



**SUPPLY, DELIVERY AND
COMMISSIONING OF MULTI
FUNCTION RADIO
COMMUNICATIONS WITH
CENTRALIZED DISPATCHING
AND RECORDING SYSTEM**

**BID DOCS
BAC-PGCS-012-2021**

Table of Contents

Glossary of Acronyms, Terms, and Abbreviations.....	3
Section I. Invitation to Bid.....	6
Section II. Instructions to Bidders.....	9
1. Scope of Bid.....	10
2. Funding Information.....	10
3. Bidding Requirements.....	10
4. Corrupt, Fraudulent, Collusive, and Coercive Practices.....	10
5. Eligible Bidders.....	10
6. Origin of Goods.....	11
7. Subcontracts.....	11
8. Pre-Bid Conference.....	11
9. Clarification and Amendment of Bidding Documents.....	11
10. Documents comprising the Bid: Eligibility and Technical Components.....	11
11. Documents comprising the Bid: Financial Component.....	12
12. Bid Prices.....	12
13. Bid and Payment Currencies.....	13
14. Bid Security.....	13
15. Sealing and Marking of Bids.....	13
16. Deadline for Submission of Bids.....	13
17. Opening and Preliminary Examination of Bids.....	14
18. Domestic Preference.....	14
19. Detailed Evaluation and Comparison of Bids.....	14
20. Post-Qualification.....	15
21. Signing of the Contract.....	15
Section III. Bid Data Sheet.....	16
Section IV. General Conditions of Contract.....	18
1. Scope of Contract.....	19
2. Advance Payment and Terms of Payment.....	19
3. Performance Security.....	19
4. Inspection and Tests.....	19
5. Warranty.....	20
6. Liability of the Supplier.....	20
Section V. Special Conditions of Contract.....	21
Section VI. Schedule of Requirements.....	26
Section VII. Technical Specifications.....	27
Section VIII. Checklist of Technical and Financial Documents.....	48
Section IX. Bidding Forms	51

Glossary of Acronyms, Terms, and Abbreviations

ABC – Approved Budget for the Contract.

BAC – Bids and Awards Committee.

Bid – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

Bidder – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

Bidding Documents – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

BIR – Bureau of Internal Revenue.

BSP – Bangko Sentral ng Pilipinas.

Consulting Services – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

CDA - Cooperative Development Authority.

Contract – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

CIF – Cost Insurance and Freight.

CIP – Carriage and Insurance Paid.

CPI – Consumer Price Index.

DDP – Refers to the quoted price of the Goods, which means “delivered duty paid.”

DTI – Department of Trade and Industry.

EXW – Ex works.

FCA – “Free Carrier” shipping point.

FOB – “Free on Board” shipping point.

Foreign-funded Procurement or Foreign-Assisted Project– Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

Framework Agreement – Refers to a written agreement between a procuring entity and a supplier or service provider that identifies the terms and conditions, under which specific purchases, otherwise known as “Call-Offs,” are made for the duration of the agreement. It is in the nature of an option contract between the procuring entity and the bidder(s) granting the procuring entity the option to either place an order for any of the goods or services identified in the Framework Agreement List or not buy at all, within a minimum period of one (1) year to a maximum period of three (3) years. (GPPB Resolution No. 27-2019)

GFI – Government Financial Institution.

GOCC – Government-owned and/or –controlled corporation.

Goods – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

GOP – Government of the Philippines.

GPPB – Government Procurement Policy Board.

INCOTERMS – International Commercial Terms.

Infrastructure Projects – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

LGUs – Local Government Units.

NFCC – Net Financial Contracting Capacity.

NGA – National Government Agency.

PhilGEPS - Philippine Government Electronic Procurement System.

Procurement Project – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

PSA – Philippine Statistics Authority.

SEC – Securities and Exchange Commission.

SLCC – Single Largest Completed Contract.

Supplier – refers to a citizen, or any corporate body or commercial company duly organized and registered under the laws where it is established, habitually established in business and engaged in the manufacture or sale of the merchandise or performance of the general services covered by his bid. (Item 3.8 of GPPB Resolution No. 13-2019, dated 23 May 2019). Supplier as used in these Bidding Documents may likewise refer to a distributor, manufacturer, contractor, or consultant.

UN – United Nations.



INVITATION TO BID

FOR THE SUPPLY, DELIVERY AND COMMISSIONING OF MULTI FUNCTION RADIO COMMUNICATIONS WITH CENTRALIZED DISPATCHING AND RECORDING SYSTEM

The Philippine Ports Authority, through the Corporate Budget of the Authority for CY 2021, intends to apply the sum of P50,000,000.00 being the Approved Budget for the Contract (ABC) to payments under the contract for the Supply, Delivery and Commissioning of Multi Function Radio Communications with Centralized Dispatching and Recording System (BAC PGCS-012-2021). Bids received in excess of the ABC shall be automatically rejected at bid opening.

The Philippine Ports Authority now invites bids for the above Procurement Project. Completion of the Work is required within One Hundred Twenty (120) calendar days from the receipt by the successful bidder of the Notice to Proceed. 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).

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. 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.

Prospective Bidders may obtain further information from the Philippine Ports Authority Bids and Awards Committee (BAC) and inspect the Bidding Documents at the address given below during 8:00 a.m. to 5:00 p.m., Monday to Friday.

A complete set of Bidding Documents may be acquired by interested Bidders on **06 May 2021** from the given address and website(s) below and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB, in the amount of **Twenty Five Thousand (P25,000.00) Pesos**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees in person.

The Philippine Ports Authority's Bids and Awards Committee will hold a Pre-Bid Conference on **18 May 2021 at 2:00 p.m.** at the PPA Function Room, 7th Floor, PPA Bldg., Bonifacio Drive, South Harbor, Port Area, Manila, and/or through video conferencing or webcasting via zoom, which shall be open to all prospective bidders.

Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before 02 June 2021 at 9:00 a.m. Late bids shall not be accepted.


All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in ITB Clause 14.

Bid opening shall be on 02 June 2021 at 10:00 a.m. at the 7th Floor, PPA Building, A. Bonifacio Drive, South Harbor, Port Area, Manila. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

The Philippine Ports Authority 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 Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

For further information, please refer to:

BAC Secretariat, Philippine Ports Authority
5th Floor, PPA Bldg., A. Bonifacio Drive,
South Harbor, Port Area, Manila
Telephone Nos. 527-47-35
527-83-56 to 83 loc. 539
PPA Website: www.ppa.com.ph
PhilGEPS Website: www.philgeps.gov.ph


MARK JON S. PALOMAR
Chairperson, PPA Head Office Bids and Awards
Committee for the Procurement of Goods and
Consultancy Services (HO-BAC-PGCS)

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, PHILIPPINE PORTS AUTHORITY wishes to receive Bids for the **Supply, Delivery and Commissioning of Multi Function Radio Communications with Centralized Dispatching and Recording System**, with identification number **BAC-PGCS-012-2021**.

The Procurement Project (referred to herein as "Project") is composed of a single lot, the details of which are described in Section VII (Technical Specifications).

2. Funding Information

2.1. The Philippine Ports Authority through its corporate budget for the Calendar Year (CY) 2021 in the amount of **FIFTY MILLION PESOS (Php50,000,000.00)**.

2.2. The source of funding is the Corporate Budget of the PHILIPPINE PORTS AUTHORITY.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

- 5.2 Foreign ownership limited to those allowed under the rules may participate in this Project.
- 5.3 Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to at least fifty percent (50%) of the ABC.
- 5.4 The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under ITB Clause 18.

7. Subcontracts

- 7.1 The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The Procuring Entity has prescribed that:

Subcontracting is not allowed.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address at the PPA Function Room, 7th Floor, PPA Building, Bonifacio Drive, South Harbor, Port Area, Manila and/or through videoconferencing/webcasting as indicated in paragraph 6 of the IB.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the IB, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Section VIII (Checklist of Technical and Financial Documents).
- 10.2. The Bidder's SLCC as indicated in ITB Clause 5.3 should have been completed within five (5) years prior to the deadline for the submission and receipt of bids.

- 10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

11. Documents comprising the Bid: Financial Component

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.
- 11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.
- 11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

- 12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:
 - a. For Goods offered from within the Procuring Entity's country:
 - i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
 - ii. The cost of all customs duties and sales and other taxes already paid or payable;
 - iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
 - iv. The price of other (incidental) services, if any, listed in e.
 - b. For Goods offered from abroad:
 - i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination

in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.

- ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications)**.

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in Philippine Pesos.

14. Bid Security

14.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be valid for One Hundred Twenty (120) calendar days from the date of the opening of bids. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each bidder shall submit one copy of the first and second components of the Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

16. Deadline for Submission of Bids

16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

17. Opening and Preliminary Examination of Bids

- 17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

- 18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 15 shall be submitted for each lot or item separately.
- 19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.
- 19.4. The Project shall be awarded as one Project having several items that shall be awarded as one contract.
- 19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

- 20.1. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

- 21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

Bid Data Sheet

ITB Clause	
5.3	<p>For this purpose, contracts similar to the Project shall be:</p> <ul style="list-style-type: none"> a. Contract for the Supply, Delivery, Installation and Commissioning of Multi Function Radio Communication with Centralized Dispatching and Recording System or any Computer Aided Dispatching System. b. completed within five (5) years prior to the deadline for the submission and receipt of bids.
7.1	Subcontracting is not allowed.
12	The price of the Goods shall be quoted DDP [<i>Manila</i>] or the applicable International Commercial Terms (INCOTERMS) for this Project.
14.1	<p>The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts:</p> <ul style="list-style-type: none"> a. The amount of not less than One Million Pesos (Php1,000,000.00), if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b. The amount of not less than Two Million Five Hundred Thousand Pesos (Php2,500,000.00) if bid security is in Surety Bond.
15	<p>Each Bidder shall submit ONE (1) original and SIX (6) copies of its Technical and Financial Components of its Bid in two (2) separate sealed bid envelopes, which should be submitted simultaneously. Each of the bid documents should be individually sealed.</p> <p>All bid documents shall be book-bound, hard-bound and properly labelled with index tabs.</p>
19.3	Partial bid is not allowed. The goods are grouped in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.
20.1	No additional requirements.
21.1	No additional requirements.

Section IV. General Conditions of Contract

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC)**.

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex "D" of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the SCC.

3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184.

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the SCC, **Section IV (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

- 6.1. In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.
- 6.2. The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
1	<p>Delivery and Documents –</p> <p>For purposes of the Contract, “EXW,” “FOB,” “FCA,” “CIF,” “CIP,” “DDP” and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows:</p> <p><i>[For Goods supplied from abroad, state:]</i> “The delivery terms applicable to the Contract are DDP delivered <i>[indicate place of destination]</i>. In accordance with INCOTERMS.”</p> <p><i>[For Goods supplied from within the Philippines, state:]</i> “The delivery terms applicable to this Contract are delivered <i>[indicate place of destination]</i>. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination.”</p> <p>Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements).</p> <p>For purposes of this Clause the Procuring Entity’s Representative at the Project Site is Philippine Ports Authority-Head Office, Manila</p> <p>Incidental Services –</p> <p>The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VI. Schedule of Requirements:</p> <ol style="list-style-type: none"> 1. performance or supervision of on-site assembly and/or start-up of the supplied Goods; 2. furnishing of tools required for assembly and/or maintenance of the supplied Goods; 3. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; 4. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and 5. Provision for a minimum four (4) hours training to PPA personnel for the use of the equipment. <p>The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.</p> <p>Spare Parts –</p>

The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

- a. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and
- b. in the event of termination of production of the spare parts:
 - i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and
 - ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested.

The spare parts and other components required are listed in **Section VI (Schedule of Requirements)** and the cost thereof are included in the contract price.

The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for a period of ten (10) years after the last day of manufacturing of the specific model.

Spare parts or components shall be supplied as promptly as possible, but in any case, within two (2) months of placing the order.

Packaging –

The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity.

The outer packaging must be clearly marked on at least four (4) sides as follows:

Name of the Procuring Entity
Name of the Supplier
Contract Description

Final Destination
Gross weight
Any special lifting instructions
Any special handling instructions
Any relevant HAZCHEM classifications

A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging.

Transportation –

Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price.

Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price.

Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure.

The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination.

Intellectual Property Rights –

The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.

2.2	<p>The terms of payment shall be as follows:</p> <ul style="list-style-type: none"> • Sixty-Five (65%) of the contract cost after delivery and inspection at PPA Head Office. • Thirty-Five (35%) of the contract cost after commissioning, inspection and acceptance by the PPA Head Office Port Police Department.
4	<p>Actual testing of the DMR+LTE Portable Radio, POC Mobile Radio and DMR Radio will be done during commissioning.</p>

Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item Number	Description¹	Quantity	Total	Delivered, Weeks/Months
	Supply, Delivery and Commissioning of Multi Function Radio Communications with Centralized Dispatching and Recording System			Within one hundred twenty (120) calendar days from receipt by the winning bidder of the Notice to Proceed.
	1. DMR+LTE Portable Radio	182 sets	182 sets	
	2. POC Mobile base radio	25 set	25 sets	
	3. Ad-hoc Voice Emergency System	2 sets	2 sets	
	4. Platform Command Center	1 set	1 set	
	5. DMR radio	20 sets	20 sets	
	6. SIM Card	207 pcs	207 pcs	
	7. Engineering Service	1 set	1 set	

¹ Subject to the Scope of Work and Technical Specifications under Item Nos. 3 and 4, respectively of the Terms of Reference

Section VII. Technical Specifications

Technical Specifications

Item	Specification	Statement of Compliance
		<p><i>[Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. 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 Bidder's statement of compliance or the supporting evidence that is found to be</i></p>

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 applicable laws and issuances.]

SCOPE OF WORK

Supply, Delivery and Commissioning of Multi Function Radio Communications with Centralized Dispatching and Recording System

Item	Description	Qty	Unit
1	DMR+LTE Portable radio, 4"touch screen, 136-174MHz, Dual SIM card,GPS, 2900mAh Battery Li-polymer, DMR Tier II and Tier III, battery, Desktop Charger, antenna, AES 256 encryption, with earset. (7 units x 25 ports)	182	set
2	POC Mobile base radio 4G Smart Mobile Radio European version (Include B26\B28) ,4G Smart Mobile Radio, Android 7.0, 1GB+8GB (RoHS) (REACH) (1unit x 25 ports)	25	set
3	Ad-hoc Voice Emergency System Mesh ad-hoc repeater. Can work independently or can be linked wirelessly to form a bigger radio coverage, Backpack bag.	2	set
4	Platform Command Center Hardware Server and Software, Network Management System, Dispatch System, and Recording	1	set

5	DMR radio	Power 1 - 5 watts, DMR Tier II and analogue conventional mode, with GPS, with Bluetooth	20	set
6	SIM Card	Data SIM Card for 3 years (1 SIM per DMR Radio and POC Mobile Radio)	207	pcs
7	Engineering Service	HQ remote support plus local engineering onsite service for system configuration, training	1	set
MULTIMODE RADIO REQUIREMENT (182 sets)				
General Features:				
<ul style="list-style-type: none"> • Radios should operate in either analog or digital mode and is compatible with the prevalent analog system, ensuring a smooth analog-to-digital transition. • Support wired PIN connection and connections over WLAN, BT and NFC to a wide range audio accessories. • Provides enhanced encryption capability such as 256-bit encryption in narrowband mode and the scrambler feature. • Support Narrowband and Broadband Operation. • Upgradeable into DMR Tier III Trunking System • Support TDMA Technology. • Support Narrowband Call Recording. • Supports Alert Call, Remote Monitor, Call Priority, Call Queuing • Support automatic roaming to all transceiver sites connected via IP multisite. • Support three band equalizer in Audio. • Support LTE Band such as B26, B28, B40 and B41. 				

- Support GSM Band such as 850/900/1800/1900Mhz.
- Support Wi-fi 802.11 b/g/n , 2.4Ghz.
- Support NFC 13.56Mhz.
- Support GPS/BDS/GLONASS.
- Support WCDMA B1/B8.
- Support AP Processor Qualcomm 8-core, 2.0GHz or better.
- Support TTS (Test to Speech).
- Shall be equipped with mission critical dual-screen design.
- Shall be equipped with Smart Knob design, volume control and contact selection 2-in-1.

Technical Specifications:

General:

1	Frequency range	136-174MHz
2	Channel Capacity	At least 16
3	Channel Spacing	12.5KHz / 25KHz
4	Frequency Stability	±0.5ppm
5	Blocking	84db
6	Battery	not less than 2900mAh Li polymer, 7.6V(Rated)
7	Ports	20 PIN Accessory/Charging Port
8	Android OS	Android 7.0
9	Front Camera	13MP Auto Focus
10	Rear Camera	13MP Auto Focus
11	Memory	Broadband:RAM:3GB ROM:32GB eMMC expandable to 128GB Narrowband: Expandable to 16GB with MicroSD card

Receiver:

12	Sensitivity	Analog: 0.3 μ V(12dB SINAD) Digital: 0.3 μ V(typical) / BER5%
13	Audio Output	2Watts

Transmitter:

14	RF Power Output	High Power: 5W
15	Audio Distortion	\leq 3%

Video and Imaging:

16	Video File Types	3GPP, AVI, MPEG-4, MPEG-PS
17	Image File Types	JPEG, GIF, PNG, BMP
18	Video Recording Quality	Front Camera:1080P HD up to 30fps Rear Camera:4K HD

Audio:

19	File Types	MP3, WAV, 3GPP
20	Input	Multi-Mic Noise Suppression Wind Noise Suppression Echo Cancellation

Environmental:

21	Operating Temperature	-20 $^{\circ}$ C ~+60 $^{\circ}$ C
22	Shock Vibration	MIL-STD-810 G
23	Dustproof & Waterproof	IP67 Standard

Accessories:

24	One (1) Smart Battery Li-Polymer
25	One (1) each Belt Clip
26	One (1) Power Adapter
27	Color Rings
28	One (1) Charger
29	One (1) Strap
30	C-Styl Earset
31	Three (3) year subscription of Data Sim

POC MOBILE STATION REQUIREMENT (25 pcs)**General Features:**

- It should work with 2G/3G/4G/WLAN connections
- It's mandatory to have the support for GPS(AGPS)/BDS/GLONASS/Galileo positioning
- It should support BT4.0 or above
- It should have dedicated emergency button and PTT button
- It should have the 3.5" touch-screen for easy operation
- It should support Android 7.0 platform for app expansion.
- It should have handheld microphone for easy operation in the vehicle.

Technical Specifications**General:**

1	Dimension (H x W x D)	170x80x85 mm
2	Weight	380g
3	Screen Size	3.5-inch Touch LCD
4	CPU	Quad-core processor (1.2GHz)
5	OS	Android 7.0
6	RAM Capacity	1GB
7	ROM Capacity	8GB
8	Micro SD Card Slot	1
9	SIM Card Slot	1
10	Operating Voltage	12-36V DC

Connectivity:

11	Frequency bands	TDD-LTE: Band38/40/41 FDD-LTE: Band1/3/5/7/8/20/28 WCDMA: Band1/2/5/8 GSM/GPRS/EDGE: Band2/3/5/8
12	WiFi	2.4GHz, IEEE 802.11 b/g/n

13	GPS	GPS (AGPS)/GLONASS/BDS
14	BT	2.0/3.0/4.0

Audio:

15	Microphone	1
16	Speaker	4W (6W Max.)

Environmental:

17	Operating Temperature	-30°C to +75°C
----	-----------------------	----------------

Interface:

18	Antenna Port	SMA
19	GPS Antenna Port	SMA
20	Micro USB 2.0 OTG	Support
21	External Audio Port	Support
22	Microphone Jack	Support

Accessories:

23	One (1) 4G Antenna
24	One (1) GPS Antenna
25	Screws for the Brackets
26	Mounting Brackets
27	Handheld Microphone
28	Power Cables
29	Three (3) year subscription of Data SIM

PTT OVER CELLULAR (POC) SYSTEM (1 set)

Dispatcher

- Private Voice Call

Both the full-duplex and half-duplex private voice calls can be established between the UE and DC. During the full-duplex call, both parties can simultaneously talk while listening. During the half-duplex call, only one party can speak at a time.

- Group Voice Call

The DC can initiate a group voice call to a group in its organization through the web dispatch client. During the group call, only one group member can speak at a time, while all other group members can only listen. After the talking party finishes talking and release the floor, other group members can request the floor.

- **Listening**

The DC can listen to an ongoing private or group call, or activities of a particular UE or group. One DC can listen to multiple UEs or groups at the same time. When the listened UE or group participates in a call, the server automatically forwards the call to the DC.

Both the voice call and video call are supported for listening.

- **Interrupt or Override**

Interrupt: When a user is talking in a call initiated, received, or monitored by the DC, the DC can interrupt the talking anytime to control the floor.

- **Stunning or Reviving**

If a UE is lost, the DC can stun the UE to prevent unauthorized use of the radio. A stunned UE will be deprived of all functions excluding GPS polling.

To restore the stunned UE to normal use, the DC can revive the UE.

- **Broadcast Call**

The DC can initiate a broadcast call to a group. During the call, only the DC can speak and be heard.

- **Dynamic Regrouping**

The DC can create a temporary group consisting of UEs located within a specified area on the map or selected from the favorite contacts. And then, the DC can initiate the voice or video call or send the message to the group.

- **Private Video Call**

The DC can initiate a one-to-one video call to a UE with video services.

- **Group Video Call**

The DC can initiate a group video call to a group. During the call, only the member with the floor can transmit voice and video, and other members can only receive.

- **Video Pull**

By video pulling, the DC makes a one-way video call to the designated UE, and pull the video to the DC. The video call can be established automatically or manually based on the settings of the DC. In this case, the DC can monitor the vicinity of the UE. Besides, the DC can pull videos of multiple UEs in turn. After the video is pulled, the DC can forward the video to other users. The video pulling supports the resolutions of CIF, VGA, and 720P.

If pack loss exists during the video pulling, the system automatically re-uploads the lost packets, to ensure that the video is complete.

- **Video Push**

By video pushing, the DC makes a one-way video call to a UE or group, and sends the local video of the DC to the UE or group members.

In this case, the UE or group members can only view the video, but cannot request the floor.

- **Video Forward**

By video forwarding, the DC makes a one-way video call without voice to a UE or group. After the call is established, the DC forwards the video pulled from another UE to this UE. In this case, the group members can only view the video, but cannot request the floor.

- **GPS Subscription**

The DC can subscribe to GPS of a UE or multiple UEs by time. After the UE receives the GPS information, the location of the UE will be displayed on the digital map of the DC. The DC can click the icon of the UE

to initiate a voice or video call, send a message, or check the location.

The DC can configure the color of the UE icons as per needs.

- GPS Tracking

After the GPS tracking feature is enabled on the subscribed UE, the DC can view the real-time geographic locations of the UE on the map and obtain the moving route of the UE.

- Historical Track

The DC can query the historical track of a UE within a specified period.

- Statistic Query

The DC can query the records of short messages, online and offline status, geofencing alarms, emergency alarms, and calls. The DC can query the statistics by UE type or time. The query results are presented in figures or tables.

Unified Network Management System

- Template Management

The carrier can create subscriber templates on the SOP to preset annual and monthly credits for different types of subscribers. The template can only be created, edited, or deleted by the carrier.

- Subscriber Management

The customer can create, edit, delete subscribers on the SOP. Once the services of the subscriber are enabled, the corresponding credits will be consumed.

- Group Management

The customer can create, edit, delete groups, and manage group members.

- Statistics Analysis

- Task Statistics

The system provides operation statistics of the SOP, which illustrate the operations status from different dimensions. Users can customize the statistical parameters, such as the start time and period, as per actual needs.

- Account Statistics

The daily account statistics measure the total number of active accounts and the number of new accounts in one day.

- Subscriber Statistics

The subscriber statistics measure the total number of subscriber accounts, the number of new subscriber accounts, and the number of active subscriber accounts (logged in to the server) in one day.

- Organization Statistics

The organization statistics measure the total number of organizations and the number of newly added organizations in one day.

- Invalid Terminal Statistics

The invalid terminal refers to the expired terminal that is not renewed. The invalid terminal statistics measure the total number of the invalid device and the number of the newly added invalid device in one day.

- Group Statistics

The group statistics measure the total number of groups and the number of newly added groups in one day.

- Quota Statistics

The quota statistics measure the total number of credits, the number of consumed credits, and the number of remaining credits.

Multimedia Recording and Playback System:

- Multi -system recording: Can record calls, message and registration information that pass through the core network.
- Provides rich criteria for data query, including calling party, called party, call type, duplex type, media type, system type, user tag and event.
- Delivers versatile playback functions, including playing, pausing, playlist, previous file, next file, single file looping, all files looping and volume adjustment.
- Floor information display: During the playback the floor information is displayed and varied with the call process.
- Status monitoring: This system can monitor and display the service running status and the status of the CPU, memory and disk space of the server.
- Alarm: When this system runs abnormally, an alarm with sound appears on the interface to remind users to solve the problem promptly. Moreover, users can query and analyze historical alarms.
- Exporting and downloading: This system allows users to export searched online and offline information, and download historical audio and video files.

Hardware Requirements:

➤ POC (Ptt over Cellular) Server Requirements

- One (1) Unit – Server: 2U/CPU:Xeon4112 4 c_85w_2.6 GHZ/ Memory 16GB /Storage capacity 5*300GB/ /10K/12Gbps/SAS2.5RAID930-8i/2GBFlash/2*750W redundant power supply /1Gb 4-Port RJ45 Ethernet Adapter and 1Gb 2-Port Ethernet /3-year guarantee/RAID write back cache (RoHS) (REACH).
- One (1) Unit - MYSQL L87640 MySQL Enterprise Edition (1-4 socket server) - Server Perpetual(MYSQL Perpetual authorization 1-4 Socket server); B61817 MySQL Software Update License & Support - OEM(One-year service support from Original)(RoHS).

	<ul style="list-style-type: none"> ○ One (1) Unit - Switch, S5720-36C-EI-AC S5720-36C-EI-AC, 10/100/1000 Base-T Ethernet port * 28, multiplexing gigabit Combo SFP * 4, gigabit SFP * 4, single subboard slot, 150 W AC power supply * 2 (RoHS). ○ One (1) Unit - Firewall USG6525E (2*GE WAN+8*GE Combo+2*10GE SFP+,2 ac power);M.2 sd-sata 6Gb/ s-240gb;36 months of threat protection; Telescopic slide;5y service (RoHS) <p>➤ NMS (Network Management System) Client</p> <ul style="list-style-type: none"> ○ One (1) Unit NMS Client PC - 4G / 500g / dvd rw / keyboard and mouse / three year service / win10 English professional 64 bit operating system (RoHS). ○ One (1) Unit - 21.5" monitor <p>➤ Dispatch, NMS and MRPS Server Requirements</p> <ul style="list-style-type: none"> ○ One (1) Unit - Rack Server 2U/CPU: Xeon4112 4C_85W_2.6GHz/Memory16GB/Disk 5*300GB/10K/12Gbps/ SAS2.5RAID930-8i/2GBFlash/ 2*750W Redundant Power supply/ Native dual Gbps ports & 4 x 100M/1000M bps pluggable NIC/3 Years warranty (RoHS). ○ One (1) Unit - Window Server2012 Operating System of English ○ Three (3) Units - Dispatch client access license <p>➤ Dispatch Client PC Requirements</p> <ul style="list-style-type: none"> ○ One (1) Unit Dispatch Client - 9500/2*8GB_2400MHz_DDR4/ 1T_3.5 inch_SATA_7200Rpm/DVDRW/ keyboard/mouse/dual network interface card/no monitor/three (3) year service/Win 10 Pro English 64-bit (RoHS) (REACH). ○ One (1) Unit - 21.5" monitor. ○ One (1) Unit - SoundBox. 	
--	--	--

	<ul style="list-style-type: none"> ○ One (1) Unit - Earphone Microphone Headset Length 2m. ○ One (1) Unit - SafeNet SuperDog for License ○ Three (3) Units - Google online map fee (Including 5 years annual fee for one Dispatcher) <p>➤ Multimedia Recording & Playback System</p> <ul style="list-style-type: none"> ○ One (1) Storage array - 6*900GB 15K RPM SAS 512n 2.5"SAS Hard Drive CNC4 ports single-control 2*2X SFP+, FC16,16GB, 580W power, 3-year service (RoHS). ○ Three (3) Units - 2.5"SAS Hard Drive, 900GB 15K RPM SAS 512n (RoHS). ○ One (1) Unit - Fiber Ethernet Adapter Qlogic 00Y3337/01CV750 16Gb Enhanced Gen5 FC Single-port HBA (Including full height baffle. ○ One (1) Unit - whole network video recording application software package. ○ One (1) Unit - whole network voice recording application software package. 	
	<p>EMERGENCY AD HOC REPEATER (2 sets)</p> <p>General Features:</p> <ul style="list-style-type: none"> ➤ The emergency voice mesh communication system adopts wireless interconnection technology and versatile networking topologies to achieve large-scale communication coverage. It can be used independently without relying on other external facilities in all-weather and all terrain conditions. ➤ The Radio Communication Network shall use the new generation of digital mobile radio system complying with DMR Tier 2 Standard developed by ETSI (European Telecommunication Standard Institute) for Private Mobile Radio (PMR). 	

➤ The equipment must comply with the requirements set out in the standards and publications mentioned below.

- ETSI DMR Tier 2 Open Standard
- ETSI EN 300 113-2 V1.4.2(2009-11)
- ETSI EN 301 489-5 V1.3.1(2002-8)
- ETSI EN 301 489-1 V1.8.1(2008-4)

➤ The system shall support automatically deploy an Ad-Hoc DMR Tier 2 wireless network without extra facilities like IP, Microwave or satellite.

➤ There shall be up to 31 devices in the network to enlarge the coverage area.

➤ The system shall need no more than one frequency

➤ The working bandwidth of device shall not be wider than 25kHz.

➤ The system shall support AES128bits and AES256 bits basic and advanced encryption.

➤ The system shall support GSM connection between each other or to other GSM devices to enlarge the coverage.

➤ The device shall be portable and flexible deployment, say man-packed, vehicle-mounted or fixed-mounted.

➤ The device shall be directly powered by in-bedded battery and shall work up to 10 hours with one battery.

➤ The device shall be configured via web browser of B/S architecture.

➤ The system shall support various networking topologies, including chain, mesh and hybrid topologies.

Technical Specifications:

General:

1	Node Capacity	32
2	Battery Capacity	185Wh
3	Battery Life	≥ 10 hours (15% TX)
4	Frequency	136-174 Mhz
5	Output Power	5 W/10 W/20 W, adjustable
6	Vocoder	AMBE++/NVOC
7	Channel Spacing	12.5 kHz
8	Operating Voltage	14.8 V (rated)
9	Frequency stability	±0.5 ppm

Receiver:

10	Sensitivity	-120dBm
11	Intermodulation	ETSI: 70 dB @ 12.5/20/25 KHz
12	Spurious Response Rejection	ETSI: 70 dB @ 12.5/20/25 KHz
13	Spurious Emission	< -57 dBm

Transmitter:

14	Output Power	20W
15	Adjacent Channel Power	60 dB @ 12.5 KHz
16	Modulation Limiting	±2.5 KHz @ 12.5 KHz

Environment:

17	Operating Temperature	-30°C to +60°C
18	Storage Temperature	-40°C to +85°C
19	Shock & Vibration	MIL-STD-810 C/D/E/F/G
20	Ingress Protection Rating	IP67

DMR HANDHELD RADIO (20 sets)

General Features:

- Portable radio should support both analog and digital mode.
- Portable radio should support both analog and digital mode in one channel.
- Full Keypad for easy accessibility to change channels.
- Support automatic timeslot selection.

- VOX ready for hands-free communication.
- Built-in GPS and bluetooth.
- Built-in bluetooth
- With user programmable feature.
- Adjustable power levels(High/Low)
- With battery saver mode
- Battery indicator (LED provides status of battery at a glance)

Security Requirement:

- Support end-to-end Basic Encryption in Digital Mode

Technical Specifications:

General:

1	Frequency Range	136 – 174 MHz
2	Channel Capacity	Not less than 200
3	Channel Spacing	12.5KHz / 25KHz
4	Operating Voltage	7.4V
5	Frequency Stability	± 0.5ppm
6	Antenna Impedance	50Ω
7	Battery	Not less than 2000mAh (Li-ion)
8	Weight	Not less than 300g

Receiver:

9	Sensitivity	Analog: 0.22μV (12dB SINAD) Digital: 0.22μV/BER5%
10	Spurious Response Rejection	70dB @ 12.5/25KHz
11	Intermodulation	65dB @12.5/25KHz 70dB @12.5/25KHz
12	Rated Audio Distortion	≤3%
13	Audio Response	+1 ~-3dB
14	Hum and Noise	40dB @12.5KHz / 45dB @25KHz

Transmitter:

15	RF Power Output	1-5W
16	FM Modulation	11K0F3E @12.5Khz/ 16K0F3E @25Khz
17	4FSK Digital Modulation	12.5KHz Data Only; 7K60FXD 12.5KHz Data & Voice: 7K60FXW
18	Modulation Limiting	±2.5Khz@12.5KHz/ ±5.0Khz @ 25KHz
19	Hum and Noise	40dB @12.5KHz / 45dB @25KHz
20	Audio Response	+1 ~-3dB
21	Audio Distortion	≤3%
22	Digital Protocol	ETSI-TS102 361-1,-2,-3

Environmental:

23	Operating Temperature	-30°C ~+60°C
24	Storage Temperature	-40°C ~+85°C
25	Dustproof & Waterproof	IP54 Standard
26	Shock & Vibration Standard	Per MIL STD 810 G Standard

Accessories:

- One (1) Battery each
- One (1) Lithium Ion Battery
- One (1) Rapid Charger with Universal Power Adapter each
- One (1) VHF Threaded Antenna each
- One (1) Belt Clip
- One (1) Operator's Manual each

REQUIREMENTS

1. Bidders shall submit/provide NTC Type Approval or Type Acceptance Certificate of the Radio Equipment being offered.

	<ol style="list-style-type: none"> 2. Bidders must submit Certification from the manufacturer that parts and accessories are available in the next five (5) years. 3. Bidders shall submit certification from Manufacturer of the Radio Equipment being offered of their accredited service center in the Philippines. 4. Bidders shall provide a valid Certificate of Distributorship/Dealership of the brand to be offered from the Manufacturer (If the Bidder is not the Manufacturer). 5. Bidders must submit a certification that Manufacturer of the Radio Equipment being offered is at least ten (10) years in existence in the Philippine Market. 6. Bidders must submit proof of local representative office in the Philippines for Foreign Manufacturer of the Radio Equipment being offered. 7. Bidders must submit a list of at least three (3) service technicians or technical experts/engineers and their corresponding training certificates issued by the manufacturer of the brand of the radio being offered. 8. Bidders shall submit a duly signed Assessment Certificates from End Users signifying the good performance of existing DMR systems and Manufacturer in after sales support within the warranty period for the radio equipment being offered 9. Bidders shall submit a document as a proof of the local business registration in the Philippines of the foreign manufacturer of the radio equipment being offered. 	
	<p>WARRANTY</p> <ol style="list-style-type: none"> 1. One (1) year warranty on manufacturing defects for the DMR+LTE Portable Radio, POC Mobile Radio, Ad-hoc Voice Emergency System and DMR Radio from the date of receipt of the Acceptance. 2. If the DMR+LTE Portable Radio, POC Mobile Radio and DMR Radio is malfunctioning or inoperable, the Supplier shall provide maintenance service within seventy two (72) hours after receipt of notification at no cost to PPA. 	

	<p>3. PPA shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, within seventy two (72) hours and with all reasonable speed, repair or replace the defective units or parts thereof, without cost to PPA</p>	
	<p>TESTING</p> <p>Actual testing of the DMR+LTE Portable Radio, POC Mobile Radio and DMR Radio will be done during commissioning.</p>	
	<p>All other provisions stated in the Terms of Reference not included herein.</p>	

TERMS OF REFERENCE

SUPPLY, DELIVERY AND COMMISSIONING OF MULTI FUNCTION RADIO COMMUNICATIONS WITH CENTRALIZED DISPATCHING AND RECORDING SYSTEM

This Terms of Reference (TOR) provides the technical description and other terms and conditions for the Supply, Delivery and Commissioning of Multi Function Radio Communications with Centralized Dispatching and Recording System of Philippine Ports Authority.

1. OBJECTIVES

The PPA aims to provide a fast and reliable communication within and between PPA Head Office, Port Management Offices and Terminal Management Offices. The handheld communication terminals are advance and versatile performing both the functionalities of Narrowband radio communication and Broadband communication. This will provide robust and flexible communication platform and can further increase the efficiency of PPA operations.

2. CONCEPT OF OPERATION

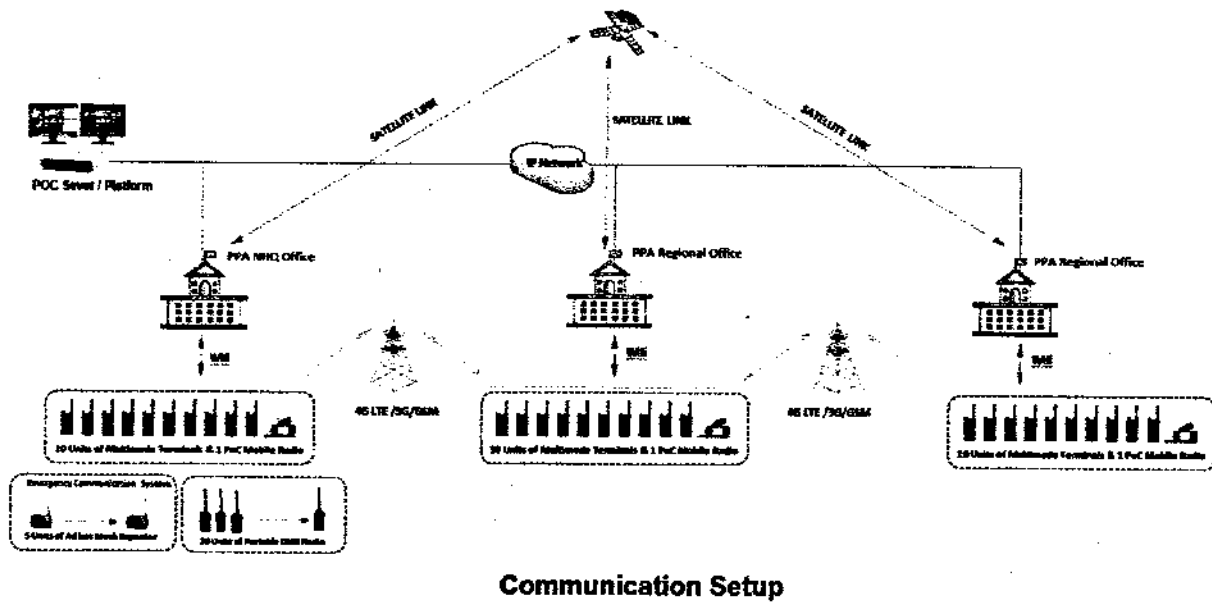
Through the push-to-talk platform that is using broadband connectivity, PPA offices nationwide can be able to communicate via voice, video, and via multimedia messaging. At the same time, terminals can be able to perform critical voice communication through the use of radio frequencies (e.g. VHF, UHF).

To add more security and control, PPA will have an on-premise dedicated communication platform that is composed of hardwares and application softwares for the broadband communication system. This includes Network Management, Dispatch and Multimedia Recording system.

The POC Terminal that will be used is a Multimode device that can work in broadband as well as in narrowband. It is state-of-the-art device equipped with big touch screen, back and front cameras, and multiple connectivity options such as 3G, 4G LTE, Wifi, Bluetooth, and with embedded GPS module. The android based device functions like a smart phone receives cellular calls and can run industry & 3rd party applications. A mobile PoC terminal will also be provided in all PPA offices which can be used in office or in PPA vehicles.

The Narrowband functionality of the multimode device will be used for fast voice communication within the district premises or can be brought in other areas where it is needed. It is a digital and secured platform providing end-to-end encryption.

For emergency situations and mobility, Ad Hoc mesh repeater can provide bigger radio coverage instantly. With the built-in battery, it will provide radio signal coverage thus the multimode radio can be deployed on a wider range. Equipped with mesh technology realizing an automatic linking of multiple nodes and thereby instantly providing wide coverage, fast and secured voice communication.



3. SCOPE OF WORK

Supply, Delivery and Commissioning of Multi Function Radio Communications with Centralized Dispatching and Recording System.

	ITEM/UNIT	DESCRIPTION	QTY	UNIT
1	DMR+LTE Portable radio	DMR+LTE portable radio, 4"touch screen, 136-174MHz, Dual SIM card,GPS, 2900mAh Battery Li-polymer, DMR Tier II and Tier III, battery, Desktop Charger, antenna, AES 256 encryption, with earset. (7 units x 25 ports)	182	set
2	POC Mobile base radio	4G Smart Mobile Radio European version (Include B26\B28) ,4G Smart Mobile Radio, Android 7.0, 1GB+8GB (RoHS) (REACH) (1unit x 25 ports)	25	set

3	Ad-hoc Voice Emergency System	Mesh ad-hoc repeater. Can work independently or can be linked wirelessly to form a bigger radio coverage, Backpack bag	2	set
4	Platform Command Center	Hardware Server and Software, Network Management System, Dispatch System, and Recording	1	set
5	DMR radio	Power 1 - 5 watts, DMR Tier II and analogue conventional mode, with GPS, with Bluetooth	20	set
6	SIM Card	Data SIM Card for 3 years (1 SIM per DMR Radio and POC Mobile Radio)	207	pcs
7	Engineering Service	HQ remote support plus local engineering onsite service for system configuration, training	1	set

4. APPROVED BUDGET FOR THE CONTRACT

The Approved Budget for the Contract is **FIFTY MILLION PESOS (Php 50,000,000.00)**.

5. SPECIFICATIONS

5.1 MULTIMODE RADIO REQUIREMENT (182 sets)

5.1.1 General Features:

- Radios should operate in either analog or digital mode and is compatible with the prevalent analog system, ensuring a smooth analog-to-digital transition.
- Support wired PIN connection and connections over WLAN, BT and NFC to a wide range audio accessories.
- Provides enhanced encryption capability such as 256-bit encryption in narrowband mode and the scrambler feature.
- Support Narrowband and Broadband Operation.
- Upgradeable into DMR Tier III Trunking System
- Support TDMA Technology.
- Support Narrowband Call Recording.

- Supports Alert Call, Remote Monitor, Call Priority, Call Queuing
- Support automatic roaming to all transceiver sites connected via IP multisite.
- Support three band equalizer in Audio.
- Support LTE Band such as B26, B28, B40 and B41.
- Support GSM Band such as 850/900/1800/1900Mhz.
- Support Wi-fi 802.11 b/g/n , 2.4Ghz.
- Support NFC 13.56Mhz.
- Support GPS/BDS/GLONASS.
- Support WCDMA B1/B8.
- Support AP Processor Qualcomm 8-core, 2.0GHz or better.
- Support TTS (Test to Speech).
- Shall be equipped with mission critical dual-screen design.
- Shall be equipped with Smart Knob design, volume control and contact selection 2-in-1.

5.1.2 Technical Specifications:

- General

1	Frequency range	136-174MHz
2	Channel Capacity	At least 16
3	Channel Spacing	12.5KHz / 25KHz
4	Frequency Stability	±0.5ppm
5	Blocking	84db
6	Battery	not less than 2900mAh Li polymer, 7.6V(Rated)
7	Ports	20 PIN Accessory/Charging Port
8	Android OS	Android 7.0
9	Front Camera	13MP Auto Focus
10	Rear Camera	13MP Auto Focus
11	Memory	Broadband:RAM:3GB ROM:32GB eMMC expandable to 128GB

		Narrowband: Expandable to 16GB with MicroSD card
--	--	--

➤ Receiver

12	Sensitivity	Analog: 0.3 μ V(12dB SINAD) Digital: 0.3 μ V(typical) / BER5%
13	Audio Output	2Watts

➤ Transmitter

14	RF Power Output	High Power: 5W
15	Audio Distortion	≤3%

➤ Video and Imaging

16	Video File Types	3GPP, AVI, MPEG-4, MPEG-PS
17	Image File Types	JPEG, GIF, PNG, BMP
18	Video Recording Quality	Front Camera:1080P HD up to 30fps Rear Camera:4K HD

➤ Audio

19	File Types	MP3, WAV, 3GPP
20	Input	Multi-Mic Noise Suppression Wind Noise Suppression Echo Cancellation

➤ Environmental

21	Operating Temperature	-20°C -+60°C
22	Shock Vibration	MIL-STD-810 G
23	Dustproof & Waterproof	IP67 Standard

➤ Accessories

24	One (1) Smart Battery Li-Polymer
25	One (1) each Belt Clip
26	One (1) Power Adapter
27	Color Rings
28	One (1) Charger
29	One (1) Strap
30	C-Style Earset

5.2 POC MOBILE STATION REQUIREMENT (25 pcs)

5.2.1 General Features:

- It should work with 2G/3G/4G/WLAN connections
- It's mandatory to have the support for GPS(AGPS)/BDS/GLONASS/Galileo positioning
- It should support BT4.0 or above
- It should have dedicated emergency button and PTT button
- It should have the 3.5" touch-screen for easy operation
- It should support Android 7.0 platform for app expansion.
- It should have handheld microphone for easy operation in the vehicle.

5.2.2 Technical Specifications:

➤ General

1	Dimension (H x W x D)	170x80x85 mm
2	Weight	380g
3	Screen Size	3.5-inch Touch LCD
4	CPU	Quad-core processor (1.2GHz)
5	OS	Android 7.0
6	RAM Capacity	1GB
7	ROM Capacity	8GB
8	Micro SD Card Slot	1

9	SIM Card Slot	1
10	Operating Voltage	12-36V DC

➤ **Connectivity**

11	Frequency bands	TDD-LTE: Band38/40/41 FDD-LTE: Band1/3/5/7/8/20/28 WCDMA: Band1/2/5/8 GSM/GPRS/EDGE: Band2/3/5/8
12	WiFi	2.4GHz, IEEE 802.11 b/g/n
13	GPS	GPS (AGPS)/GLONASS/BDS
14	BT	2.0/3.0/4.0

➤ **Audio**

15	Microphone	1
16	Speaker	4W (6W Max.)

➤ **Environmental**

17	Operating Temperature	-30°C to +75°C
----	-----------------------	----------------

➤ **Interface**

18	Antenna Port	SMA
19	GPS Antenna Port	SMA
20	Micro USB 2.0 OTG	Support
21	External Audio Port	Support
22	Microphone Jack	Support

➤ **Accessories**

23	One (1) 4G Antenna
24	One (1) GPS Antenna
25	Screws for the Brackets
26	Mounting Brackets
27	Handheld Microphone
28	Power Cables
29	Three (3) year subscription of Data SIM

5.3 PTT OVER CELLULAR (POC) SYSTEM (1 set)

5.3.1 Dispatcher

➤ Private Voice Call

Both the full-duplex and half-duplex private voice calls can be established between the UE and DC. During the full-duplex call, both parties can simultaneously talk while listening. During the half-duplex call, only one party can speak at a time.

➤ Group Voice Call

The DC can initiate a group voice call to a group in its organization through the web dispatch client. During the group call, only one group member can speak at a time, while all other group members can only listen. After the talking party finishes talking and release the floor, other group members can request the floor.

➤ Listening

The DC can listen to an ongoing private or group call, or activities of a particular UE or group. One DC can listen to multiple UEs or groups at the same time. When the listened UE or group participates in a call, the server automatically forwards the call to the DC.

Both the voice call and video call are supported for listening.

➤ Interrupt or Override

Interrupt: When a user is talking in a call initiated, received, or monitored by the DC, the DC can interrupt the talking anytime to control the floor.

➤ Stunning or Reviving

If a UE is lost, the DC can stun the UE to prevent unauthorized use of the radio. A stunned UE will be deprived of all functions excluding GPS polling.

To restore the stunned UE to normal use, the DC can revive the UE.

➤ **Broadcast Call**

The DC can initiate a broadcast call to a group. During the call, only the DC can speak and be heard.

➤ **Dynamic Regrouping**

The DC can create a temporary group consisting of UEs located within a specified area on the map or selected from the favorite contacts. And then, the DC can initiate the voice or video call or send the message to the group.

➤ **Private Video Call**

The DC can initiate a one-to-one video call to a UE with video services.

➤ **Group Video Call**

The DC can initiate a group video call to a group. During the call, only the member with the floor can transmit voice and video, and other members can only receive.

➤ **Video Pull**

By video pulling, the DC makes a one-way video call to the designated UE, and pull the video to the DC. The video call can be established automatically or manually based on the settings of the DC. In this case, the DC can monitor the vicinity of the UE. Besides, the DC can pull videos of multiple UEs in turn. After the video is pulled, the DC can forward the video to other users. The video pulling supports the resolutions of CIF, VGA, and 720P.

If pack loss exists during the video pulling, the system automatically re-uploads the lost packets, to ensure that the video is complete.

➤ **Video Push**

By video pushing, the DC makes a one-way video call to a UE or group, and sends the local video of the DC to the UE or group members.

In this case, the UE or group members can only view the video, but cannot request the floor.

➤ **Video Forward**

By video forwarding, the DC makes a one-way video call without voice to a UE or group. After the call is established, the DC forwards the video pulled from another UE to this UE. In this case, the group members can only view the video, but cannot request the floor.

➤ **GPS Subscription**

The DC can subscribe to GPS of a UE or multiple UEs by time. After the UE receives the GPS information, the location of the UE will be displayed on the digital map of the DC. The DC can click the icon of the UE to initiate a voice or video call, send a message, or check the location.

The DC can configure the color of the UE icons as per needs.

➤ **GPS Tracking**

After the GPS tracking feature is enabled on the subscribed UE, the DC can view the real-time geographic locations of the UE on the map and obtain the moving route of the UE.

➤ **Historical Track**

The DC can query the historical track of a UE within a specified period.

➤ **Statistic Query**

The DC can query the records of short messages, online and offline status, geofencing alarms, emergency alarms, and calls. The DC can query the statistics by UE type or time. The query results are presented in figures or tables.

5.3.2 Unified Network Management System

➤ **Template Management**

The carrier can create subscriber templates on the SOP to preset annual and monthly credits for different types of subscribers. The template can only be created, edited, or deleted by the carrier.

➤ **Subscriber Management**

The customer can create, edit, delete subscribers on the SOP. Once the services of the subscriber are enabled, the corresponding credits will be consumed.

➤ **Group Management**

The customer can create, edit, delete groups, and manage group members.

➤ **Statistics Analysis**

○ **Task Statistics**

The system provides operation statistics of the SOP, which illustrate the operations status from different dimensions. Users can customize the statistical parameters, such as the start time and period, as per actual needs.

○ **Account Statistics**

The daily account statistics measure the total number of active accounts and the number of new accounts in one day.

○ **Subscriber Statistics**

The subscriber statistics measure the total number of subscriber accounts, the number of new subscriber accounts, and the number of active subscriber accounts (logged in to the server) in one day.

○ **Organization Statistics**

The organization statistics measure the total number of organizations and the number of newly added organizations in one day.

○ **Invalid Terminal Statistics**

The invalid terminal refers to the expired terminal that is not renewed. The invalid terminal statistics measure the total number of the invalid device and the number of the newly added invalid device in one day.

- **Group Statistics**

The group statistics measure the total number of groups and the number of newly added groups in one day.

- **Quota Statistics**

The quota statistics measure the total number of credits, the number of consumed credits, and the number of remaining credits.

5.3.3 Multimedia Recording and Playback System

- **Multi -system recording:** Can record calls, message and registration information that pass through the core network.
- **Provides rich criteria for data query,** including calling party, called party, call type, duplex type, media type, system type, user tag and event.
- **Delivers versatile playback functions,** including playing, pausing, playlist, previous file, next file, single file looping, all files looping and volume adjustment.
- **Floor information display:** During the playback the floor information is displayed and varied with the call process.
- **Status monitoring:** This system can monitor and display the service running status and the status of the CPU, memory and disk space of the server.
- **Alarm:** When this system runs abnormally, an alarm with sound appears on the interface to remind users to solve the problem promptly. Moreover, users can query and analyze historical alarms.
- **Exporting and downloading:** This system allows users to export searched online and offline information, and download historical audio and video files.

5.3.4 Hardware Requirements

- **POC (Ptt over Cellular) Server Requirements**

- **One (1) Unit – Server:** 2U/CPU:Xeon4112 4 c_85w_2.6 GHZ/
Memory 16GB /Storage capacity 5*300GB/
/10K/12Gbps/SAS2.5RAID930-8i/2GBFlash/2*750W

redundant power supply /1Gb 4-Port RJ45 Ethernet Adapter and 1Gb 2-Port Ethernet /3-year guarantee/RAID write back cache (RoHS) (REACH).

- One (1) Unit - MYSQL L87640 MySQL Enterprise Edition (1-4 socket server) - Server Perpetual(MYSQL Perpetual authorization 1-4 Socket server); B61817 MySQL Software Update License & Support - OEM(One-year service support from Original)(RoHS).
- One (1) Unit - Switch, S5720-36C-EI-AC S5720-36C-EI-AC, 10/100/1000 Base-T Ethernet port * 28, multiplexing gigabit Combo SFP * 4, gigabit SFP * 4, single subboard slot, 150 W AC power supply * 2 (RoHS).
- One (1) Unit - Firewall USG6525E (2*GE WAN+8*GE Combo+2*10GE SFP+,2 ac power);M.2 sd-sata 6Gb/s-240gb;36 months of threat protection; Telescopic slide;5y service (RoHS)

➤ NMS (Network Management System) Client

- One (1) Unit NMS Client PC - 4G / 500g / dvd rw / keyboard and mouse / three year service / win10 English professional 64 bit operating system (RoHS).
- One (1) Unit - 21.5" monitor

➤ Dispatch, NMS and MRPS Server Requirements

- One (1) Unit - Rack Server 2U/CPU: Xeon4112 4C_85W_2.6GHz/Memory16GB/Disk 5*300GB/10K/12Gbps/SAS2.5RAID930-8i/2GBFlash/ 2*750W Redundant Power supply/ Native dual Gbps ports & 4 x 100M/1000M bps pluggable NIC/3 Years warranty (RoHS).
- One (1) Unit - Window Server2012 Operating System of English
- Three (3) Units - Dispatch client access license

➤ Dispatch Client PC Requirements

- One (1) Unit Dispatch Client - 9500/2*8GB_2400MHz_DDR4/1T_3.5 inch_SATA_7200Rpm/DVDRW/ keyboard/mouse/dual

network interface card/no monitor/three (3) year service/Win 10 Pro English 64-bit (RoHS) (REACH).

- One (1) Unit - 21.5" monitor.
- One (1) Unit - SoundBox.
- One (1) Unit - Earphone Microphone Headset Length 2m.
- One (1) Unit - SafeNet SuperDog for License
- Three (3) Units - Google online map fee (Including 5 years annual fee for one Dispatcher)

➤ **Multimedia Recording & Playback System**

- One (1) Storage array - 6*900GB 15K RPM SAS 512n 2.5"SAS Hard Drive CNC4 ports single-control 2*2X SFP+, FC16,16GB, 580W power, 3-year service (RoHS).
- Three (3) Units - 2.5"SAS Hard Drive, 900GB 15K RPM SAS 512n (RoHS).
- One (1) Unit - Fiber Ethernet Adapter Qlogic 00Y3337/01CV750 16Gb Enhanced Gen5 FC Single-port HBA (Including full height baffle.
- One (1) Unit - whole network video recording application software package.
- One (1) Unit - whole network voice recording application software package.

5.4 EMERGENCY AD HOC REPEATER (2 sets)

5.4.1 General Features

- The emergency voice mesh communication system adopts wireless interconnection technology and versatile networking topologies to achieve large-scale communication coverage. It can be used independently without relying on other external facilities in all-weather and all terrain conditions.

- The Radio Communication Network shall use the new generation of digital mobile radio system complying with DMR Tier 2 Standard developed by ETSI (European Telecommunication Standard Institute) for Private Mobile Radio (PMR).
- The equipment must comply with the requirements set out in the standards and publications mentioned below.
 - ETSI DMR Tier 2 Open Standard
 - ETSI EN 300 113-2 V1.4.2(2009-11)
 - ETSI EN 301 489-5 V1.3.1(2002-8)
 - ETSI EN 301 489-1 V1.8.1(2008-4)
- The system shall support automatically deploy an Ad-Hoc DMR Tier 2 wireless network without extra facilities like IP, Microwave or satellite.
- There shall be up to 31 devices in the network to enlarge the coverage area.
- The system shall need no more than one frequency
- The working bandwidth of device shall not be wider than 25kHz.
- The system shall support AES128bits and AES256 bits basic and advanced encryption.
- The system shall support GSM connection between each other or to other GSM devices to enlarge the coverage.
- The device shall be portable and flexible deployment, say man-packed, vehicle-mounted or fixed-mounted.
- The device shall be directly powered by in-bedded battery and shall work up to 10 hours with one battery.
- The device shall be configured via web browser of B/S architecture.
- The system shall support various networking topologies, including chain, mesh and hybrid topologies

5.4.2 Technical Specifications

➤ General

1	Node Capacity	32
2	Battery Capacity	185Wh
3	Battery Life	≥ 10 hours (15% TX)
4	Frequency	136-174 Mhz
5	Output Power	5 W/10 W/20 W, adjustable
6	Vocoder	AMBE++/NVOC
7	Channel Spacing	12.5 kHz
8	Operating Voltage	14.8 V (rated)
9	Frequency stability	±0.5 ppm

➤ Receiver

10	Sensitivity	-120dBm
11	Intermodulation	ETSI: 70 dB @ 12.5/20/25 KHz
12	Spurious Response Rejection	ETSI: 70 dB @ 12.5/20/25 KHz
13	Spurious Emission	< -57 dBm

➤ Transmitter

14	Output Power	20W
15	Adjacent Channel Power	60 dB @ 12.5 KHz
16	Modulation Limiting	±2.5 KHz @ 12.5 KHz

➤ Environment

17	Operating Temperature	-30°C to +60°C
18	Storage Temperature	-40°C to +85°C
19	Shock & Vibration	MIL-STD-810 C/D/E/F/G
20	Ingress Protection Rating	IP67

5.5 DMR HANDHELD RADIO (20 sets)

5.5.1 General Features

- Portable radio should support both analog and digital mode.
- Portable radio should support both analog and digital mode in one channel.
- Full Keypad for easy accessibility to change channels.
- Support automatic timeslot selection.

- VOX ready for hands-free communication.
- Built-in GPS and bluetooth.
- Built-in bluetooth
- With user programmable feature.
- Adjustable power levels(High/Low)
- With battery saver mode
- Battery indicator (LED provides status of battery at a glance)

5.5.2 Security Requirement

- Support end-to-end Basic Encryption in Digital Mode

5.5.3 Technical Specifications

➤ General

1	Frequency Range	136 – 174 MHz
2	Channel Capacity	Not less than 200
3	Channel Spacing	12.5KHz / 25KHz
4	Operating Voltage	7.4V
5	Frequency Stability	± 0.5ppm
6	Antenna Impedance	50Ω
7	Battery	Not less than 2000mAH (Li-ion)
8	Weight	Not less than 300g

➤ Receiver

9	Sensitivity	Analog: 0.22μV (12dB SINAD) Digital: 0.22μV/BER5%
10	Spurious Response Rejection	70dB @ 12.5/25KHz
11	Intermodulation	65dB @12.5/25KHz 70dB @12.5/25KHz
12	Rated Audio Distortion	≤3%
13	Audio Response	+1 --3dB
14	Hum and Noise	40dB @12.5KHz / 45dB @25KHz

➤ Transmitter

15	RF Power Output	1-5W
16	FM Modulation	11K0F3E @12.5KHz/ 16K0F3E @25KHz
17	4FSK Digital Modulation	12.5KHz Data Only; 7K60FXD 12.5KHz Data & Voice: 7K60FXW

18	Modulation Limiting	±2.5Khz@12.5KHz/ ±5.0Khz @ 25KHz
19	Hum and Noise	40dB @12.5KHz / 45dB @25KHz
20	Audio Response	+1 --3dB
21	Audio Distortion	≤3%
22	Digital Protocol	ETSI-TS102 361-1,-2,-3

➤ Environmental

23	Operating Temperature	-30°C ~+60°C
24	Storage Temperature	-40°C ~+85°C
25	Dustproof & Waterproof	IP54 Standard
26	Shock & Vibration Standard	Per MIL STD 810 G Standard

5.5.4 Accessories

- One (1) Battery each
- One (1) Lithium Ion Battery
- One (1) Rapid Charger with Universal Power Adapter each
- One (1) VHF Threaded Antenna each
- One (1) Belt Clip
- One (1) Operator's Manual each

6. REQUIREMENTS

- 6.1 Bidders shall submit/provide NTC Type Approval or Type Acceptance Certificate of the Radio Equipment being offered.
- 6.2 Bidders must submit Certification from the manufacturer that parts and accessories are available in the next five (5) years.
- 6.3 Bidders shall submit certification from Manufacturer of the Radio Equipment being offered of their accredited service center in the Philippines.
- 6.4 Bidders shall provide a valid Certificate of Distributorship/Dealership of the brand to be offered from the Manufacturer (If the Bidder is not the Manufacturer).
- 6.5 Bidders must submit a certification that Manufacturer of the Radio Equipment being offered is at least ten (10) years in existence in the Philippine Market.

- 6.6 Bidders must submit proof of local representative office in the Philippines for Foreign Manufacturer of the Radio Equipment being offered.
- 6.7 Bidders must submit a list of at least three (3) service technicians or technical experts/engineers and their corresponding training certificates issued by the manufacturer of the brand of the radio being offered.
- 6.8 Bidders shall submit a duly signed Assessment Certificates from End Users signifying the good performance of existing DMR systems and Manufacturer in after sales support within the warranty period for the radio equipment being offered
- 6.9 Bidders shall submit a document as a proof of the local business registration in the Philippines of the foreign manufacturer of the radio equipment being offered
- 6.10 The Bidder must have completed a single contract similar to the contract to be bid whose value must be at least equivalent to Fifty Percent (50%) of the ABC. For this purpose, a similar contract means contract for the Supply, Delivery, Installation and Commissioning of Multi Function Radio Communication with Centralized Dispatching and Recording System or any Computer Aided Dispatching System

7. DELIVERY

- 7.1 Within one hundred twenty (120) calendar days from receipt of Notice to Proceed.
- 7.2 The Supplier must provide a minimum of four (4) hours training to PPA Personnel for the use of the equipment.

8. WARRANTY

- 8.1 One (1) year warranty on manufacturing defects for the DMR+LTE Portable Radio, POC Mobile Radio, Ad-hoc Voice Emergency System and DMR Radio from the date of receipt of the Acceptance.
- 8.2 If the DMR+LTE Portable Radio, POC Mobile Radio and DMR Radio is malfunctioning or inoperable, the Supplier shall provide maintenance service within seventy two (72) hours after receipt of notification at no cost to PPA.

8.3 PPA shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, within seventy two (72) hours and with all reasonable speed, repair or replace the defective units or parts thereof, without cost to PPA

9. TESTING

Actual testing of the DMR+LTE Portable Radio, POC Mobile Radio and DMR Radio will be done during commissioning.

10. PAYMENT

10.1 Sixty-five percent (65%) of the contract cost after delivery and inspection at the PPA Head Office.

10.2 Thirty-five percent (35%) of the contract cost after commissioning, inspection and acceptance by the PPA Head Office Port Police Department.


Genaro P. Mancio, Jr.
Acting Manager/Superintendent
Port Police Department

***Section VIII. Checklist of Technical and
Financial Documents***

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
or
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document,
and
- (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and
- (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- (f) Statement of the prospective bidder of all its ongoing 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**
- (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; **and**
- (h) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; **and**
- (i) Conformity with the Technical Specifications, which may include production/delivery schedule, manpower requirements, and/or after-sales/parts, if applicable; **and**
- (j) Original duly signed Omnibus Sworn Statement (OSS);
and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- (k) The Supplier's audited financial statements, showing, among others, the Supplier's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**

- (l) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC);
or
A committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

Class "B" Documents

- (m) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

Other documentary requirements under RA No. 9184 (as applicable)

- (n) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.
- (o) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

25 FINANCIAL COMPONENT ENVELOPE

- (a) Original of duly signed and accomplished Financial Bid Form; **and**
- (b) Original of duly signed and accomplished Price Schedule(s).

**Bid Form for the Procurement of Goods
[shall be submitted with the Bid]**

BID FORM

Date : _____
Project Identification No. : _____

To: [name and address of Procuring Entity]

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers [insert numbers], the receipt of which is hereby duly acknowledged, we, the undersigned, offer to [supply/deliver/perform] [description of the Goods] in conformity with the said PBDs for the sum of [total Bid amount in words and figures] or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this Bid. The total bid price includes the cost of all taxes, such as, but not limited to: [specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties], which are itemized herein or in the Price Schedules,

If our Bid is accepted, we undertake:

- a. to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements of the Philippine Bidding Documents (PBDs);
- b. to provide a performance security in the form, amounts, and within the times prescribed in the PBDs;
- c. to abide by the Bid Validity Period specified in the PBDs and it shall remain binding upon us at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of [name of the bidder] as evidenced by the attached [state the written authority].

We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name: _____
Legal capacity: _____

Signature: _____
Duly authorized to sign the Bid for and behalf of: _____
Date: _____

Price Schedule for Goods Offered from Abroad
 [shall be submitted with the Bid if bidder is offering goods from Abroad]

For Goods Offered from Abroad

Name of Bidder _____ Project ID No. _____ Page ___ of ___

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place (specify border point or place of destination)	Total CIF or CIP price per item (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name: _____

Legal Capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Price Schedule for Goods Offered from Within the Philippines
 [shall be submitted with the Bid if bidder is offering goods from within the Philippines]

For Goods Offered from Within the Philippines

Name of Bidder _____ Project ID No. _____ Page ___ of ___

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+8)	Total Price delivered Final Destination (col 9) x (col 4)

Name: _____

Legal Capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Bid Securing Declaration Form
[shall be submitted with the Bid if bidder opts to provide this form of bid security]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION
Project Identification No.: [Insert number]

To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
 - a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
 - b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
 - c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of [month]
[year] at [place of execution].

[Insert NAME OF BIDDER OR ITS
AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Contract Agreement Form for the Procurement of Goods (Revised)
[Not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT AGREEMENT

THIS AGREEMENT made the _____ day of _____ 20____ between [name of PROCURING ENTITY] of the Philippines (hereinafter called “the Entity”) of the one part and [name of Supplier] of [city and country of Supplier] (hereinafter called “the Supplier”) of the other part;

WHEREAS, the Entity invited Bids for certain goods and ancillary services, particularly [brief description of goods and services] and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of [contract price in words and figures in specified currency] (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as integral part of this Agreement, viz.:
 - i. Philippine Bidding Documents (PBDs);
 - i. Schedule of Requirements;
 - ii. Technical Specifications;
 - iii. General and Special Conditions of Contract; and
 - iv. Supplemental or Bid Bulletins, if any
 - ii. Winning bidder’s bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

Bid form, including all the documents/statements contained in the Bidder’s bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder’s response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity’s bid evaluation;
 - iii. Performance Security;
 - iv. Notice of Award of Contract; and the Bidder’s conforme thereto; and
 - v. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such

as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.

3. In consideration for the sum of [total contract price in words and figures] or such other sums as may be ascertained, [Named of the bidder] agrees to [state the object of the contract] in accordance with his/her/its Bid.
4. The [Name of the procuring entity] agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written.

[Insert Name and Signature]

[Insert Name and Signature]

[Insert Signatory's Legal Capacity]

[Insert Signatory's Legal Capacity]

for:

for:

[Insert Procuring Entity]

[Insert Name of Supplier]

Acknowledgment

[Format shall be based on the latest Rules on Notarial Practice]

Omnibus Sworn Statement (Revised)
[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. [Select one, delete the other:]

[If a sole proprietorship:] I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

[If a partnership, corporation, cooperative, or joint venture:] I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. [Select one, delete the other:]

[If a sole proprietorship:] As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;

[If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. [Select one, delete the rest:]

[If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a partnership or cooperative:] None of the officers and members of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of [Name of Bidder] is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. [Name of Bidder] complies with existing labor laws and standards; and

8. [Name of Bidder] is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

a. Carefully examining all of the Bidding Documents;

b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;

c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and

d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the [Name of the Project].

9. [Name of Bidder] did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to

deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this ___ day of ___, 20__ at _____, Philippines.

[Insert NAME OF BIDDER OR ITS
AUTHORIZED REPRESENTATIVE]

[Insert signatory's legal capacity]

Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

Performance Securing Declaration (Revised)

[if used as an alternative performance security but it is not required to be submitted with the Bid, as it shall be submitted within ten (10) days after receiving the Notice of Award]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

PERFORMANCE SECURING DECLARATION

Invitation to Bid: [Insert Reference Number indicated in the Bidding Documents]

To: [Insert name and address of the Procuring Entity]

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, to guarantee the faithful performance by the supplier/distributor/manufacturer/contractor/consultant of its obligations under the Contract, I/we shall submit a Performance Securing Declaration within a maximum period of ten (10) calendar days from the receipt of the Notice of Award prior to the signing of the Contract.
2. I/We accept that: I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of one (1) year for the first offense, or two (2) years for the second offense, upon receipt of your Blacklisting Order if I/We have violated my/our obligations under the Contract;
3. I/We understand that this Performance Securing Declaration shall cease to be valid upon:
 - a. issuance by the Procuring Entity of the Certificate of Final Acceptance, subject to the following conditions:
 - i. Procuring Entity has no claims filed against the contract awardee;
 - ii. It has no claims for labor and materials filed against the contractor; and
 - iii. Other terms of the contract; or
 - b. replacement by the winning bidder of the submitted PSD with a performance security in any of the prescribed forms under Section 39.2 of the 2016 revised IRR of RA No. 9184 as required by the end-user.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of [month] [year] at [place of execution].

[Insert NAME OF BIDDER OR ITS
AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

**NET FINANCIAL CONTRACTING CAPACITY (NFCC)
COMPUTATION**

A. The values of the bidder's current assets and current liabilities shall be based on the data submitted to the BIR, through its Electronic Filing and Payment System (EFPS).

		Year 20
1.	Total Assets	
2.	Current Assets	
3.	Total Liabilities	
4.	Current Liabilities	
5.	Net Worth (1-3)	
6.	Net Working Capital (2-4)	

B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = [(Current asset minus current liabilities) (15)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started, coinciding with the contract to be bid

NFCC = Php _____

K = 15

Herewith attached are certified true copies of the income tax return and audited financial statement: stamped "RECEIVED" by the BIR or BIR authorized collecting agent for the immediately preceding year.

Submitted by:

Name of Supplier/Distributor/Manufacturer

Signature of Authorized Representative

**STATEMENT OF THE BIDDER'S SINGLE LARGEST COMPLETED CONTRACT (SLCC)
SIMILAR TO THE CONTRACT TO BE BID**

This is to certify that _____ has completed the following:

NAME OF THE CONTRACT	DATE OF THE CONTRACT	CONTRACT DURATION	OWNER'S NAME & ADDRESS	KINDS OF GOODS	AMOUNT OF COMPLETED CONTRACT/S	DATE OF DELIVERY	END USER'S ACCEPTANCE OR OFFICIAL RECEIPT(S) OR SALES INVOICE ISSUED FOR THE CONTRACT*

*TO BE ATTACHED TO THE STATEMENT

Name and Signature of Authorized Representative

Date