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**SUBSCRIPTION OF MANAGED SERVICES FOR LOCAL AREA NETWORK  
OF DSWD CENTRAL OFFICE, NROC AND SWADCAP**  
(ITB No. GOP/20-DSWD-014)  
**17 JANUARY 2020 | 11:00 AM**  
*OUS-DRMG Conference Room, Directors Dormitory, DSWD Central Office*

**MINUTES OF PRE-BID CONFERENCE**

**I. Attendance**

**Bids and Awards Committee (BAC):**

- |                                   |   |                  |
|-----------------------------------|---|------------------|
| 1. U/Sec. Felicisimo C. Budiongan | - | Chairperson      |
| 2. Dir. Emmanuel P. Privado       | - | Regular Member   |
| 3. OIC-Dir. Irene B. Dumlao       | - | Alternate Member |
| 4. Mr. Felix M Armeña             | - | Alternate Member |

**BAC Secretariat:**

- |                              |   |                                    |
|------------------------------|---|------------------------------------|
| 1. Ms. Oliva C. Arcaina      | - | Supervising Administrative Officer |
| 2. Mr. William V. Garcia Jr. | - | Administrative Officer V           |
| 3. Mr. Ramises B. Esteban    | - | Administrative Officer III         |
| 4. Mr. Prince A. Lee         | - | Administrative Officer III         |
| 5. Ms. Filipinas B. Alfonso  | - | Administrative Officer III         |
| 6. Ms. Danilyn A. Dedeles    | - | Administrative Assistant III       |
| 7. Ms. Marden D. Aquino      | - | Administrative Assistant III       |

**Others in Attendance:**

- |                           |   |   |
|---------------------------|---|---|
| 1. Mr. Dennis S. Asuncion | - | Information and Communications<br>Technology Management Service (ICTMS)                         |
| 2. Mr. Randolph B. Dimal  | - | Procurement Management Service (PMS)-<br>Procurement Planning and Management<br>Division (PPMD) |

**Prospective Bidder/s Present:**

- |                         |   |                                 |
|-------------------------|---|---------------------------------|
| 1. Mr. Romeo Doroja Jr. | - | Accent Micro Technologies, Inc. |
|-------------------------|---|---------------------------------|

**II. Call to Order**

The Pre-Bid Conference for the “**Subscription of Managed Services for Local Area Network of DSWD Central Office, NROC and SWADCAP**” was called to order at **11:00 AM** by the BAC Chairperson, **U/Sec. Felicisimo C. Budiongan**. He then introduced the members of the BAC, the BAC Secretariat and the representatives from the End-user (Information and Communications Technology Management Service) and Procurement Management Service. (*Note: The other invited observers were unable to attend.*) He also acknowledged the presence of representative of the prospective bidder.



A copy of the Agenda is hereto attached, marked as **Annex "A"**, and made an integral part hereof.

### III. Highlights of Discussion

ITEM/ PARTICULAR	ISSUES/ CONCERNS / DISCUSSIONS	AGREEMENTS/ ACTION REQUIRED
<b>Procurement Guidelines</b>	<ul style="list-style-type: none"><li>Ms. Arcaina (<i>BACSec</i>) presented the procurement guidelines for the information of the prospective bidder.</li></ul>	
<b>Background of the Project</b>	<ul style="list-style-type: none"><li>Mr. Asuncion (<i>ICTMS</i>) provided the background of the project. He mentioned that the project aims to improve the network infrastructure of DSWD Central Office, NROC and SWADCAP and to ensure fast and reliable access to DSWD systems, applications and websites, and to support the daily operations of the DSWD.</li></ul>	
<b>Technical Specifications</b>	<ul style="list-style-type: none"><li>Mr. Doroja Jr. (<i>Accent Micro</i>) stated that he has no questions on the technical specifications as well as the other terms and conditions of the project since Accent Micro Technologies, Inc. is the current service provider of the project.</li></ul>	
<b>Preparation of Bid Proposals</b>	<ul style="list-style-type: none"><li>Ms. Arcaina (<i>BACSec</i>) reminded the prospective bidder on how to prepare bid proposal and how to accomplish the forms in the Bidding Documents.</li></ul>	
<b>Deadline of Submission and Receipt of Queries and Clarifications</b>	<ul style="list-style-type: none"><li>Mr. Garcia Jr. (<i>BACSec</i>) reminded the prospective bidder that queries and clarifications may be submitted to the BAC Secretariat on or before 20 January 2020, 05:00 PM, in writing or thru email at <a href="mailto:bacsec@dswd.gov.ph">bacsec@dswd.gov.ph</a> or thru fax at (02) 951-7116.</li></ul>	



#### IV. Adjournment


Having no other matters for discussion, the Pre-Bid Conference was adjourned at **11:30 AM.**

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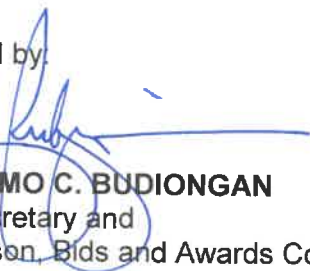
Prepared by:

  
**DANILYN A. DEDELES**  
Administrative Assistant III  
Bids and Awards Committee Secretariat

Noted by:

  
**OLIVA C. ARCAINA**  
Supervising Administrative Officer and  
Officer-in-Charge, Bids and Awards  
Committee Secretariat

Approved by:

  
**FELICISIMO C. BUDIONGAN**  
Undersecretary and  
Chairperson, Bids and Awards Committee

## PRE-BID CONFERENCE

<b>DESCRIPTION</b>	:	Subscription of Managed Services for Local Area Network of DSWD Central Office, NROC and SWADCAP   ITB No. GOP/20-DSWD-014
<b>DATE</b>	:	17 January 2020
<b>TIME</b>	:	11:00 AM
<b>VENUE</b>	:	OUS-DRMG Conference Room, Room 202, Directors Dormitory
<b>PARTICIPANTS</b>	:	BAC, BAC Secretariat, ICTMS, FMS, PMS, Prospective Bidders

## AGENDA

### I. Call to Order

- A. Introduce the members of the BAC, the BAC Secretariat, and other DSWD Personnel present.
- B. Acknowledge the presence of all interested bidders who are in attendance.
- C. Inform the bidders that questions will be entertained after the reading of the Rules Specified in the Bidding Documents.

### II. Procurement Guidelines

- A. The procurement procedure for the **"Subscription of Managed Services for Local Area Network of DSWD Central Office, NROC and SWADCAP"** is Competitive Bidding pursuant to the provisions of Republic Act No. 9184 (RA 9184) and its revised 2016 Implementing Rules and Regulations (IRR), otherwise known as the "Government Procurement Reform Act" (GPRA).
- B. All bids will be opened, read aloud, and recorded at the time of the bid opening. **Late bids will be marked "Late" and will be returned unopened to the bidder.** No award shall be made during the bid opening. During the bid opening, the Bids and Awards Committee (BAC) will conduct a preliminary examination of the bid proposals submitted to determine its completeness, check if the required bid security has been posted, and that the documents have been properly signed and are generally in order.
- C. Deviations  

Bidders are not allowed to deviate from any of the eligibility, technical and financial specifications specified in the bidding documents. Bids exhibiting non-compliance with the specifications shall be disqualified.
- D. Evaluation and Comparison of Bids  

The Procuring Entity will evaluate and compare bids, which have been determined to be responsive during the preliminary examination.



**III. The Bidding Documents shall be discussed by the Head of the BAC Secretariat, particularly the following issues:**

**A. Eligibility and Technical Component**

All the required Eligibility and Technical Documents listed on the Instructions to Bidders (ITB) and the Bid Data Sheet (BDS) shall be submitted following such order. Those documents shall be the basis of the preliminary examination of bids.

**B. Financial Component**

All the required Financial Documents listed in the ITB and BDS shall be submitted, following such order. Those documents will be the basis of the Preliminary Examination of the Financial Proposal during the bid opening.

**C. Preliminary Examination**

The BAC shall open the **Eligibility and Technical Component (first envelope)** and check the submitted eligibility and technical documents for each bidder against a checklist of required eligibility and technical documents to ascertain if they are all present, **using non-discretionary “pass/fail” criteria**. In case one or more of the required documents is missing, the BAC shall declare the eligibility and technical requirement concerned as **“failed”** and immediately return to the bidder concerned its Financial Component (second envelope). Otherwise, the BAC shall declare the said eligibility requirements as **“passed”**.

Upon completion of the preliminary examination of the Eligibility and Technical component, the BAC shall subsequently open the **Financial Component (second envelope)** and check against a checklist of required financial documents to ascertain if they are all present **using a non-discretionary “pass/fail” criteria**. In case one or more of the financial documents required are missing and/or if the submitted total bid price exceeds the Approved Budget for the Contract (ABC), the BAC shall declare the bid concerned as **“failed”**.

**D. Bid Security**

Each bidder shall furnish a Bid Security as part of its Bid. The Bid Security shall be in any of the form prescribed on the ITB.

**E. Bid Validity Period**

Bids shall be valid for **one hundred twenty (120) calendar days** from the date of the opening of bids.

**F. Evaluation and Award**

The BAC or the designated Technical Working Group (TWG) will conduct a detailed evaluation and comparison of all bids declared “passed”, using non-discretionary criteria. Those who complied with the criteria prescribed in the bidding documents will be ranked in ascending order of their total calculated bid prices, as evaluated and corrected for computational errors, discounts and other modifications to determine the Lowest Calculated Bid (LCB).



#### G. Post-Qualification

After determining the **Lowest Calculated Bid (LCB)** or **Single Calculated Bid (SCB)**, as the case maybe, the BAC shall conduct post-qualification to verify, validate, and ascertain all statements made and documents submitted by the bidder with the LCB/SCB, using non-discretionary criteria. If the BAC determines that the bidder with the LCB/SCB passes all the criteria for post-qualification, it shall declare the said bidder as the **Lowest Calculated and Responsive Bid (LCRB)** or **Single Calculated and Responsive Bid (SCRB)** and award the contract to the said bidder.

#### IV. Open Forum

Any clarifications, issues or concerns that are not found in the bid documents will be announced in writing through Supplemental/Bid Bulletin.

#### V. Adjournment

**INVITATION TO BID FOR**  
**SUBSCRIPTION OF MANAGED SERVICES FOR LOCAL AREA**  
**NETWORK OF DSWD CENTRAL OFFICE, NROC AND**  
**SWADCAP**

— ITB No. GOP/20-DSWD-014 —  
(PR No. 2019121829)

1. The **Department of Social Welfare and Development (DSWD)**, through the **DSWD Funds**, intends to apply the sum of **Twelve Million Five Hundred Ninety-Three Thousand Nineteen Pesos and Eleven Centavos (PHP 12,593,019.11)**, being the Approved Budget for the Contract (ABC) to payments under the contract for the **Subscription of Managed Services for Local Area Network of DSWD Central Office, National Resource Operations Center (NROC) and Social Welfare and Development Center for Asia and the Pacific (SWADCAP)**. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The DSWD now invites registered Philippine Government Electronic Procurement System (PhilGEPS) service providers to bid for the **Subscription of Managed Services for Local Area Network of DSWD Central Office, NROC and SWADCAP**. Delivery of Goods and Services shall be in accordance with **Section VI. Schedule of Requirements**. Bidders should have completed, **within five (5) years from the date of submission and receipt of bids**, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. Instructions to Bidders.
3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary “pass/fail” criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184, otherwise known as the “Government Procurement Reform Act”.  
  
Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.
4. Interested bidders may obtain further information from **DSWD Bids and Awards Committee (BAC) Secretariat** and inspect the Bidding Documents at the address given below from **Monday to Friday at 08:00 AM to 05:00 PM**.
5. A complete set of Bidding Documents may be purchased by interested Bidders on **13 January 2020 to 29 January 2020** from the address below and upon payment of a nonrefundable fee for the Bidding Documents in the amount of **Fifteen Thousand Pesos (PHP 15,000.00)**.

It may also be downloaded free of charge from the website of the PhilGEPS and the website of the Procuring Entity, provided that Bidders shall pay the nonrefundable fee for the Bidding Documents not later than the submission of their bids.

6. The DSWD will hold a **Pre-Bid Conference** on *17 January 2020, 11:00 AM*, at the **Office of the Undersecretary for Disaster Response Management Group (OUS-DRMG) Conference Room, Room 202, Directors Dormitory, DSWD Central Office, IBP Road, Constitution Hills, Quezon City** which shall be open to all interested parties.
7. Bids must be delivered to the address below on or before *29 January 2020, 09:00 AM*. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 18.

Bid opening shall be on *17 January 2019, 11:00 AM*, at the **Office of the Undersecretary for Disaster Response Management Group (OUS-DRMG) Conference Room, Room 202, Directors Dormitory, DSWD Central Office, IBP Road, Constitution Hills, Quezon City**. Bids will be opened in the presence of the Bidders' representatives who choose to attend. Late bids shall not be accepted.

8. The DSWD reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 41 of RA 9184 and its 2016 Revised IRR, without thereby incurring any liability to the affected bidder or bidders.
9. For further information, please refer to:


**THE CHAIRPERSON**

DSWD Bids and Awards Committee  
c/o BAC Secretariat

Ground Floor, DSWD Central Office  
IBP Road, Constitution Hills, Quezon City

Fax No. (02) 931-6139

Telephone Nos. (02) 931-8101 to 07 Local 122 or 124

  
**FELICISIMO C. BUDIONGAN**  
*Undersecretary and*  
*Chairperson, Bids and Awards Committee*



## *Section VI. Schedule of Requirements*

### **Subscription of Managed Service for Local Area Network of DSWD Central Office, NROC and SWADCAP**

Particulars	Components	Quantity
DSWD Central Office	Fiber Optic Backbone	5,005 meters
	Network Node	550 nodes
	Core Switch	2 units
	Distribution Switch for Edge Network	4 units
	Distribution Switch for IDF	12 units
	Access Switch (24 ports)	70 units
	Access Switch (48 ports)	11 units
	Wireless Controller	2 units
	Wireless Access Point	90 units
	Network Management System	200 licenses
	Network Node	550 units
	Care Pack Support for Existing Network Switches	20 units
	10Gbps Transceiver	20 units
NROC	Fiber Optic Backbone	200 meters
	Network Node	100 nodes
	Wireless Access Point	10 units
	Wireless Controller	1 unit
SWADCAP	Wireless Access Point	5 units

**Timeline/ Schedule of Deliverables:**

- Supply, Delivery, Installation, Testing and User Acceptance – Within sixty (60) calendar days upon receipt of Notice to Proceed (NTP)

<b>Deliverables</b>	<b>Timelines</b>
Submission Project Implementation Plan	10 calendar days
Supply, Delivery, and Installation of Fiber Optic Backbones and Structured Cabling	50 calendar days
Supply, Delivery, and Installation of Fiber Optic of Network Switches	50 calendar days
Supply, Delivery, and Installation of Wireless Access Points	50 calendar days
Testing and User Acceptance	10 calendar days
Submission of Project Documentations	10 calendar days

**Warranty and Support:**

- Technical Support - 3 months
- Software Warranty - 3 months
- Hardware Warranty - 3 months

**Terms of Payment:**

- One-time payment shall be made after managed network services has been rendered and upon completion of all supporting documents (e.g. inspection reports, delivery receipts, etc.).

**Delivery Site\*:**

Contract Monitoring Division-Procurement Management Service  
DSWD Central Office  
IBP Road, Batasan Complex, Constitution Hills, Quezon City  
*\*In coordination with the ICTMS and PMS-CMD*

Name of Bidder: \_\_\_\_\_

Name of Authorized Representative: \_\_\_\_\_

Signature of Authorized Representative: \_\_\_\_\_

Date: \_\_\_\_\_

# Technical Specifications

DSWD Specifications	Bidder's Specifications <sup>6</sup>
<p><b>Subscription of Managed Services for Local Area Network for DSWD Central Office, NROC and SWADCAP</b></p> <p><b>1. Project Specifications:</b></p> <p><b>1.1. Managed Local Area Network Services Coverage</b></p> <p>1.1.1. The Service Provider shall provide fully-managed local area network services for DSWD Central Office.</p> <p>1.1.2. The Service Provider shall provide free use of structured cabling system and 10gbps fiber optic backbones connecting Data Centers and Intermediate Distribution Frames (IDF).</p> <p>1.1.3. The Service Provider shall provide free use of network devices such as enterprise-grade network switches, wireless access points, and wireless access point controllers.</p> <p>1.1.4. The Service Provider shall provide free use of wireless controllers and network management systems to centrally manage the network devices.</p> <p>1.1.5. The Service Provider shall provide free use Network Management System for DSWD Central Office that can manage up to 200 network switches.</p> <p>1.1.6. The Service Provider shall offer free installation, setup, configuration, integration into existing network, and technical on-site support and issue resolution.</p>	<p>Brand:</p> <p>Model:</p> <p>Detailed Specifications:</p>

<sup>6</sup> **IMPORTANT NOTE:** Detailed specifications must be provided. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidders statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the provisions of ITB Clause 3.1(a)(ii) and/or GCC Clause 2.1(a)(ii).

- 1.1.7. The Service Provider shall manage all the active components of the project such as switches, access points, and wireless controller.
- 1.1.8. The two core switches of DSWD Central Office should be virtualized to one logical switch to simplify the management and to enhance reliability.
- 1.1.9. The Service Provider shall provide a Network Management System that will centralize the network management of the network switches.
- 1.1.10. The Service Provider shall provide sfp+ transceivers for the existing 4 units of top of rack switches of DSWD.
- 1.1.11. The Service Provider shall interconnect these top of rack switches using 40 gbps link.
- 1.1.12. The Service Provider shall provide support inclusive of cabling materials and labor whenever there will be offices that will transfer to another location or will be rearranging their cubicles.
- 1.1.13. The Service Provider shall conduct cleaning of IDFs.
- 1.1.14. The Service Provider shall conduct quarterly network assessment with recommendations. These recommendations shall be implemented by the provider once approved by the Network Group of DSWD.
- 1.1.15. The Service Provider shall capacitate the network engineers of DSWD Central Office by providing certification and technology transfer training.
- 1.1.16. All network equipment shall be covered by Foundation Care for Support Services/Care Packs of the Offered Brands.
  - 1.1.16.1. Priority Access to Technical Assistance Center (TAC) Engineers 24/7/365
  - 1.1.16.2. Access to all Software Releases
  - 1.1.16.3. Next Business Day delivery commitments with onsite labor

1.1.16.4. Any consultative or operational engagement including design, configuration, deployment, interoperability, best practices, ACE and Engineering support

1.1.16.5. Issue resolution (issues that require remote assistance) shall be a maximum of 4 hours.

1.1.17. Existing Switches of Mahusay Building, GSD, and CIU and Wireless Access Points and Controller of SWADCAP shall also be covered by Foundation Care for Support Services/Care Packs.

1.1.18. The Service Provider shall also provide 10G SFP+ module inclusive of transceiver and fiber optic patch cords for the HP 2920 Access Switches (20 units).

1.1.19. The Service Provider shall provide the following certification trainings inclusive of exam vouchers, training venue, and accommodation for free:

1.1.19.1. Three (2) pax of Routing and Switching certification track of the offered brand

1.1.19.2. Three (2) pax of Wireless certification track of the offered brand

***Note: All hardware components are not properties of DSWD and shall be returned after the contract.***

## **2. Technical Specifications:**

### **2.1. Structured Cabling System**

**2.1.1.** The Service Provider shall provide Structured Cabling System service with the following fiber optic backbones and number of nodes:

Table 1. Fiber Optic Backbones and Network Nodes for DSWD Central Office and NROC (*Refer to Annex B for the Fiber Optic Layout*)

Location	Intermediate Distribution Frames	Distance of DC to IDF (mtrs)	Nodes	
DSWD Central Office				
Mahusay Datacenter	1st flr Data Center	230	550	
	2nd flr IDF	235		
	3rd flr IDF	240		
	4th flr IDF	245		
	Modular Data Center 2 (MDC2)	220		
	IDF1 (Mahusay 1st flr IDF)	135		
	IDF2 (Mahusay 2nd flr IDF)	155		
	IDF3 (Mahusay 3rd flr IDF)	155		
	IDF8 (DREaMB Annex bldg)	200		
	IDF9 (CIU Annex bldg)	150		
	IDF10 (GSD)	160		
	IDF 11( KALAH)	300		
	Modular Data Center	1st flr Data Center		260
		IDF1 (Mahusay 1st flr IDF)		135
IDF2 (Mahusay 2nd flr IDF)		155		
IDF3 (Mahusay 3rd flr IDF)		155		
IDF4 (Matapat 1st flr IDF)		175		
IDF5 (Matapat 2nd flr IDF)		185		
IDF6 (Matapat 3rd flr IDF)		195		
IDF7 (Matapat 4th flr IDF)		205		
IDF8 (DREaMB Annex bldg)		250		
IDF9 (CIU Annex bldg)		200		
IDF10 (GSD)	165			

	IDF 11( KALAHI)	300	
NROC	Pentagon and Warehouse G	200	100

- 2.1.2.** For the Central Office, the Service Provider shall provide 10gbps Fiber Optic Cable Backbone connecting all the Intermediate Distribution Frames to the two (2) Data Centers. The two (2) data centers should also be connected to each other using said backbone. Fiber optic cabling components for the datacenter switches shall also be provided by the Service Provider.
- 2.1.3.** The Service Provider shall provide 1G SFP for the interconnection of Pentagon and Warehouse G.
- 2.1.4.** The above measurements are just estimates. If the said estimates will not suffice during the implementation, the service provider should provide the additional fiber optic cables.
- 2.1.5.** All network cables shall be properly terminated, tagged, documented, and tested using a certified cable tester to obtain accurate results.
- 2.1.6.** The Service Provider shall provide and install the Data Cabinets in their proposed locations.
- 2.1.7.** All structured cabling system materials needed for the installation of the wireless shall be provided and installed by the Service Provider.
- 2.1.8.** Installation shall include all civil works and labor for the cabling, demolition, excavation, and restoration of walls, floors, and other physical changes in the buildings or campus.
- 2.1.9.** All cabling installations shall be done under the direct supervision of a Certified Structured Cabling Installer.
- 2.1.10.** The brand for the cabling should be at least certified by one of the following entities: Telecommunications Industry Association (TIA), Electronics Industries Association (EIA), or ISO/IEC11801.

## **2.2. Network Switches**

### **2.2.1. Core Switches (2 Units)**

**2.2.1.1.** I/O ports & slots: at least 8 module slots; 32x10GbE SFP+ transceiver slots; 8x 40/100 GbE transceiver module; 1 management module; 2 fabric modules

**2.2.1.2.** Power supplies:  $\geq 4$  units power supplies required

**2.2.1.3.** Fan tray:  $\geq 3$  unit fan tray

**2.2.1.4.** Inclusive of Management Module and Fabric Modules

**2.2.1.5.** Inclusive of SFP+ Transceivers

**2.2.1.6.** Performance: Routing /Switching Capacity:  $\geq 19$  Tbps; Throughput:  $\geq 7$  BPPS

**2.2.1.7.** Features:

**2.2.1.7.1.** Supports OpenFlow 1.0 and 1.3 or NETCONF or equivalent industry standard protocol for SDN

**2.2.1.7.2.** Connectivity: High-density port connectivity, Jumbo frames, Loopback & packet storm protection

**2.2.1.7.3.** Resiliency and High Availability - Hot-swappable modules, Redundant and load-sharing fabrics, management, fan assemblies, and power supplies, Separate data and control paths, Virtual Router Redundancy Protocol (VRRP), Device Link Detection Protocol (DLDP), and IEEE 802.3ad Link Aggregation Control Protocol (LACP)

**2.2.1.7.4.** Quality of Service (QoS)

**2.2.1.7.5.** Layer 2 Switching - VLAN support and tagging, Bridge Protocol Data Unit (BPDU) tunneling, Port Mirroring, Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol



(MSTP)

**2.2.1.7.6.** Layer 3 Routing - Static IPV4 routing, Open Shortest Path First (OSPF), Border Gateway Protocol 4 (BGP-4), IP performance optimization, Static IPv6 routing, Dual IP stack, OSPFv3, and Equal-Cost Multipath (ECMP)

**2.2.1.7.7.** Security - Access Control (ACL), Remote Authentication Dial-In User Service (RADIUS), Terminal Access Controller Access-Control System (TACACS+), Management Access Security, Secure Shell (SSHv2)

**2.2.1.7.8.** Multicast - Multicast VLAN, Protocol Independent Multicast (PIM), Internet Group Management Protocol (IGMP)

## **2.2.2. Distribution/Datacenter Switch**

### **2.2.2.1. Top of Rack for Datacenter (4 units)**

**2.2.2.1.1.** I/O ports and slots: 48 fixed 1000/10000 SFP+ ports, 6 QSFP+ 40GbE ports

**2.2.2.1.2.** Power Supply:  $\geq 1$  power supply required

**2.2.2.1.3.** Fan Tray:  $\geq 1$  unit fan tray slot

**2.2.2.1.4.** Performance: Throughput  $\geq 1070$  Mbps; Routing /Switching capacity:  $\geq 1440$  Gbps; Latency:  $\leq 5$   $\mu$ sec

**2.2.2.1.5.** Inclusive of SFP+ /10GbE transceivers

**2.2.2.1.6.** Features:

**2.2.2.1.6.1.** Supports OpenFlow 1.0 and 1.3 or NETCONF or equivalent industry standard protocol for SDN

**2.2.2.1.6.2.** Quality of Service (QoS) - queue scheduling, packet filtering at L2 through L4

**2.2.2.1.6.3.** Data center optimized - high-port

density, high-performance switching, reversible airflow, redundant fans and power supplies, jumbo frames and EVPN

**2.2.2.1.6.4.** Manageability - provides complete control of the switch with familiar CLi, Traceroute & ping which enables testing of network connectivity

**2.2.2.1.6.5.** Facilitates centralized discovery, monitoring, and secure management of network devices such as SNMPv1, v2c, & v3

**2.2.2.1.6.6.** Supports protocols such as IEEE 802.1w Rapid Convergence Spanning Tree, IEEE 802.1s Multiple Spanning Tree w/c provides high link availability in VLAN environment, Virtual Router Redundancy Protocol (VRRP), and Device Link Detection Protocol (DLDP)

**2.2.2.1.6.7.** Layer 2 Switching - Address Resolution Protocol (ARP), Ethernet Link Aggregation, Spanning Tree Protocol (STP), VLAN Support, IGMP Support

**2.2.2.1.6.8.** L3 Routing - VRRP and VRRP Extended, Policy-based routing, Equal-Cost Multipath (ECMP), L3 IPv4 routing, Open shortest path first (OSPF), Border Gateway Protocol 4 (BGP-4), Intermediate system to intermediate system (IS-IS), Routing Information Protocol next generation (RIPng), OSPFv3, BGP+, IS-IS for IPv6, IPv6 tunneling, Policy routing, Bidirectional Forwarding Detection (BFD), and L3 IPv6 routing

**2.2.2.1.6.9.** Security - Access control lists

(ACLs), RADIUS/TACACS+, Secure Shell, IEEE 802.1X and RADIUS network logins, and Port Security

**2.2.3. Distribution Switch for Intermediate Distribution Frames (12 units)**

**2.2.3.1.** I/O ports and slots: 24 SFP+ ports; 1 RJ-45 serial console port

**2.2.3.2.** Power supply:  $\geq 2$  power supply required

**2.2.3.3.** Fan Tray: 1 unit fan tray

**2.2.3.4.** Inclusive of SFP+ /10GbE transceivers

**2.2.3.5.** Performance: Throughput:  $\geq 285$  Mbps; Routing /Switching:  $\geq 480$  Gbps; Fabric Speed:  $\geq 508$  Gbps

**2.2.3.6.** Features:

**2.2.3.6.1.** Supports OpenFlow 1.0 and 1.3 or NETCONF or equivalent industry standard protocol for SDN

**2.2.3.6.2.** Quality of Service (QoS) - Advanced classifier-based QoS, Layer 4 prioritization, Class of Service (CoS), Bandwidth shaping, Remote monitoring (RMON), sFlow v5, and Traffic prioritization

**2.2.3.6.3.** Management - IEEE 802.1AB Link Layer Discovery Protocol (LLDP), Multiple configuration files, Out-of-band Ethernet management port, Zero-Touch Provisioning (ZTP), Device Link Detection Protocol(DLDP) or equivalent

**2.2.3.6.4.** Connectivity - Jumbo frames, SFP+ uplink, IPv6 , IPv6 routing support, Auto-MDIX

**2.2.3.6.5.** Resiliency and High Availability - Virtual Router Redundancy Protocol (VRRP), IEEE 802.3ad Link

Aggregation Protocol (LACP), IEEE 802.1s Multiple Spanning Tree, Hot-swappable power supplies

- 2.2.3.6.6. Layer 2 Switching - IEEE 802.1ad QinQ, VLAN support and tagging, Secure Sockets Layer (SSL), Port security
- 2.2.3.6.7. Layer 3 Services - Loopback interface address, Route maps, DHCP server, and Bidirectional Forwarding Detection (BFD)
- 2.2.3.6.8. Layer 3 routing - Static IP routing, Policy-based routing, Border Gateway Protocol (BGP), OSPF, Routing Information Protocol (RIP) v1, v2 & RIPng
- 2.2.3.6.9. Security - Control Plane Policy, Source-port filtering, RADIUS/TACACS+, Secure FTP, Dynamic IP lockdown, Dynamic ARP protection, STP root guard, ACL, IEEE 802.1X authentication, Web-based authentication, MAC-based authentication, Switch CPU protection, Private VLAN protection, Open Authentication Role, and Critical Authentication Role
- 2.2.3.6.10. Convergence - IP multicast snooping (data-driven IGMP), LLDP-MED (Media Endpoint Discovery), PoE allocations, Protocol Independent Multicast for IPv6, IP multicast routing, RADIUS VLAN configuration, Local MAC Authentication

### **2.3. Access Switch (70 Units)**

- 2.3.1. Ports: 20 RJ-45 autosensing 10/100/1000 ports; 4 RJ-45 dual-personality 10/100/1000 ports; IEEE 802.3at Power over Ethernet (PoE+)
- 2.3.2. Power Supply:  $\geq 2$  power supply required
- 2.3.3. Performance: Throughput:  $\geq 126$ Mpps, Switching

capacity:  $\geq 176$  Gbps

**2.3.4.** Inclusive of one (1) unit 10GbE transceiver for DSWD CO switches

**2.3.5.** Supports PoE features

**2.3.6.** Features:

**2.3.6.1.** Supports OpenFlow 1.0 and 1.3 or NETCONF or equivalent industry standard protocol for SDN

**2.3.6.2.** Supports Quality of Service (QoS such as: Traffic prioritization, L4 prioritization, Class of Service (CoS), Rate limiting, and Large buffers

**2.3.6.3.** IP multicast traffic mitigation

**2.3.6.4.** Supports Resiliency and high availability such as Multiple spanning tree protocol (STP) and IEEE802.1s and Link Aggregation Protocol (LACP)

**2.3.6.5.** Supports L2 switching features such as VLAN support & tagging, GVRP & MVRP, Jumbo packet support

**2.3.6.6.** Supports DHCP server which centralizes & reduce the cost of IPV4 address management

**2.3.6.7.** Supports security features such as Private VLAN or equivalent protocol, Multiple user authentication, Authentication flexibility, Access Control List (ACLs), Source port filtering, RADIUS/TACACS+, Web authentication, Secure Shell (SSH), Secure Sockets Layers (SSL), Port Security, MAC address lockout, Secure FTP, Switch management logon, DHCP Protection, STP root guard, and Dynamic ARP protection

#### **2.4. Access Switch (11 Units)**

**2.4.1.** Ports: 48\*10/100/1000Base-T, 4\*10GBASE-X SFP+, 48\*10/100/1000Base-T, 2\*10GBASE-X SFP+, 2\*10GBASE-T, IEEE 802.3at Power over Ethernet (PoE+)

**2.4.2. Power Supply:**  $\geq 2$  power supply required

**2.4.3. Performance:** Throughput:  $\geq 132$ Mpps, Switching capacity:  $\geq 256$  Gbps

**2.4.4. Inclusive of one (1) unit 10GbE transceiver**

**2.4.5. Features:**

**2.4.5.1.** Supports OpenFlow 1.0 and 1.3 or NETCONF or equivalent industry standard protocol for SDN

**2.4.5.2.** Supports Quality of Service (QoS such as: Traffic prioritization, L4 prioritization, Class of Service (CoS), Rate limiting, and Large buffers

**2.4.5.3.** IP multicast traffic mitigation

**2.4.5.4.** Supports Resiliency and high availability such as Multiple spanning tree protocol (STP) and IEEE802.1s and Link Aggregation Protocol (LACP)

**2.4.5.5.** Supports L2 switching features such as VLAN support & tagging, GVRP & MVRP, Jumbo packet support

**2.4.5.6.** Supports DHCP server which centralizes & reduce the cost of IPV4 address management

**2.4.5.7.** Supports security features such as Private VLAN or equivalent protocol, Multiple user authentication, Authentication flexibility, Access Control List (ACLs), Source port filtering, RADIUS/TACACS+, Web authentication, Secure Shell (SSH), Secure Sockets Layers (SSL), Port Security, MAC address lockout, Secure FTP, Switch management logon, DHCP Protection, STP root guard, and Dynamic ARP protection

## **2.5. Wireless Access Points and Wireless Controller**

### **2.5.1. Wireless Controller (3 Units)**

**2.5.1.1.** AP capacity: The controller must be able to handle maximum 256 AP

- 2.5.1.2.** Concurrent device connected: The controller must be capable of maximum 8,192 concurrent users
- 2.5.1.3.** Concurrent GRE Tunnels: The controller must have at least 256 concurrent GRE tunnels
- 2.5.1.4.** Concurrent IPsec sessions: The controller must have 1,000 concurrent sessions
- 2.5.1.5.** Wired throughput: The controller must have 10 Gbps for supporting large packets
- 2.5.1.6.** VLAN support: The controller must support VLAN tagging with maximum of 4,094 VLANS
- 2.5.1.7.** Interfaces: The controller must have 2 10GBASE-X and four dual-media (1000BASE-X or 10/100/1000BASE- T) ports
- 2.5.1.8.** Integration to Role Based Feature: The controller must support policy enforcement function, that can be loaded on the controller
- 2.5.1.9.** Integration with IDS / IPS function: The controller must support RF protection feature that can be loaded optional on the controller
- 2.5.1.10.** Common Features: The controller must have common features like: Guest Portal, AP Provision, Group Managed
- 2.5.1.11.** Controller Architecture: The controller can be deployed via following architecture:
  - 2.5.1.11.1.** Master Controller – This controller manages local controllers, either in the same campus or in remote sites
  - 2.5.1.11.2.** Local Controller – Global settings for this controller are managed by a Master Controller
  - 2.5.1.11.3.** Standalone – This controller operates independently within the network
- 2.5.1.12.** VPN Function: The controller must support

remote AP function where the AP will communicate via IPsec to the controller and be able to forward all role based function to the AP. The controller must support concurrent 1,000 IPsec sessions

**2.5.1.13.** AP License: The AP license shall be capable of AP management, performance management, and RF management.

**2.5.2. Wireless Access Points (90 units for CO and 10 units for NROC)**

**2.5.2.1.** Interfaces: 2x 10/100/1000BASE-T (RJ-45)

**2.5.2.2.** Power supply: supports direct DC power source and Power over Ethernet (PoE);

**2.5.2.3.** Performance: Max data rate:  $\geq 1,733$ Mbps for 5Ghz radio  $\geq 800$  Mbps for 2.4Ghz radio; Composed of 8 integrated omni-directional downtilt antenna; software configurable dual radio support;  $\geq 255$  associated client devices per radio &  $\geq 16$  BSSIDs per radio

**2.5.2.4.** The two controllers should be set up as Active-Standby or Active-Active.

**2.5.2.5.** Features & Specifications:

**2.5.2.5.1.** Software-configurable dual radio supports up to 1,733Mbps in the 5Ghz band & 800Mbps in 2.4Ghz band

**2.5.2.5.2.** Supports advanced cellular coexistence to minimize interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell /femtocell equipment

**2.5.2.5.3.** RF Management automatically assigns channel and power settings, provides airtime fairness, and ensures AP stay clear of all source of RF interference to deliver reliable, high performance WLANs

**2.5.2.5.4.** Security features such as integrated wireless intrusion protection, threat



protection and mitigation, and eliminates the need for separate RF sensors & security appliances

### **2.5.3. Wireless Access Points for SWADCAP (5 units)**

**2.5.3.1.** Interfaces: 2x 10/100/1000BASE-T (RJ-45)

**2.5.3.2.** Dual-radio (8x8 + 4x4 MIMO) 802.11ax AP with up-and downlink OFDMA\* and Multi-User MIMO (MU-MIMO)

**2.5.3.3.** Maximum data rates of 4.8Gbps in the 5GHz band and 1,150Mbps in the 2.4GHz band (for an aggregate peak data rate of 5.95Gbps)

**2.5.3.4.** Must be compatible with the existing controller of SWADCAP

**2.5.3.5.** Features & Specifications:

**2.5.3.5.1.** Supports advanced cellular coexistence to minimize interference from 3G/4G cellular networks, distributed antenna systems, and commercial small cell /femtocell equipment

**2.5.3.5.2.** RF Management automatically assigns channel and power settings, provides airtime fairness, and ensures AP stay clear of all source of RF interference to deliver reliable, high performance WLANs

**2.5.3.5.3.** Security features such as integrated wireless intrusion protection, threat protection and mitigation, and eliminates the need for separate RF sensors & security appliances

## **3. List of Reports**

**3.1.** Service Level Agreement

**3.2.** Project Documentation indicating the following:

**3.2.1.** Campus Layout and Floor Plans indicating the location of fiber optic cable runs, MDFs, and IDF

**3.2.2.** Test results indicating test parameters such as Wire Map, Length, Propagation Delay, Delay Skew, Insertion Loss, Return Loss, and Attenuation to Crosstalk ratio

**3.2.3.** Node Mapping (Distribution Switch – Access Switch – Wireless Access Point - Location)

**3.2.4.** Installation pictures

#### **4. Qualification of Service Provider**

**4.1.** The Service Provider should have done at least five (5) successful projects involving the quoted service with certifications and proof of satisfactory service from previous or existing clients.

**4.2.** The offered brand for the switches and wireless access should have at least five (5) existing medium to large-scale deployments (at least 200 units deployment each for switches and wireless access points) in the Philippines or globally.

**4.3.** The offered brand should be an international brand, and should have been continuously marketed in the Philippines for the last 10 years. For those brands that have not yet met the 10 years presence in the Philippines but have been able to market in other countries for 10 years, the presence of that brand should be at least in five (5) different countries.

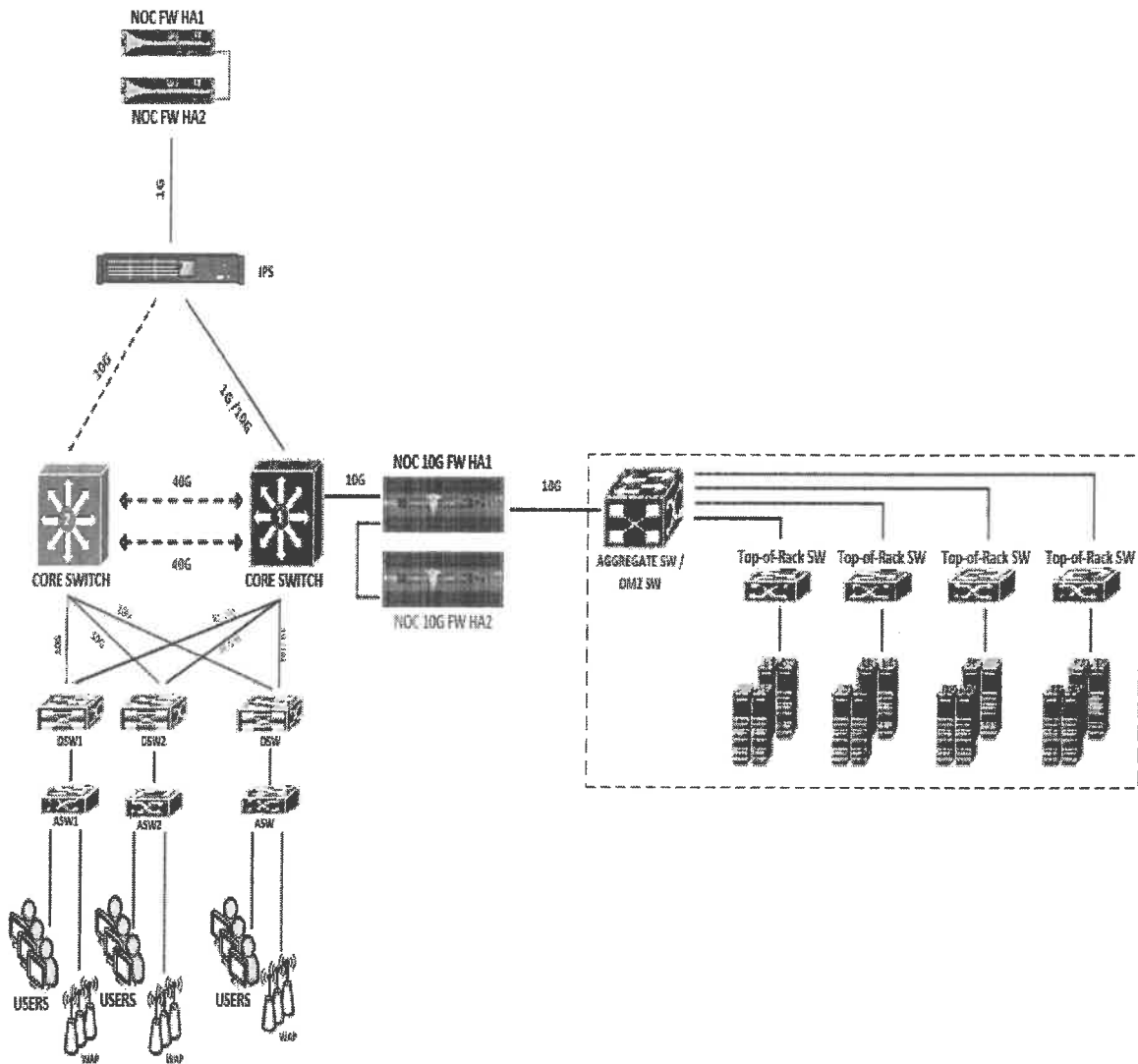
**4.4.** The Service Provider should have been in the business of providing networking services and structured cabling system for the last 10 years.

**4.5.** The Service Provider should have certified Engineers of the offered brand both network equipment and cabling.

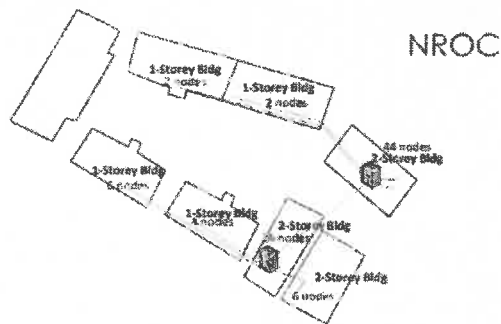
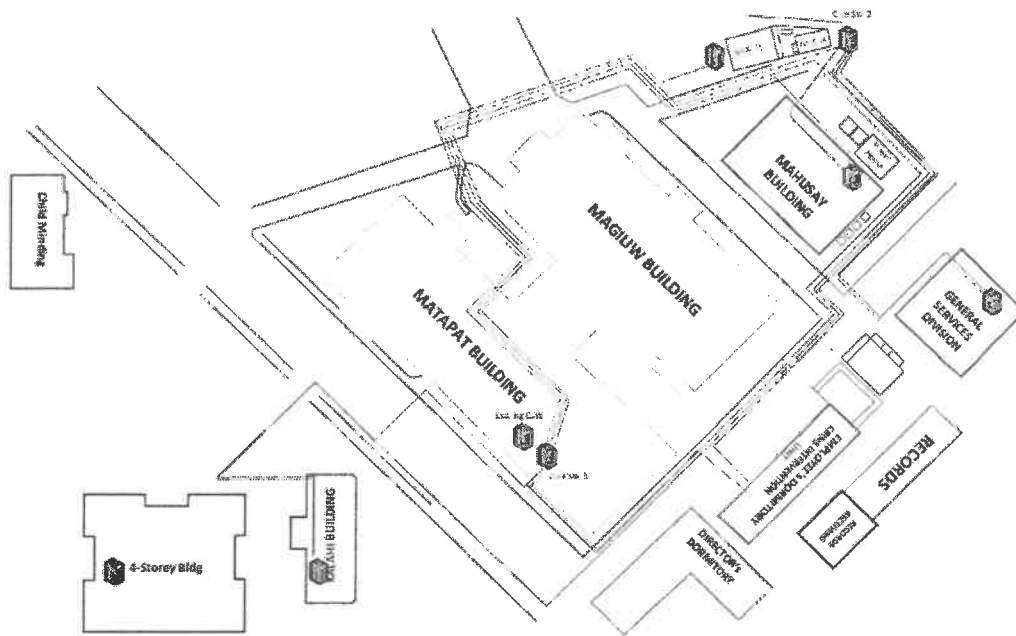
**4.6.** The Service Provider should have a Project Manager who is a Project Management Professional (PMP) certified and have 5 years of project management experience managing nationwide deployment.

# NETWORK DIAGRAM

## DSWD CENTRAL OFFICE



FIBER OPTIC LAYOUT



NOTE:

- RED LINE – Fiber Pathway from EC to designated IDF's
- BLUE LINE – Fiber Pathway from MDC to designated IDF's
- GREEN LINE – Copper Pathway from MDF to IDF
- LIGHT BLUE LINE – Core LTP for Nodes Distribution

Name of Bidder: \_\_\_\_\_

Name of Authorized Representative: \_\_\_\_\_


Signature of Authorized Representative: \_\_\_\_\_

Date: \_\_\_\_\_






**PRE-BID CONFERENCE**  
**SUBSCRIPTION OF MANAGED SERVICES FOR LOCAL AREA NETWORK OF DSWD CENTRAL OFFICE, NROC AND SWADCAP**  
(ITB NO. GOP/20-DSWD-014)  
**17 January 2020 at 11:00 AM**

**OUS-DRMG, Room 202, Directors Dormitory, DSWD Central Office, IBP Road, Batasan Hills, Quezon City**

**ATTENDANCE SHEET**


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**PRE-BID CONFERENCE**  
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