumption - 125W | Wall Bracket | Remote Control Add-Ons: Includes installation of wall bracket and mounting the TV to a wall	Unit	1
8	Smart 4K Television	Size: 50" Backlight: Direct LED Display Resolution: Ultra HD 3840x2160 Brightness: 500 cd/m2 Response Time: 6 ms Audio: Surround Sound System | Audio Power Output: 8Wx2 Connectivity: WiFi/LAN | DLNA | Bluetooth, USB 2.0 - JPG, MP3, MKVx2 | HDMI Input x3 (2.0) General: Invisible Speakers | Power Consumption - 130W | Remote Control | Wall Bracket Add-Ons: Includes installation of wall bracket and mounting the TV to a wall	Unit	1
9	NAS HDD	Hard Drive for the existing NAS Synology Diskstation DS420+ (2 - 4TB for the existing NAS) - Includes setup and configuration to the existing NAS | Additional Drive must be compatible with the existing Hard Drive installed on the NAS.	Unit	2
10	Indoor Camera	High quality imaging with 2 MP, 1920 x 1080 resolution n 24/7 color imaging Clear imaging against strong back light due to 130 dB true WDR technology 3D DNR technology delivers clean and sharp images n 2.8 mm, 3.6 mm, 6 mm fixed focal lens n Up to 20 m white light distance for bright night imaging One port for four switchable signals (TVI/AHD/CVI/CVBS) Water and dust resistant (IP68) Inclusion: Installation and integration of cameras at CID, SGOD,ICT Unit, Cabinet Diamond, Accounting, Security	Unit	3
11	Outdoor Camera	High quality imaging with 2 MP, 1920 x 1080 resolution n 24/7 color imaging Clear imaging against strong back light due to 130 dB true WDR technology 3D DNR technology delivers clean and sharp images n 2.8 mm, 3.6 mm, 6 mm fixed focal lens n Up to 40 m white light distance for bright night imaging One port for four switchable signals (TVI/AHD/CVI/CVBS) n Water and dust resistant (IP68) Inclusion: Installation and integration of cameras at Gate-Highway, Parking Area	Unit	2

12	Manageable Gigabit POE Switch	16 x Gigabit PoE ports, 2 x Gigabit SFP fiber optical ports IEEE 802.3at/af standard IEEE 802.3, IEEE 802.3u, and IEEE 802.3x standard n 6 kV surge protection for PoE ports n PoE power management n Gigabit network access n Wire-speed forwarding n Store-and-forward switching n Solid high-strength metal shell	Unit	6
13	Monitor (32") - Security Guard & AO V	LED backlit technology with full HD 1920 x 1080n 32" LED backlight monitor 16.7 million colors display images perfectly Multiple interfaces: HDMI, VGA, audio inn Built-in speaker Wide viewing angle: Horizontal 178°, Vertical 178° 24/7 operation LED backlit technology with full HD 1920x1080n 16.7 million color, display picture perfectly HDMI support up to 1080Pn Multiple inputs: HDMI, VGA Build-in speaker Audio 5W*2n Auto signal input Detection Smart engine for Phase/Image position/Color calibration Plastic casing Narrow front Bezel or Higher	Unit	2
	PASSIVE EQUIPMENT			
14	Cabinet	600*450*330 6U DATA CABINET	Unit	4
15	Patch Panel	24PORTS CAT6 PATCH PANEL	Unit	4
16	Cable Manager	24PORTS CABLE MANAGER	Unit	4
17	Ethernet Cable (Camera to Switch)	CAT6 U/UTP CABLE 305M, PVC, BLUE	Box	3
18	Fiber Optic Cable	200 METERS SC To SC Single Core Cable FTTH Singlemode Simplex Cable Optical Fiber Indoor/Outdoor	Unit	5
19	Media Converter A	10/100/1000 Mbps RJ45 to 1000 Mbps Single-mode SC WDM Bi-Directional Fiber Converter	PORT: 1x Gigabit SC Port, 1x Gigabit RJ45 Port (Auto MDI/MDIX) SPEC: Full-duplex, Tx:1550 nm, Rx:1310 nm	Unit	5
20	Media Converter B	10/100/1000 Mbps RJ45 to 1000 Mbps Single-mode SC WDM Bi-Directional Fiber Converter	PORT: 1x Gigabit SC Port, 1x Gigabit RJ45 Port (Auto MDI/MDIX) SPEC: Full-duplex, Tx:1310 nm, Rx:1550 nm	Unit	5
21	HDMI KVM Extender	HDMI KVM Fiber Extender HDMI With USB2.0 Over SC/FC; Standards: For HD V1.3; for HDCP 1.2 Maximum pixel clock:165MHz Maximum data rate:6.75Gbps Resolution:1920X1080P@60Hz Connector: HD-A Impedance:100Q	Unit	2
22	HMDI Splitter	Interface Type: HDMI Female Version: HDMI 1.4 Interface Process: Gold Plated Resolution: 4K 30Hz Transmission Direction: HDMI Input, HDMI Output, Middle Frame Shell: Aluminum Alloy Upper and Lower Cover Shell: ABS + Aluminum Alloy Power Supply: DC Power Supply Supply Current: 5V Packing: Kraft Box + Color Box Output / Input Standard: HDMI 1.4	Unit	1
23	External DVD Drive	External DVD Drive |Branded and heavy duty	Supports Windows 8.1 and above OS	USB interface to the computer	Unit	1
24	Accessories and rough-ins	Accessories and rough-ins	Lot	1
26	RECONNECTION OF THE CCTV, AP's,	Installation and setup of the switch cabinet at the Library Hub	Lot	1
27		Reconnection of Fiber Cable from Lib Hub to Diamond Building Cabinet	Lot	1

28	TELEPHONE, & DATA PORTS in the Library Hub and ALS Office	Rewiring and reconfiguration of 6 cameras	Lot	6
29		Rewiring and reconfiguration of 2 LAN ports (Lib Hub)	Lot	2
30		Reconnection of 2 AP's (Lib Hub + ALS office)	Lot	2
31		Reconnection of IP Phone (Lib Hub + ALS Office)	Lot	2
32		Rewiring and reconfiguration of 2 LAN Ports (ALS Office)	Lot	2
33	RECONNECTION OF THE CCTV, AP's, TELEPHONE, & DATA PORTS in the Ruby Building	Installation and configuration of 2 Access Points	Lot	2
34		10m machined crimped patch chord	Lot	5
35		Installation and configuration of 1 Camera in the ICT Unit Office (Camera is available)	Lot	1
36		Replacement of camera in the Ruby Building 2nd Floor, installation and configuration	Lot	1
37	TOOLS	Ladder Extend Aluminum Folding 4x4	Unit	1
38		Cable Installation Kit | Includes the complete solution for cutting, crimping, and terminating | All the tools included come in a compact zipper case | Stripper, Scissors, Punchdown Tool, Reversible blade, Phone/Data Crimpt Tool| 10 RJ45 Modular Plugs that can work with the ethernet cable included in the project | 50 RJ11 Modular Plugs | Compact Zipper Case NOTE: The offered brand and model must comply with the requirements or any higher model and brand that is acceptable to the procuring entity.	Unit	1
39		Cable Tracer Probe | Able to track ethernet/telephone/power cables without opening their insulation | Telephone/ethernet/power cable tracking | DC Level Test, can check voltage level and polarity | Ethernet Cable wiring sequence verification | Fast open/short circuit test | Volume adjustment | Headset connection for noisy environment | Dual measurement cycle mode| Low battery indication | Certifications: CE, UKCA NOTE: The offered brand and model must comply with the requirements or any higher model and brand that is acceptable to the procuring entity.	Unit	1
40		Modular Data Cable Crimper (Passthrough)| Modular crimp-connector installation tool for voice and data applications with Pass-Thru RJ45 connector plugs | Wire stripper, crimper, and cutter all-in-one tool for STP/UTP paired-conductor data cables | Trims flush to end face of connector eliminating unintended contact between conductors |Crimps and trims Klein Tools RJ45 Pass-Thru Connectors Crimps 4, 6 and 8 position modular connectors (RJ11/RJ12 standard and RJ45 Klein Tools Pass-Thru)| Full-cycle ratchet mechanism ensures complete connector termination |On-tool wiring guide helps minimize wiring errors NOTE: The offered brand and model must comply with the requirements or any higher model and brand that is acceptable to the procuring entity.	Unit	1
41		Delivery, Installation, Configuration, Testing, Commissioning, Labeling and Training	Lot	1
		TOTAL	**1,500,000.00**	