



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
NATIONAL TELECOMMUNICATIONS COMMISSION
BIR ROAD, EAST TRIANGLE, DILIMAN, QUEZON CITY

PHILIPPINE BIDDING DOCUMENTS

Procurement of One (1) Lot Supply, Delivery, Installation, Testing, Integration and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency

Project Identification No.: **NTC-PB-2021-09-01**

September 2021

Preface

These Philippine Bidding Documents (PBDs) for the procurement of Goods through Competitive Bidding have been prepared by the Government of the Philippines for use by any branch, constitutional commission or office, agency, department, bureau, office, or instrumentality of the Government of the Philippines, National Government Agencies, including Government-Owned and/or Controlled Corporations, Government Financing Institutions, State Universities and Colleges, and Local Government Unit. The procedures and practices presented in this document have been developed through broad experience, and are for mandatory use in projects that are financed in whole or in part by the Government of the Philippines or any foreign government/foreign or international financing institution in accordance with the provisions of the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184.

The Bidding Documents shall clearly and adequately define, among others: (i) the objectives, scope, and expected outputs and/or results of the proposed contract or Framework Agreement, as the case may be; (ii) the eligibility requirements of Bidders; (iii) the expected contract or Framework Agreement duration, the estimated quantity in the case of procurement of goods, delivery schedule and/or time frame; and (iv) the obligations, duties, and/or functions of the winning bidder.

Care should be taken to check the relevance of the provisions of the PBDs against the requirements of the specific Goods to be procured. If duplication of a subject is inevitable in other sections of the document prepared by the Procuring Entity, care must be exercised to avoid contradictions between clauses dealing with the same matter.

Moreover, each section is prepared with notes intended only as information for the Procuring Entity or the person drafting the Bidding Documents. They shall not be included in the final documents. The following general directions should be observed when using the documents:

- a. All the documents listed in the Table of Contents are normally required for the procurement of Goods. However, they should be adapted as necessary to the circumstances of the particular Procurement Project.
- b. Specific details, such as the “*name of the Procuring Entity*” and “*address for bid submission*,” should be furnished in the Instructions to Bidders, Bid Data Sheet, and Special Conditions of Contract. The final documents should contain neither blank spaces nor options.
- c. This Preface and the footnotes or notes in italics included in the Invitation to Bid, Bid Data Sheet, General Conditions of Contract, Special Conditions of Contract, Schedule of Requirements, and Specifications are not part of the text of the final document, although they contain instructions that the Procuring Entity should strictly follow.
- d. The cover should be modified as required to identify the Bidding Documents as to the Procurement Project, Project Identification Number, and Procuring Entity, in addition to the date of issue.

e. Modifications for specific Procurement Project details should be provided in the Special Conditions of Contract as amendments to the Conditions of Contract. For easy completion, whenever reference has to be made to specific clauses in the Bid Data Sheet or Special Conditions of Contract, these terms shall be printed in bold typeface on Sections I (Instructions to Bidders) and III (General Conditions of Contract), respectively.

f. For guidelines on the use of Bidding Forms and the procurement of Foreign-Assisted Projects, these will be covered by a separate issuance of the Government Procurement Policy Board.

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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.

Section I. Invitation to Bid



REPUBLIC OF THE PHILIPPINES
NATIONAL TELECOMMUNICATIONS COMMISSION
NTC Bldg., BIR Road, East Triangle, Diliman, Quezon City
Email Address: ntc@ntc.gov.ph * Website: <http://www.ntc.gov.ph>

BIDS AND AWARDS COMMITTEE 2 (BAC2)

INVITATION TO BID FOR

PROCUREMENT OF ONE (1) LOT SUPPLY, DELIVERY, INSTALLATION, TESTING, INTEGRATION AND COMMISSIONING OF THE NATIONAL TELECOMMUNICATIONS COMMISSION (NTC) NATIONAL EMERGENCY COMMUNICATIONS RESILIENCY

1. The *National Telecommunications Commission (NTC)*, through the General Fund for Year 2020 intends to apply the sum of **Three Hundred Seventy-Five Million Pesos (Php 375,000,000.00)** being the ABC to payments under the contract for One (1) Lot **Supply, Delivery, Installation, Testing, Integration and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency** / Project Identification No.: NTC-PB-2021-09-01. Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The National Telecommunications Commission (NTC), through the Bids and Awards Committee 2 (BAC2), now invites bidders for the above Procurement Project. Delivery of the Goods is required within **One Hundred Eighty (180) calendar days** from receipt 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).
3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary “pass/fail” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.
4. Bidding is open to all interested bidders, whether local or foreign, subject to the conditions for eligibility provided in the 2016 revised IRR of RA No. 9184.
5. Prospective Bidders may obtain further information from the *National Telecommunications Commission (NTC)* at the address given below during office hours from 9:00 a.m. to 5:00 p.m. (Monday to Friday).
6. All particulars and activities regarding the Eligibility of Bidders, Bid Security, Pre-Bid Conference/s, Evaluation of Bids, Post-qualification, Award of Contract, Performance Security, procedures and other documents, shall be governed by Republic Act No. 9184 and the 2016 Revised IRR.

Activities		Schedule	Venue/ Contact Person
1	Issuance of Bid Documents	Starting 02 September 2021	Due to the COVID-19 pandemic, hard copies of bid documents are no longer issued. May be downloaded at www.ntc.gov.ph
2	Pre-Bid Conference	13 September 2021, 3:00 P.M.	NTC Multi-Purpose Hall, 4 th Floor, NTC Building, BIR Road, East Triangle, Diliman, Quezon City. For further details, see Item 8.
3	Deadline for Submission of Bids	27 September 2021, 3:00 P.M. (Philippine Standard Time)	NTC Lobby, Ground Floor, NTC Building, BIR Road, East Triangle, Diliman, Quezon City.
4	Opening of Bids	27 September 2021, 3:30 P.M. (Philippine Standard Time)	NTC Multi-Purpose Hall, 4 th Floor, NTC Building, BIR Road, East Triangle, Diliman, Quezon City.

7. A complete set of Bidding Documents may be acquired by interested Bidders on **02 September 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 **Fifty Thousand Pesos (Php 50,000.00)**. The Procuring Entity shall allow the bidder to present its proof of payment for the fees in person.

It may also be downloaded free of charge from the website of the Philippines Government Electronics Procurement System (PhilGEPS) at www.philgeps.gov.ph and the website of NTC at www.ntc.gov.ph, provided that Bidders shall pay the nonrefundable fee for the bidding documents not later than the submission of bids.

8. The *National Telecommunications Commission (NTC)* will hold a Pre-Bid Conference on **13 September 2021 at 3:00 P.M.** PST at the NTC Multi-Purpose Hall, 4th Floor, NTC Building, BIR Road, East Triangle, Diliman, Quezon City, which shall be open to prospective bidders and observers (on a limited numbers only) and simultaneously through online videoconferencing (Zoom, Google Meets, Microsoft Teams, etc.). Those who want to attend the Pre-Bid conference through online videoconferencing shall email the BAC2 Secretariat, indicating their company name, address, names of attendees and contact details.

9. Bids must be duly received by the BAC2 Secretariat through **manual/personal submission** at the office address indicated below on or before **27 September 2021 at 3:00 P.M. PST. Late bids shall not be accepted.**

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


11. Bid opening shall be on **27 September 2021, 3:30 P.M. PST**, at the given address below, and via *videoconferencing*. Bids will be opened in the presence of the Observers and bidders' representatives who choose to attend the activity.

12. The *National Telecommunications Commission (NTC)* 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.

13. For further information, please refer to:

Atty. Jurmobin T. Baddiri
Chairperson, BAC2 Secretariat
NTC Bids and Awards Committee 2
National Telecommunications Commission
BIR Road, East Triangle Diliman, Quezon City
Telephone Nos.: 8924 4046; 8924 3744 / FAX. No. 89289171
Email: ntcbac2020@gmail.com

01 September 2021



ATTY. ELLA BLANCA B. LOPEZ
Chairperson - Bids and Awards Committee 2

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, National Telecommunications Commission (NTC), wishes to receive Bids for the Procurement of **One (1) Lot Supply, Delivery, Installation, Testing, and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency** / Project Identification No.: **NTC-PB-2021-09-01**.

The Procurement Project (referred to herein as “Project”) is composed of One (1) lot Supply, Delivery, Installation, Testing, and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency, the details of which are described in Section VII (Technical Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for 2020 in the amount of *Three Hundred Seventy-Five Million Pesos* (Php 375,000,000.00).

2.2. The source of funding is FY 2020 GAA.

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:

- a. The Bidder must have completed a single contract that is similar to this Project, 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 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 at its physical address **NTC Multi-Purpose Hall, 4th Floor, NTC Building, BIR Road, East Triangle, Diliman, Quezon** and simultaneously through videoconferencing as indicated in 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 until **120 calendar** days from the date of 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 (1) original and two (2) copies** of the first and second components of its 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.

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 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 the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case of 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 but one lot and 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

20.2. 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**.

Section III. Bid Data Sheet

Bid Data Sheet

ITB Clause	
5.3	<p>For this purpose, contracts similar to the Project shall be:</p> <p>a. <i>A Similar Contract refers to any contracts that includes provision for supply, installation, delivery and /or maintenance services related to Emergency Communication Network</i></p> <p>b. Completed within Five (5) Years prior to the deadline for the submission and receipt of bids.</p>
7.1	<i>Not Applicable.</i>
12	No further instructions.
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> <p>a. The amount of not less than Seven Million Five Hundred Thousand Pesos (Php 7,500,000.00) or <i>2% of ABC</i>, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or</p> <p>b. The amount of not less than Eighteen Million Seven Hundred Fifty Thousand Pesos (Php 18,750,000.00) or <i>5% of ABC</i> if bid security is in Surety Bond.</p>
15.0	Each bidder shall submit one (1) original and Two (2) copies of the first and second components of its bid. Documents to be submitted shall be properly tabbed and labeled.
19.3	One (1) Lot Supply, Delivery, Installation, Testing, Integration and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency
20.2	<p>Documents, licenses and permits required. All the documents to be submitted as part of post-qualification documents must be certified by the authorized representative to be copy (ies) from the original.</p> <p><i>For the purpose of Post-qualification as mentioned in Section 34.2 of Revised IRR of RA 9184 the following document(s) shall be required:</i></p> <ol style="list-style-type: none"> 1. Income Tax Return for year 2020 (BIR Form 1701 or 1702), duly filed thru Electronic Filing and Payment System (eFPS) of the BIR, as provided for under E.O. No. 398 or Revenue Regulations 3-2005, together with the Filing and Payment References. (If bidding as a JV, all partners shall submit the documents). 2. Business Tax Returns/ Latest Value Added Tax Returns (Forms 2550M and 2550Q), for the quarter ending 31 March 2021 and 30 June 2021, per RR 3-2005. (If bidding as a JV, all partners shall submit the documents).

	<p>3. BIR Registration Certification, which contains the Taxpayer's Identification Number (TIN).</p> <p>4. Updated PhilGEPS Certificate of Registration (Platinum Membership), in case the said document was not submitted. (If bidding as a JV, all partners shall submit the documents).</p> <p>5. Proof of Completion of the single largest contract as identified in the Statement of Single Largest Contract, which shall be copy of any verifiable document(s) of the following documents :</p> <p style="padding-left: 40px;">a. Contract /Agreement can be any or all of the following: Contract/Job Order/ Purchase Order/ Notice to Proceed/ Sales Invoice/ Official receipt or any duly executed document proving/showing the name/nature of project or project description and contract cost.</p> <p style="padding-left: 40px;">b. Proof of Completion and Acceptance can be any or all of the following: Certificate of Completion/ Official Receipt /Certificate of Acceptance/ Certificate of Satisfactory Performance/ Delivery Receipt duly acknowledged by client.</p> <p><i>The following requirements in the Terms of Reference should be submitted together with the above items:</i></p> <p>6. Manufacturer's Certificate stating that the Supplier are duly certified and authorized distributor or dealer of the manufacturer in the Philippines.</p> <p>7. The Supplier must submit copy of Radio Dealer's Permit from the National Telecommunications Commission</p> <p>8. The Supplier must submit copy of Service Center Permit from the National Telecommunications Commission</p> <p>9. Copy of the NTC Type Approval/ Type Acceptance of all the radio communication equipment used for this project.</p> <p>10. Copy of Import Permit/Certificate, as may be applicable, for any of the components of this project.</p> <p><i>Documents must be submitted within five(5) calendar days from receipt of notice/advice from BAC2</i></p>
21.2	<i>No further instruction</i>

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>“The delivery terms applicable to this Contract are delivered to <i>NTC Building, BIR Road, East Triangle, Diliman, Quezon City</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:</p> <p style="text-align: center;">Mr. RAMON RODULFO Chief, General Services Division NTC Central Office</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> <ul style="list-style-type: none"> a. performance or supervision of on-site assembly and/or start-up of the supplied Goods; b. furnishing of tools required for assembly and/or maintenance of the supplied Goods; c. furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods; d. 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 e. training of the Procuring Entity’s personnel, at the Supplier’s plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

	<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> <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:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. <p>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.</p> <p>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.</p> <p>Packaging –</p> <p>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.</p>
	<p>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</p> <p>The outer packaging must be clearly marked on at least four (4) sides as follows: Name of the Procuring Entity</p>

	Name of the Supplier Contract Description Final Destination Gross weight
	Any special lifting instructions Any special handling instructions Any relevant HAZCHEM classifications
	<p>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.</p> <p>Transportation –</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Intellectual Property Rights –</p>

	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	“The terms of payment shall be as follows:	
	Milestones	Progress
	<p>Advance Payment</p> <p>Subject to compliance with Annex D of RA 9184, as amended, Fifteen percent (15%) of the contract price shall be paid within fifteen (15) working days from the Acceptance and Approval of Project Plan, signed and sealed by a Professional Electronics and Communications Engineer</p> <p>Project Plan includes but not limited to the following:</p> <ul style="list-style-type: none"> • Project Gantt Charts and Schedules • List of Personnel/ Project Team • Work Breakdown Structures (WBS) • Implementation and Acceptance Plan • Complete design, configuration, test script and others 	15%
	<p>Training</p> <p>Additional Ten percent (10%) of the contract price shall be paid upon completion of training.</p>	10%
	<p>Upon Onsite Delivery of System</p> <p>Additional Forty-five Percent (45%) of the contract price shall be paid upon delivery of the project components, installation of antenna mast and enclosure, construction of monopole towers and concrete base with guying anchors on three concrete posts in the identified eight (8) sites.</p>	45%
	<p>Upon Submission of Operation or Maintenance Manuals, Warranty Certificates</p> <p>Additional Ten percent (10%) of the contract price shall be paid upon submission of documentation and manuals</p>	10%
	<p>Functional Testing and Project Acceptance</p> <p>Additional Twenty percent (20%) of the contract price shall be paid upon completion of testing of the systems delivered and project acceptance.</p>	20%
4	Please refer to Section VII: Technical Specification.	

5	<p>Warranty for Equipment, Parts, Services and Software Update for the components of Emergency Resiliency Project, for at least five (5) Years from written acceptance by the NTC End-User/Project Manager.</p> <p>The obligation for warranty shall be subject to Section 62.1 of the 2016 Revised Implementing Rules and Regulations of RA 9184.</p>
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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	Description	Quantity	Total	Delivered, Weeks/Months
1	One (1) Lot Supply, Delivery, Installation, Testing, Integration and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency	One (1) Lot	1	Delivered within One Hundred Eighty (180) calendar days from Notice to Proceed

I hereby certify to comply and deliver all the requirements in accordance to the above stated schedule.

Name of Company/Bidder	Signature Over Printed Name of Authorized Representative	Date
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Section VII. Technical Specifications

One (1) Lot Supply, Delivery, Installation, Testing, Integration and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency.

Project Identification No.: NTC-PB-2021-09-01

A. COMPONENTS`

1. The Supplier shall supply, deliver, install, test, and commission the following minimum components:

ITEM	DESCRIPTION	UNIT	QTY
1.	DIGITAL TWO-WAY EMERGENCY RADIO SYSTEM		
1.1	Communication Backbone - Repeater System (Trunked)	Lot(s)	8
1.2	IP Link System	Lot(s)	16
1.3	Antenna System and Enclosure (Base Station)	Lot(s)	8
1.4	Digital Mobile Radio	Pc(s)	200
1.5	Digital Handheld Radio	Pc(s)	1000
1.6	POC Radio with Dispatch	Pc(s)	100
1.7	Command Center System Software	Lot(s)	1
2	DEPLOYABLE COMMUNICATION INTEROPERABILITY SYSTEM		
2.1	Communication Interoperability Unit (18)	Lot(s)	18
3.	UNIFIED DISPATCH AND MULTI-PROTOCOL INTEROPERABILITY PLATFORM		
3.1	Multi-Protocol Interoperability Software	Lot(s)	1
4	REMOTE CONTROLLED UNMANNED AERIAL VEHICLE - MONITORING SYSTEM FOR EMERGENCY COMMUNICATIONS SYSTEMS		
4.1	Disaster Response Unmanned Aerial Monitoring System (5)		
	<ul style="list-style-type: none"> ● UAV for Video monitoring 	Pcs	3
	<ul style="list-style-type: none"> ● UAV with mounted Portable Aerial Repeater 	Pcs	2
5	COMMAND AND CONTROL CENTER		
5.1	C3 System Integration	Lot(s)	1
5.2	C3 Architectural Design, Engineering, Construction and MEP	Lot(s)	1
5.3	C3 Joineries and Furniture	Lot(s)	1
5.4	Generator Set	Lot(s)	1

6.	SERVICES		
6.1	Engineering, Network Design, RF Path Profiling and Bandwidth Allocation	Lot(s)	1
6.2	Engineering and Design Works, Site Preparation, Documentation and Training	Lot(s)	1
6.3	Implementation, Testing, User's Training and Commissioning, Integration & System Acceptance	Lot(s)	1
6.4	Warranty Support Services	Lot(s)	1

B. DESCRIPTION

2. The Two-Way Radio System shall provide infrastructure backbone for voice and data information. The whole system shall consist of **Eight (8) Trunked Repeater System, Sixteen (16) IP Radios, Eight (8) antenna mast and system enclosure**. The repeater stations shall be installed in the following locations: Manila, Makati, Muntinlupa, Antipolo, Quezon City, Pasay, Tagaytay and San Mateo. The subscriber units shall enable all areas within NCR to communicate within one common frequency assigned/used during emergencies and disasters. This shall consist of two hundred (200) digital mobile radios and one thousand (1000) portable radios and one hundred (100) POC Radio with Dispatch, which shall be used to provide communication and information transmission link, deployable in different areas, for the first and/or emergency responders to facilitate emergency assistance to the public during disaster and emergencies.
3. **The Deployable Communication Interoperability System** enables emergency responders to communicate and work seamlessly with other communication systems of other government agencies. It also serves as a mobile gateway that is highly configured for radio interoperability. The project shall provide Eighteen (18) lots of Communication Interoperability/Integrator System.
4. **The Unified Dispatch and Multi-protocol Interoperability Platform** shall enable the network to be managed with detailed and accurate data and allows instantaneous interoperability with other communications platforms. The system shall be capable of expanding to 200 Console positions and 2000 endpoints. One (1) lot of this software shall be included in this project.
5. **Remote controlled Unmanned Aerial Monitoring System for Emergency Communications Response** - Drones shall be effectively used in different phases of providing disaster and emergency communication systems. The UAVs shall facilitate the identification of areas affected by disasters by means of aerial photos and videos and provide the necessary communication repeater system in case the terrestrial repeaters are rendered un-operational due to disasters. The project shall provide Three (3) drones for video monitoring and Two (2) drones

mounted with a portable aerial repeater to broaden the coverage of deployed portable and mobile two-way radio units.

6. **The Command-and-Control Center (C3)** shall serve as the center of dispatch, coordination and communication. This will include automatic, integrated response and information application of all systems.
7. **The Services** shall include all activities pertaining to professional and technical labor applied to the project such as Engineering, Network Design and RF Path Profiling, Engineering-Civil works, Architectural Design, Site Preparation, Documentation and Implementation, Testing, Commissioning, Integration & System Acceptance.

C. COMPONENTS SUMMARY

ITEM	DESCRIPTION	UNIT	QTY
1	DIGITAL TWO-WAY RADIO SYSTEM	Lot(s)	1
2	DEPLOYABLE COMMUNICATION INTEROPERABILITY SYSTEM	Lot(s)	18
3	UNIFIED DISPATCH AND MULTI-PROTOCOL INTEROPERABILITY PLATFORM	Lot(s)	1
4	REMOTE CONTROLLED UNMANNED AERIAL VEHICLE MONITORING SYSTEM AND EMERGENCY COMMUNICATIONS		
	• UAV for Video Monitoring	Pc(s)	3
	• UAV with mounted Portable Aerial Repeater	Pc(s)	2
5	COMMAND AND CONTROL CENTER	Lot(s)	1
6	SERVICES	Lot(s)	1

D. TECHNICAL SPECIFICATIONS

1. Digital Two-Way Emergency Radio System

1.1 Communication Backbone - Repeater System (Trunked)

- Frequency: 350 – 400 MHz
- Mixed mode: Analog/Digital
- Channel Access: TDMA
- Trunk Capable
- Common Air Interface: DMR
- Channel Capacity: At least 64
- RF Output Power: 1-50 Watts or better
- Operating Temperature: -22 to +140 °F or better
- Battery Charger Capacity: 12V, 3A
- Connectivity: Tx (N female), Rx (BNC female), USB A receptacle, 2 Ethernet ports
- Includes power supply and backup battery
- Includes Antenna multiplex consisting of antenna, surge suppressor,

- RG8 cable, connectors, open bay equipment rack, isolation transformer, grounding accessories
- Project requirement: 40 units (5 repeater per sites)

1.2. IP Link System

- RF Bands: Wide-band operation 4.9 to 6.05 GHz or better
- Channel Sizes: 5, 10, 15, 20, 30, 40, and 45 MHz channels
- Spectral Efficiency: 10 bps/Hz maximum
- Channel Selection: By Dynamic Spectrum Optimization or manual intervention Automatic selection on start-up and continual self-optimization to avoid interference
- Maximum Transmit Power: Up to 27 dBm or better
- Security: Identity-based user accounts, Configurable password rules, Event logging and management; optional logging via syslog Disaster recovery and vulnerability management
- Project requirement: 16 lots (8 pairs)

1.3 Antenna System and Enclosure (Base Station)

- All towers are of monopole construction using 3” and 2 ½” diameter, schedule 40 GI pipes, provided with steps, and painted red and white in compliance with the existing government rules and regulations.
- The tower is anchored to a concrete base with guying anchors on three concrete posts.
- Guy wires, connected to the guying anchors through a metal plate, should be set at most twenty feet apart on the monopole and should form an angle of not less than 30 degrees with the ground.
- Turnbuckles should be provided to tighten the guy wires.
- Equipment enclosure shall have concrete walls, concrete roof slabs, and steel doors.
- Typical enclosure dimension 2.0 m X 3.5 m. X 2.7 m
- The enclosure should be grounded and surge-protected.
- Necessary antenna mast installation/construction permits shall be at the responsibility of the winning bidder.
- Project requires the provision of 8 lots of Antenna Mast and Enclosures

■ RF Combiner and Amplifier

- **Combiner**
 - Frequency Range - 350-400
 - Channel separation: 250 KHz
 - Input Power: 100W
 - Tx-TX isolation: 80dB
 - Temperature range: -30 to +60°C
- **Receiver panel**
 - System Gain: 0-18 dB
 - Noise figure: 2.5dB
 - Ports: 8 ports
 - Temperature range: -40 to +60°C

- **Duplexer**
 - TX/RX separation (min): 3Mhz
 - Isolation Tx to Rx: 75dB
 - Temperature range: -30 to +70°C
- **Antenna**
 - Frequency: 370-400 MHz
 - Gain: At least 6dBd
 - Power rating (typ.) 500 watts
 - Impedance: 50 ohms
 - VSWR: 1.5:1 or less

1.4 Digital Mobile

- Frequency: 350-400 MHz
- Common Air Interface: DMR
- Channel Capacity: 1000
- Channel Spacing: 12.5/25kHz
- Power Output: 1-40W
- Rated Audio: 3 W (internal), optional 7.5 W (External - 8 ohms), optional 13 W (External - 4 ohms)
- Bluetooth Version 4.0
- Bluetooth Range: Class 2, 10m
- Analogue Sensitivity: 0.18uV
- Digital Sensitivity: 0.16 uV
- IMPRES Audio
- Constellation Support: GPS, BEIDOU
- GPS Horizontal Accuracy: < 5m
- Operating Temp Range: -30 to +60 °C or better
- Storage Temperature: -40 to +85 °C or better
- Protection Level: IP54, US Military Standard 810 C,D,E,F,G
- Includes the following accessories: desk microphone, radio power supply, backup battery, base antenna, surge protection device, grounding accessories
- Optional Wi-Fi capable for firmware upgrade
- Project Requirement: 200 units (pcs)

1.5 Digital Handheld Radio

- Frequency: 350 – 400 MHz
- GPS Capable
- Common Air Interface: DMR
- Mode of Operations: Analog / Digital
- No. Of Channels: At least 1000
- Power Supply: At least 7.5 V (Nominal)
- Operating Temperature: can withstand temperature of -30°~ +60° C or better
- Bluetooth version: 4.0
- Bluetooth Range: Class 2, 10m
- Constellation Support: GPS
- GPS Horizontal Accuracy: <5m

- Analogue Sensitivity: 0.16 uV Typical
- Digital Sensitivity: 0.14 uV typical
- Must support the following features: Private and Group Call, Emergency call
- Wifi Capable for firmware upgrade
- IMPRES Audio
- Includes the following accessories: antenna, belt clip, and desktop rapid charger
- Project Requirement: 1000 units (pcs)

1.6 Push-to-talk Over Cellular (POC) Radio with Dispatch

- 2G/3G/4G and Wi-Fi
- Built-in Bluetooth, GPS and NFC modules
- Positioning: GPS, AGPS, and GLONASS
- Automatic Network Selection without Sim Card
- Three Programmable Keys
- Stun, Kill, Revive, Lone Worker, Emergency Alarm, Log, Authentication and Encryption.
- Battery: 3.8V 3000mAh
- Waterproofing: IP54
- POC Terminal License and Network Connectivity for 5 years
- Dispatch License for 5 years for every five POC radios – 20 Accounts
- Project Requirement: POC Radio 100 units (pcs)

1.7 Command Center System Software

- **Server Management Console/Dispatch Console**
 - Processor – Intel Xeon Silver 4210 2.2,
 - RAM: at least 4 x 16GB RDIMM, 2933MT/s, Dual rank
 - HDD: at least 600 GB 10K SAS 12Gbps 512n 2.5inHot-plug Hard Drive
 - Licensed Windows 10 Pro OS
 - Includes standard keyboard and mouse, Gigabit Ethernet Card
 - Includes at least 650VA UPS
 - Includes at least 21.5” LED Monitor
 - Includes desktop radio with microphone
- **Computer Unit (12 units)**
 - Branded CPU
 - Intel Core i7 (7th generation or higher)
 - 8GB Memory
 - 1TB 7200 rpm SATA
 - 4 GB GDDR5 Dedicated
 - Includes standard keyboard and mouse
 - Includes at least 650VA UPS
 - Includes at least 23.8 inch Dual Monitor

- **System Software (Command and Response and Information System)**
 - Group Call
 - Multi-Group Call
 - Site All Call (Voice)
 - Private Call
 - Remote Monitor
 - Late Entry
 - Emergency Features such as emergency call alert and emergency voice call
 - Radio Management such as repeater diagnostics, read enable/disable status, read analog/digital status, read transmit power status, read available channels
 - Repeater alarm reporting
 - Repeater control
 - IP remote repeater programming
 - GPS Mapping
 - Includes all necessary software licenses for server management and dispatch console (e.g. system server license, system controller license, site license, voice talkpath license, etc.).
 - Must be a full-featured dispatch console that is scalable and supports other apps such as Automatic Vehicle Location (AVL) and Automatic People Location (APL).

2. Deployable Communication Interoperability System

2.1. Communication Interoperability Unit (18)

- Can be operated in any or combination of the following Knobs, Switches, Buttons.
- Each port must have Automatic Input Level Gain Control
- Shall have audio buffers to handle channel access delay of trunk systems.
- Shall be rapidly deployable
- The interconnection must be plug and play and shall support all radio device with audio interface in all ports without need for reprogramming and configuration of the gateway.
- HF radio interface shall be capable of blocking noise.
- Five (5) radio ports for different types and models of radios and one (1) port for telephone devices (Cellular phone and Landline Phone)
- The Input DC can support: 7 - 20 VDC
- Number of Talk Group: Two (2)
- Encased in a Rigid Waterproof Case
- Radio interface must be compatible to existing interoperability gateways of NTC.
- Interconnection Capability and cable connectivity requirement for available/existing radio equipment using CM 200, Maxtrac,

CDM-1250, GM 300, GM 350, GM 600, PM 400, CM 300, GTX 800 Mobile, XPR 6300/6350/6500/6550, SRX2200, APX 6000/7000 Multi-Band Portable radio interface cable, TK190, 280/290, 380/390 480/481, 2140/3140, 2180/3180, 5210, 5400, NX200, NX300, A110, F320, F402, F410, F420, F601, F610, F1010, F1020, 1721/272, F121/221, F1821, F1821, F5061, F6061, IC-7000 and PD78x, etc.

2.1.2. Accessories

- Handset PTT per unit
- Carrying Case
- One (1) AC/DC power adapter
- One (1) DC cable with alligator clips and vehicle cigarette lighter plug
- Project Requirement: 18 lots

3. Unified Dispatch and Multi-Protocol Interoperability Platform

3.1. Multi-Protocol Interoperability Software

- 3.1.1. Description** - Translates both open and proprietary protocols from different standards and manufacturers to a single multicast domain compatible with the system and allowing communication among consoles, endpoints, and other instances over a LAN or WAN. This will enable different agencies using different technologies interoperate.

This specification defines minimum requirements for the equipment and operational requirements for a multi-position Voice over Internet Protocol (VoIP) based dispatch console system supporting both radio and telephony resources

- 3.1.2. System Capacity** - The preferred system should be configured for 5 Consoles (1 headset & 2 speakers with each console) interfaced with 8 endpoints and should be capable of expanding to 200 Console positions and 2000 endpoints (base stations, talk groups, telephone endpoints, etc.).

3.1.3. System Architecture and Equipment

- The VoIP dispatch console system shall be divided into three major components: Console Positions, System Gateways, and Endpoints, interconnected with industry-standard Ethernet-based IP infrastructure. No loss of system functionality shall be suffered due to geographic separation of components. A hybrid TDM-IP system requiring proprietary back-room equipment is not acceptable. All system elements shall be fully configurable via a password-protected administrator software application over a network connection, whether located on the local network or over a VPN. The system shall support a centralized configuration database configured with dedicated administrator software and shall allow the administrator software to be run from multiple locations on the network. The

administrator software shall allow the system elements to be divided into groups to assist in the management of large, country-wide deployments. The database and associated software shall employ a method to prevent different administrators from editing the same database at the same time, while optionally allowing concurrent editing of different databases. It shall be possible to assign each individual administrator rights, or privileges, to access and edit each portion of the system database. The System Gateways and other backroom elements shall be capable of being deployed in a virtual environment.

- The proposed system shall be capable of deploying configuration changes to the Console Positions over the network and take effect immediately without restarting system elements. Solutions that require each system element to be separately administered are not acceptable due to maintainability issues.
- Endpoints are a combination of vendor and third-party radio and telephone resources that are accessed by the console positions. The proposed system architecture shall be flexible and open to support endpoint technologies from multiple vendors. Preference will be given to a proposed design that uses a software-based approach to endpoint interface and management. Additionally, any licensing required by system component shall be available via software licensing in lieu of hardware-based license dongles.

3.1.4. Console Positions

- Each console position (“console”) shall physically consist of a Windows PC, audio peripherals, and a touch monitor. A keyboard or mouse shall be optionally required to operate the console.
- The monitor shall display a graphical representation of endpoints, menus, controls, and system resource icons. Control of the user interface shall be via touchscreen or any Windows compatible pointing device (mouse, trackball, etc.). When equipped, the right mouse button on a pointing device shall activate PTT.
- A dedicated software IP media processor shall be provided to perform audio processing, management, and presentation. A PC-based console utilizing an internal sound card for media processing is not an acceptable solution due to limited number of channels, inconsistent audio performance, and long-term maintainability issues.
- The IP media processor shall provide vocoding function, digital audio mixing function, and an interface to the Console GUI software running on a PC. The software-based IP media processor shall utilize USB connections for its peripherals. The media processor shall be capable of receiving and transmitting all audio via Ethernet-based

Internet Protocol packets and shall be capable of supporting multiple compression algorithms and codecs.

- Console software shall operate under Windows 8.1 Pro 64-bit or Windows 10 64-bit operating systems. The console position equipment shall connect to the system gateway via 100BASE-T Ethernet to access endpoints or other consoles. T1, E1, or other non-Ethernet based connectivity is not acceptable.
- The console graphical user interface shall be configured by administrator software to include system control buttons, audio level controls, and endpoint resources. All aspects of the console presentation and operation parameters shall be configured from the administrator software and downloaded to the console position. Both 4:5 and 16:9 (wide-screen) format displays shall be supported.
- Project Requirement: 1 Lot

3.1.5. LED Monitor (24 units) - Monitors shall be identical and shall consist of a 19" or larger LED display with a minimum resolution of 1440 x 900 @ 60-75 Hz. The touch controller shall utilize a USB connection to the console position PC.

3.1.6. Software IP Media Processor - The software IP media processor shall provide the operator audio, all peripheral interfacing for footswitch, headsets, desk microphone, and speaker audio. The IP media processor must be configurable to support interfaces for a select and up to 10 unselect speakers, up to four microphone devices (headset or desk microphones), and a footswitch. The IP media processor shall be capable of processing and presenting 250 channels of audio simultaneously.

The IP media processor shall be capable of automatically transcoding between different audio CODECs. At a minimum, G.711, G.729a, and G.726 CODECs shall be provided with the system. The media processor shall perform audio mixing for the console patching function. The design shall support a minimum of five (5) simultaneous patches per console. The patch function shall not cause a busy state in the console and shall allow the console operator to perform other duties while the patches are active.

Audio peripherals shall be connected to the IP media processor using industry standard USB connectors. Additionally, USB connected relays shall be available to provide workstation state indications to external display devices.

3.1.7. Software Console Peripherals

- **Speakers** - The console speakers shall be individual, stackable units with a single USB cable providing audio and power from the PC. Each speaker shall have an individual volume control. The speaker shall be configurable so the volume control cannot fully mute the

speaker output. Each speaker shall feature a multi-colored LED to indicate power and receive audio activity. The console shall support the use of COTS-type USB computer speakers, or alternately analog computer speakers connected to the PC's audio output.

- **Headset Jack Box** - The headset jack box shall be designed to mount under a desktop surface and accommodate headsets and handset devices with an industry standard tip/ring/sleeve plug. The jack box shall be equipped with a USB port for connection to the PC. The jack box shall provide an industry standard PJ 327 dual tip/ring/sleeve jack supporting 4W and 6W (PTT) operation and a front panel earpiece volume control. The jack box shall provide an input for a hanger/hookswitch for use with handsets. A port for connection to a NENA compliant or a non-NENA compliant telephone deskset shall be available to enable headset sharing for the console.

Alternately, the console shall support a COTS-type USB headset. A USB headset with a PTT switch that activates the general PTT function on the selected endpoint shall be optionally available

- **PTT Footswitch** - A rugged PTT footswitch with a non-skid weighted base shall be provided. The footswitch shall connect to the console position's PC via USB. When activated, the footswitch shall initiate a general PTT function on the selected endpoint.

3.1.8. System Gateway

- The system shall be provided with redundant PC-based gateways which interface to all system endpoints and consoles using IP. The gateways must be based on non-proprietary PC hardware and support automatic fail-over.
- The gateway(s) shall communicate and arbitrate control to all shared system resources, including radios (base stations, talk groups, control stations, etc.), telephone extensions, and remote monitoring and control devices (Aux I/O) without incurring performance penalties.
- The gateway will perform all conversion functions to open and proprietary radio and telephone protocols that may be required. The gateway shall employ a modular software-based architecture to support new types of communication protocols and resources without requiring proprietary hardware. All gateway features shall be software based; no special or proprietary hardware shall be required. The gateway shall contain all the software necessary to interface the external endpoint devices directly through the enterprise network.
- The gateway shall have provision to communicate with all endpoints

via unicast protocols to reduce the need for multicast traffic to traverse the wide area network to minimize network infrastructure cost and complexity. Console positions shall be capable of communicating to the gateway via multicast for bandwidth optimization on the local area network.

- Gateway administration shall be protected with user authentication. All updates and modifications shall take effect immediately after editing. Rebooting the gateway and/or console positions to enable a configuration change is unacceptable.

3.1.9. Gateway Redundancy - The gateway shall be deployed in a redundant configuration with automatic failover capability to ensure continuous uptime. Failover capability must provide a highly resilient system design that can continue to operate in numerous disaster scenarios. The redundancy feature shall operate over a WAN to allow the gateways to be deployed in separate geographic locations. It shall be possible to configure the system so active telephone calls are not dropped when gateway failover occurs.

3.1.10. Gateway Interfaces

- The gateway should be licensed for 40 endpoints to ensure maximum future flexibility and to allow best of breed choice of radios and telephone technology, the gateway shall be capable of supporting the following endpoint technologies:
 - **Telephony Endpoints** - The bidder shall propose non-proprietary SIP-based telephony gateways for administrative phone circuits if a SIP PBX is unavailable. The gateways shall support FXO and FXS (POTS) lines, T1 circuits, and 4W E&M circuits. The console shall support enhanced telephony features such as Voice Mail display and retrieval and Call Forward.
 - **Conventional Radio Endpoints** - The bidder shall propose solid-state embedded RoIP (Radio over Internet Protocol) controllers that interface non-VoIP radio equipment to an IP network. The controller shall be certified to work over a range of temperatures from -20 to +60 degrees C to enable deployment to areas that do not provide controlled environments. Controllers must be remotely administered and protected via user authentication. The ability to remotely download firmware updates and upload/download configuration files shall be supported.
 - The radio controller shall perform analog-to-digital conversion of the audio as well as remote monitoring and control. The device shall work in conjunction with the gateway to provide interoperability with radios from different manufacturers. PC-based radio controllers are not acceptable due to security and maintenance liabilities. Controllers using potentiometers for

audio level control are not acceptable.

- **Native IP Endpoints** - Native IP-based endpoints shall have provision to support via direct IP interface from the system gateway to the endpoint as and when required to upgrade, such as:
 - P25 Conventional radios via the P25 DFSI standard (TIA-102.BAHA); exclusive use of proprietary protocols will not be acceptable.
 - P25 Trunked Radio systems via the P25 CSSI standard (TIA-102.BACA); exclusive use of proprietary protocols will not be acceptable.
 - Standard and Proprietary Trunked radios and Conventional radios, single or multi-site, via direct IP connectivity to the repeaters of various technologies; control station interfaces are not acceptable. The proposed system must support the group call, inbound emergency group call, and PTT ID with alias features at a minimum.
 - Session Initiation Protocol (SIP) telephony directly to Cisco, Avaya, and other third-party IP-PBXs.
 - Tier II DMR radios via the Application Interface Specification (AIS) standard, control station interfaces are not acceptable
 - Tier III DMR radios via the Application Interface Specification (AIS) standard; control station interfaces are not acceptable.
 - ED-137 radios via direct IP wireline connection; control station interfaces are not acceptable.
 - PTT over Cellular from various providers via direct wireline connection; control station interfaces are not acceptable.
 - Native IP-based endpoints shall support the ability to send answerback tones and keying tones, and shall support inbound DTMF decoding. IP-based endpoints using the IMBE vocoder shall support sending alert tones via commands to the vocoder, in lieu of sending them in an analog format, in order to preserve the tone's fidelity when heard by field

personnel.

- RoIP/Serial Protocol Endpoints (must be available in present ROIP configuration wherever applicable)

Endpoints for several control stations (such as M7100, TM8255, TM9155, TM9300, TM9455, TK-5710, NX-5000, NX700, URC-200, XPR-5000, APX 1500/4500/6500/7500 P25) shall be supported via serial tunneling over IP from the RoIP endpoint to the system gateway.

- Auxiliary I/O Endpoints - The bidder shall propose solid-state Form C relays and isolated inputs to accomplish integrated remote control and detecting of external devices. A minimum of 24 each shall be proposed. It shall be possible to easily expand the number of I/O endpoints with the addition of expansion cards.

3.1.11. System Capabilities

- **User Interface**

- Each console position shall be capable of enabling user authentication to provide security as well as free seating of console operators. The free seating feature shall allow console operators to log in at any console and receive their unique configuration. Each console position shall be configurable to display and/or access multiple unique user screens. These screens shall present the console operator with the endpoints, controls, and informational resources in the form of "electronic push buttons" labeled with names and status colors. Each screen shall be administrator configurable to display any combination of endpoints and/or controls, screen change shortcut pads, pop-up windows, call queues, activity history or a variety of other functions at any location on a screen. Button size, colors, text, and fonts shall be programmable on a per object basis. Background highlights, images and selectable colors shall be available to accent application workspace groupings. Optionally, the system shall be configurable to allow operators to choose from a pre-defined list of their console configurations. As an example, these configurations may be used for different geographic areas (north, south, etc.) to allow an operator to choose which region they will be dispatching in on a particular day.

- Screens shall be comprised of a combination of endpoint, control, and informational resource graphics. Endpoint graphic shall display the authorized endpoints available to the operator at a particular console. Each endpoint graphic shall support a minimum of two lines of text to easily identify the endpoint. Endpoint status shall be shown in a separate endpoint text field. Status words shall be select, unselect 1-10, patch 1-5, monitor, hold, busy and mute. Call shall display flashing. The endpoint pad color shall be used to identify endpoint status condition so that overall console status can be determined at a glance. There shall be different endpoint status colors to identify the following conditions: Select, Unselect 1-10, Simul-Select, Patch 1-5, Monitor, Hold, and Mute.
- Each endpoint shall have an individual volume setting for the Select state and the Unselect state. This volume level shall be retained when toggling the endpoint between different states and have an administrator configurable minimum level to prevent muting entirely. The volume level shall only affect a single console position.
- A location configurable endpoint receive audio indicator window shall be present to aid in visual identification of active audio on a specific endpoint. The endpoint activity window background, normally white, shall be yellow when Receive Audio is present and shall be red during active TRANSMIT. The proposed system shall allow configurable icons to be added to endpoint pads enabling visual call indication to associate the call with the corresponding endpoint.
- The system shall support the display of multiple programmable 12/24-hour clocks, a master PTT status bar, and VU meter.
- It shall be possible to synchronize the time-of-day clock to an external time source using industry standard Network Time Protocol method.

- **Integrated Telephony**

- The proposed system shall provide integrated telephone capabilities at the console position.
- Support for Session Initiation Protocol (SIP) for connection to VoIP telephony systems and gateways is required for administrative telephony functions. Both SIP Extensions and SIP Trunks shall be supported. Console positions shall be capable of displaying resource icons on the user interface that map to telephony extensions. Console positions shall treat telephone extensions similarly to radios. A console may have multiple

endpoint (“phone endpoint”) appearances on its screen and allow multiple phone calls to be active simultaneously. Calls may be active, put on hold and patched to other phone endpoints and/or radio endpoints. Calls shall also be allowed to be monitored in an Unselect speaker without disconnecting the call. Extension status shall be visible to all consoles. Consoles shall not be restricted to one “phone patch.”

- The gateway shall register each endpoint (extension) directly with its corresponding SIP proxy server and provide connectivity to any or all consoles. Each endpoint may reside on different IP-telephony devices and the gateway shall support multiple proxy servers.
- The console position shall include a contact database with a minimum capacity of 10,000 entries. Contacts may be members of groups, which shall be available to offer quick access to related contacts. Multiple phone number entries shall be supported on a per contact basis. Alpha-numeric search strings shall be supported enabling rapid identification within the contact database. Inbound Caller ID shall be capable of referencing the contact database when displaying the caller’s name and number to obtain the latest information.
- Telephony functions shall include recall dial tone, call initiate, caller ID display (name and number) in the call queue, transmit caller ID, message on hold, missed call callback, and patch status. Definable telephone hunt groups shall be supported on a per-system, per-console and per-contact basis.
- The system shall support the ability for multiple consoles to select the same telephone endpoint. Up to ten consoles shall be able to join the conversation. Each telephone endpoint shall be configurable to allow/disallow the barge-in capability. If configured, consoles shall have the capability to activate a privacy feature to prevent other console from joining the call. Consoles shall have the option to place designated telephone endpoints in a Do Not Disturb mode to silence and re-route inbound calls. Additionally, each telephone endpoint shall be configurable for Push to Speak capability.
- The Message on Hold function shall use a WAV file to play a recorded message to telephone endpoints put on hold. There shall be the ability to change the WAV file to one supplied by the console system administrator. Each telephone endpoint shall be set independently for its message WAV file.
- Additionally, SIP phone endpoints shall be configurable to provide */# keying to support radio operations via telephone connections

- **Conventional Radio Integration** - Conventional radios shall be interfaced by a Radio Controller which shall communicate to the gateway via standard LAN/WAN equipment and be equipped for dual port operation. Each port's interface shall be capable of controlling a "direct connected" local radio or a tone remote controlled radio (locally or over a telephony circuit, 2W or 4W). In addition, each radio interface shall also be equipped with a serial data port to support open and proprietary radio-specific protocols.

When interfacing a radio, the Radio Controller shall perform the following functions under software control:

- Interface analog audio to/from the radio
 - Convert audio to/from RoIP supporting a CODEC to allow optimization of bandwidth use
 - Provision to support an audio delay to avoid clipping of transmissions
 - Decode DTMF digits
 - Generate tones for transmission by the radio, either as an answerback event or upon a command from the dispatcher
 - Generate single or dual function tones, and for dual function tones generate them either simultaneously or sequentially
 - Detect a carrier operated relay (COR) signal from the radio
 - Provide push-to-talk (PTT) control to the transmitter
 - Select a frequency of the transmitter, if the station supports this function
 - Provide LED indications of TX and RX status as well as network status
 - Support serial connectivity for control/status of radio technologies requiring such an interface
 - Should have provision to provide sharable remote Aux Input connections
 - Should have provision to provide sharable remote Relay Contact closures
- **Advanced Radio Integration**
 - The system shall be capable of integrating radio functionality necessary to interface digital radio systems. As these systems require an expanded feature set and respective user interface control, the proposed product must support at a minimum: group and individual calls, emergency display and clear, call alerting, call progress tones, radio ID display (when available), and the ability to change talk groups. If available, subscriber unit stun/revive and audio encryption is desirable
 - The following advanced radio endpoints shall be capable of being patched with both conventional radio and telephone endpoints with no additional impact on the system or extra operator functions required:

- The system shall interface via a RoIP Radio Controller to iDEN network radios. Two modes of operation shall be provided: single call and group call. iDEN call alerts shall also be supported. The user interface control shall enable an operator to easily initiate group and individual calls, visually identify on the circuit pad the current group selected and display radio ID for inbound calls from the field.
- The system shall support integration to P25 radio interfaces utilizing the APCO approved DFSI (TIA-102.BAHA) and CSSI (TIA-102.BACA) standards. Exclusive use of proprietary protocols will not be acceptable.
- **P25 Control Station Support** - The system shall support integration to P25 radio interfaces utilizing an intelligent control station method that provides advanced capability. Manufacturer specific protocols are acceptable for this method.
- **P25 CSSI Support** - The system shall support integration to P25 trunked Phase 1 and Phase 2 radio systems using the CSSI wire-line interface method for advanced capability. To minimize operator confusion, the proposed console shall intelligently route private calls to and from units from a single GUI control regardless of which RFSS the units are homed. Any associated incremental costs for P25 CSSI connectivity shall be included in the proposed solution for both the console and radio subsystem elements.
- At a minimum, the console's P25 CSSI capabilities shall include:
 - Group Calls (SOR 2.1.2.2, 2.6.6.2)
 - System Wide Call (SOR 2.1.2.31)
 - Announcement Group Call (SOR 2.1.2.24)
 - Broadcast Call (SOR 2.1.2.22)
 - Unit-to-Unit Calls (SOR 2.1.2.4, 2.6.6.5)
 - Emergency Calls (SOR 2.1.2.25, 2.6.6.8)
 - Call Priority (SOR 3.3.5.5-9)
 - Dispatcher Interrupt (SOR 3.3.5.1/5)
 - Encryption (SOR 2.1.2.10)
 - Unit ID Display (SOR 2.1.2.20, 2.6.6.1)
 - Talk Group Selection/Display (SOR 2.6.6.3/4)

- Encryption Mode Display (SOR 2.6.6.9)
 - Outgoing Call Alert (SOR 2.6.6.6)
 - Incoming Emergency Alert (SOR 2.1.2.18, 2.6.6.7)
 - Outgoing Radio Check (SOR 2.1.2.26)
 - Outgoing Radio Monitor (SOR 3.3.5.12)
 - Outgoing Radio Inhibit (SOR 3.3.5.10)
- The system shall have provision to integrate with MPT radio systems on a wire-endpoint basis using the MAP27 protocol. The proposed system must scale to support 100+ conventional talk groups and must support the minimum advanced trunked radio feature set.
 - Tier II DMR Support - The system shall have provision to support Tier II DMR conventional radio systems using the Application Interface Specification (AIS) standard. The system shall interface via direct “wire-endpoint” IP connectivity into the DMR infrastructure. Third party interfaces for conversion shall not be acceptable. The proposed system must support group calls, inbound emergency calls and frequency selection as a minimum.
 - Tier III DMR Support - The system shall have provision to support Tier III DMR trunked radio systems using the Application Interface Specification (AIS) standard. The system shall interface via direct “wire-endpoint” IP connectivity into the DMR infrastructure. Third party interfaces for conversion shall not be acceptable. The proposed system must scale to support 100+ talkgroup endpoints and must support the minimum advanced trunked radio feature set.
 - ED-137 Support - The system shall have provision to support ED-137 radios systems. The system shall interface via direct IP connectivity into the ED137 radios. Third party interfaces for conversion shall not be acceptable. The proposed system shall allow connection to both transmit/receive base stations as well as receiver-only base stations.
- **Dial-Up Radio Integration** - Conventional radios shall be interfaced by a Radio Controller which shall communicate to the gateway via standard LAN/WAN equipment
 - **Default Transmit Group** - The system shall allow a Default Transmit Group to be defined on a per-console basis. This feature

shall allow a console operator to activate PTT to transmit on a pre-defined endpoint or group of endpoints without selecting those endpoints, or using Instant Transmit.

- **Redundant Endpoints** - The system shall allow redundant Radio Controllers to be configured for selected endpoints. The system shall detect the availability these endpoints, and automatically switch to the backup endpoint in case of a loss. The system shall also allow a console user to force a switchover to the redundant equipment.
- **CAD Integration** - The provided solution shall offer an API at the console position level allowing third-party applications to control the console resources. The API shall support simultaneous use of both the standard console GUI and the third-party CAD application.
- **Centralized Administration**
 - The system shall provide a single administrator software application that provides for remote configuration and diagnostics for consoles, gateways, and endpoints. The administrator software shall support user authentication to prevent unauthorized access. The administrator software shall support live “push” configuration changes from a centralized database to any or all console positions without requiring users to log off. Systems that require individual, local console position configuration shall not be acceptable.
 - Every screen element, from graphical backgrounds to pad sizes, colors, and fonts, must be configurable by the administrator software. It shall be easy to design, maintain, and deploy new console screens using the software.
 - The administrator software shall provide a user login capability for security. User login authentication shall be maintained with the administrator software, or alternately users can be authenticated using Windows Active Directory. Each configured login shall provide varying levels of access for each component of the maintenance tool. The access levels shall be No Access, Read-only Access, or Full Access.
 - As an option, the system shall offer a feature that allows multiple, individual console system deployment sites to be administered from the same centralized software. Administrative access to the different sites shall be set on a per-user basis.
 - As an option, the administration software shall offer a tool that allows editing of multiple endpoints at the same time to reduce administrative effort in a large system deployment.

- **Logging/Archival Recorder Interfaces**

- The proposed system shall support recording of console and/or endpoints. IP recorders shall be supported. Consoles shall be configurable to output the following audio sources:
 - a) Select and Microphone audio, mixed together
 - b) Unselect audio
 - c) Telephony audio
 - d) Radio audio
- These audio sources shall be available in either traditional two-wire, 600-ohm analog output on the rear of the console or in standard streaming Real Time Protocol (RTP) format. For IP recording, the console shall transcode the IP audio into a user-selectable CODEC format. A minimum of three (3) CODECs shall be available to optimize bandwidth.
- The proposed Radio Controller shall have an option to present an analog recording output on the second radio port. Alternatively, radio (and any endpoint) audio shall be presented to up to four (4) IP audio recorders by the System Gateway(s) using “Active Packet Forwarding.” The Gateway shall be configurable to re-transmit both sides of the audio conversation to a recorder by allocating specific ports by which the recorder will capture all audio packets for the specified audio endpoints. Any paging tones sent by the Radio Controller shall be present in both the analog and IP recording outputs.
- Both the console and endpoint logging recorder outputs shall include descriptive metadata. The metadata shall include information about the call such as Console ID, User Login Name, Endpoint Name and Endpoint Type. Depending on the endpoint type other data should present such as Radio Unit ID, Telephone Number Dialed, ANI/ALI, etc. The console vendor shall describe the metadata available and identify recorder vendors that are certified for using the metadata.

- **Diagnostics**

- The proposed system shall include easy to use diagnostics for each component to assist in troubleshooting problems. Each of these components must be accessible via a standard Web browser, or through the administrator software. Detailed log files shall be stored on the console position PCs to ensure the ability to easily pinpoint issues.
- A diagnostic logger shall be available to centrally correlate the alarm and/or anomaly events within the proposed system. The diagnostic logger shall denote the date/time of an event, the source component of the alarm or event, the alarm type, such as

“Alarm” or “Event,” display the status of the event and include the severity of each such as Major or Minor for Alarms, and Low or High for system event anomalies. New arriving alarms shall be indicated on selected console positions with visual and audible alerts.

- The diagnostics logger shall contain a “system view” that provides a snapshot of the system’s networked components. Pertinent information shall be provided for each component, allowing a quick way to check system health.
- **SNMP Alarms** - The proposed system shall generate SNMP traps to enable monitoring by 3rd party SNMP management software. The system shall allow up to four SNMP manager destinations to be configured.
- **Network Configuration and VoIP Quality of Service (QoS)**
 - VoIP consoles shall be capable of communication across an enterprise WAN or private allocated network dedicated to the console system. IP network connectivity shall be 100Mb/s to interconnect all of the elements, from the consoles, to the gateways, to the VoIP endpoints. LAN segments shall support multicast.
 - The system shall support the QoS technique Differentiated Services Code Point (DSCP). Packets are marked using the Type of Service (ToS) field in the packet header. The network infrastructure shall be compatible and configured to recognize DSCP marked packets and act on them accordingly to ensure the proper QoS.
 - Each console position will support an Ethernet connections for the PC.
 - The gateways shall communicate to all endpoints via unicast. For efficiency on the LAN, the gateway shall forward the unicast packets from the endpoint to the console positions via multicast.
 - Latency between network-based devices shall be controlled through adjustable buffers. The jitter buffer settings must be user-tunable on a per-device basis; both the endpoint and operator software must support this capability. Proposed solutions must support variable packet sizes down to 20ms, allowing the buffer to be variably set to a maximum of at least 60ms.
- **WAN Deployment** - The system shall have the capability to be deployed across Wide Area Networks (WANs) that are incapable of being configured to carry multicast traffic. Network traffic shall be

optimized to enable remote console/endpoint deployment on low-bandwidth network segments. Bidders shall describe the methods used to enable this capability.

- **Software Deployment** - The system's software shall be capable of silent push deployment to allow administrators to install and update software from a central location.
- **Provision for Auxiliary Input/output Control (for future upgrade)** - System shall be capable of IP-based remote controllable auxiliary inputs and outputs. The system shall scale to support over 1,000 IP accessible I/O connections in multiple locations across an Enterprise network. Outputs shall be "Form C," configurable as momentary or latched relays. Inputs shall be optically isolated and trigger on detection of voltage, ground, or a contact closure. The inputs and outputs shall be 19 inch rack mountable devices that are locally powered.
- **Encryption** - The proposed console system shall be capable of supporting industry standard encryption algorithms, including AES and DES when required by the deployed radio infrastructure. P25 Key Fill Devices (KFD) shall be supported to allow loading of encryption key sets from the KFD. An option shall be available to interface a Key Management Facility (KMF) for automated loading of encryption keys sets from the KMF. Selection of the appropriate key for each endpoint shall be permitted from each console position. Individual radio endpoints and talkgroups shall be configurable to always have encryption enabled. There shall be an option to allow endpoints using encryption to automatically change the encryption key being used for the next outbound transmission to match the inbound encrypted audio's key.
- **Instant Recall Recording (IRR)**
 - Each console position shall be equipped with an integrated recall recorder capable of recording audio for all active (unselect and select states) endpoints at a given operator's console position. Selected endpoint recordings shall contain the dispatcher's outbound transmit audio as well. The IRR display shall provide date/time stamp for each call, endpoint identification and ANI, call status (emergency or normal) and state of endpoint when call received (select, unselect 1-10).
 - To maximize screen efficiency and real estate, the Instant Recall Recorder operator controls shall be incorporated into the call activity history display. To conserve console position space, no additional hardware to support IRR is permitted. The operator shall have, at a minimum, the ability to select a call from the history window, fast forward and reverse through a call, pause a call, and advance to the next or previous instance of activity on

an endpoint. IRR playback shall pause automatically when PTT is initiated at the console.

- The IRR shall be capable of recording and replaying audio on a per endpoint basis for maximum intelligibility. Designs that mix audio from multiple endpoints in a single select or unselect channel for recording and replaying are not acceptable. Recording retention time shall be configurable for up to 24 hours.
- **Call Notifications** - The system shall provide call notifications to the operator and initiate special handling of emergency calls. The call indication in the endpoint pad shall be configurable for flash rate, color, and text. The system shall also be capable of producing an audible alert WAV file alerting the user to a pending call. The endpoints on the console position shall be configured with default call indications by the administrator which may be “escalated” by the dispatcher to allow notifications on endpoints not normally heard. Additionally, inbound telephone calls shall be configurable to automatically answer, placing the inbound call on hold, while continuing to indicate the call until it is accepted at the console. Endpoints and call queues shall be configurable to display inbound call timers that indicate how long a call has been ringing at the console. In the case where the call is on a screen not currently being displayed, an option shall allow the console display to automatically change to the screen where the call is pending.
- **Intercom**
 - Intercom to and from another operating position shall be via a VoIP connection and initiated by touching/clicking a screen control corresponding to the called party. The called party’s console will flash the status word "CALL." When the called party desires to respond, the receiving operator shall touch/click the screen to answer the intercom call, and the audio shall be routed to the select speaker. The microphone path shall be configurable as full duplex, or requiring PTT. There shall be a one-way “announcement” mode that allows a console to broadcast a message to one, a group of, or all consoles.
 - The intercom shall provide a way to place a call to an operator position with an emergency level notification. The emergency intercom call shall be configurable to be placed into the call queue and play an emergency alert on the called console. The ability to place emergency intercom calls shall be configurable on a per-console basis.
 - The intercom shall provide a way to alert a called operator position that didn’t answer the intercom call. The indication shall be visual and optionally audible, show which operator position

placed the missed call, and remain until the missed call is returned.

- **Console Monitoring** - The system shall provide a Console Monitor capability for designated supervisor console positions. When configured, this function shall allow the supervisor's console to activate the function and select one or more other consoles to monitor. While activated, the monitoring console shall hear all conversations in the monitored console's selected endpoints. Multiple supervisor consoles shall be able to monitor a single console.
- **Tone and Voice Paging** - The system shall provide paging controls integrated into each console position supporting all formats in the table below. Stacking and steering of pages as well as one-touch paging stacks shall be supported. Paging tones shall be produced in the RoIP Radio controller to ensure fidelity when low bit-rate CODECs are used.

When stacks of pages are sent, the system shall have a configuration to allow alert tones to be played either at the end of the stack, or after every page in the stack. When pages in a stack are going to more than one endpoint, the system shall allow the sending of those pages to be in parallel, reducing the total paging time.

Paging Formats	
Format	Call Sequence
2 + 2, Quick Call 1 (Series Y)	Individual Call Group Call
1 + 1 std.format Quick Call 2 (General) Quick Call 2 (Modified) Quick Call 2 (Extended)	Individual Call Tone & Voice Group Call Tone Only Battery Save
Reach Two Tone	Reach Slow Reach Fast Reach Group Call Two Tone
Reach Single Tone	Reach Single Tone Battery Save
Avcall 2 + 2 (SELCAL)	Unit Call
General Electric	GE Type 99
Plectron Single Tone Duotone Fast Duotone Slow	Individual Call
DTMF	Individual Call Group Call
5/6 Tone	Unit Call
Knox	Tone Only
Customized	Individual Call

	Group Call
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- **Time Synchronization** - The system shall synchronize its internal time of day clock with an external time source using the Network Time Protocol (NTP) servers.
- **ANI and Caller ID**
 - The system shall be capable of interfacing with external ANI signaling encoders/decoders ANI information shall appear on the display in the radio call queue, activity history and in the associated radio circuit pad. The call queue and/or activity history displays shall provide an alias for the calling mobile(s) if so designated. The mobile ID shall be displayed in the associated radio circuit pad. In the event of an emergency call, both the mobile ID and the alias shall be displayed in red.
 - The system shall support the CLASS features Calling Number Delivery and Calling Name Delivery. When only Calling Number Delivery is available, the system shall search its database for a matching phone number and the name from the database shall be displayed in the call queue and in the selected endpoint status area.
- **Provision for External Voter Comparators (for future upgrades)** - The system shall be capable of interfacing to a third-party Voting Comparator system through the use of Auxiliary I/O. The interface shall allow for control as follows:
 - Force vote a receiver
 - Disable a receiver
 - Indicate which receiver is voted
 - Indicate a failed voter/endpoint/receiver
 - Indicate Receive status on a receiver

3.1.12. Console GUI Controls

- The following configurable controls and capabilities shall be available in the system. The owner, using a centralized administration tool, may incorporate any of these parameters into the console screen design according to their functional requirements. A single screen shall have the capacity to display any combination of endpoint or controls, at any location on a screen. The size, fonts, colors, and icons shall be owner configurable. Owner configurable background highlights shall be supported utilizing different colors to accent application workspace grouping
- Tabbed modules shall be definable allowing easy access to endpoints and controls when required. All tabbed backgrounds and the tabs themselves shall be administratively configurable for color,

text, font, and size and the addition of icons when required.

- Required pad and functions are listed below in alphabetical order.
 - Action Pads
 - Activity History
 - Alert Tones
 - All Mute
 - Analog/Digital Mode
 - Auto Contacts
 - Automatic Ring Down
 - Browser Control
 - Call Enable (Show Ring)
 - Call Transfer
 - Call Queue
 - Call Queue Display Area
 - Channel Marker
 - Console Timer
 - Contact Dialer
 - Contact Directory
 - Contact Directory Search
 - Do Not Disturb
 - Dial Display Area
 - Dial Screen (Shortcut)
 - Dynamic Group
 - Hook Flash
 - Recall (Redial Last Number)
 - CTCSS
 - Emergency Display Clear
 - Encryption Enable/Disable
 - Frequency Control
 - Forward Calls
 - Show Ring Assignments
 - Group Pads
 - Headset Monitor
 - Hold
 - Instant Recall Recording
 - Instant Transmit
 - Endpoint Pad
 - Mute
 - Next Call
 - Paging Dialer
 - Patch Up to 5
 - PTT (On-Screen)
 - PTT Indicator
 - Release
 - Repeat Enable/Disable
 - Resource Manager Tool
 - Ringer Disable
 - Simul Select
 - Supervisory Takeover

- System Clock
- Test Tone
- Voice Mail Indication
- Volume Control
- VU Meter

4. Remote Controlled Unmanned Aerial Vehicle - Monitoring System for Emergency Communications System

4.1. Disaster Response Unmanned Aerial Monitoring System (5)

4.1.1. UAV for Video Monitoring

- **AIRFRAME**
 - Max Diagonal Wheelbase : 1883 mm
 - Dimensions : 2509×2213×732 mm (Arms and propellers unfolded) 1795×1510×732 mm (Arms unfolded and propellers folded) 1100×570×732 mm (Arms and propellers folded)
- **FLIGHT PARAMETERS**
 - Operating Frequency : 2.4000 GHz-2.4835 GHz
 - GHz-5.850 GHz *
 - EIRP : 2.4 GHz
 - SRRC/ CE / MIC/ KCC: < 20 dBm
 - FCC / NCC: < 26 dBm
 - 5.8 GHz
 - SRRC/ NCC/ FCC: < 26 dBm
 - Total Weight (Excluding battery) : 18.5 kg
 - Standard Takeoff Weight : 41 kg
 - Max Takeoff Weight : 42 kg (At sea level)
 - Max Thrust-Weight Ratio : 2.05 (Takeoff weight of 39.5 kg)
 - Hovering Accuracy (With strong GNSS signal)
 - D-RTK enabled: Horizontal: ±10 cm, Vertical: ±10 cm
 - D-RTK disabled: Horizontal: ±0.6 m, Vertical: ±0.3 m (Radar module enabled: ±0.1 m)
 - RTK/ GNSS Operating Frequency : RTK: GPS L1/L2, GLONASS F1/F2, BeiDou B1/B2, Galileo E1/E5
 - GNSS: GPS L1, GLONASS F1, Galileo E1
 - Battery : DJI-approved battery pack (AB2-17500mAh-51.8V)
 - Max Power Consumption: 5600 W
 - Hovering Power Consumption 4600 W (Takeoff weight of 39.5 kg)
 - Hovering Time** 18 min (Takeoff weight of 24.5 kg with a 17500 mAh battery)
 - 10 min (Takeoff weight of 39.5 kg with a 17500 mAh battery)
 - Max Tilt Angle: 15°
 - Max Operating Speed : 7 m/s
 - Max Flying Speed 10 m/s (With strong GNSS signal)
 - Max Wind Resistance : 8 m/s
 - Max Service Ceiling Above Sea Level : 2000 m

- Recommended Operating Temperature : 0° to 40°C (32° to 104°F)
- Up to 128 GB Extra Storage

- **PROPULSION SYSTEM – MOTOR**

- Stator Size 100×15 mm KV; 75 rpm/V
- Max Thrust 13.5 kg/rotor
- Max Power 2400 W/rotor
- Weight 616 g

- **PROPULSION SYSTEM – FOLDABLE PROPELLERS (R3390)**

- Diameter × Pitch 33×9 in
- Weight (Single propeller) 90 g
- **PROPULSION SYSTEM – ESC**
- Max Working Current (Continuous) 40 A
 - Max Working Voltage 58.8 V (14S LiPo)

4.1.2. UAV Mounted With Portable Aerial Repeater

- **AIRFRAME**

- Max Diagonal Wheelbase : 1883 mm
- Dimensions : 2509×2213×732 mm (Arms and propellers unfolded) 1795×1510×732 mm (Arms unfolded and propellers folded) 1100×570×732 mm (Arms and propellers folded)

- **FLIGHT PARAMETERS**

- Operating Frequency : 2.4000 GHz-2.4835 GHz
- GHz-5.850 GHz *
- EIRP : 2.4 GHz
- SRRC/ CE / MIC/ KCC: < 20 dBm
- FCC / NCC: < 26 dBm
- 5.8 GHz
- SRRC/ NCC/ FCC: < 26 dBm
- Total Weight (Excluding battery) : 18.5 kg
- Standard Takeoff Weight : 41 kg
- Max Takeoff Weight : 42 kg (At sea level)
- Max Thrust-Weight Ratio : 2.05 (Takeoff weight of 39.5 kg)
- Hovering Accuracy (With strong GNSS signal)
- D-RTK enabled: Horizontal: ±10 cm, Vertical: ±10 cm
- D-RTK disabled: Horizontal: ±0.6 m, Vertical: ±0.3 m (Radar module enabled: ±0.1 m)
- RTK/ GNSS Operating Frequency : RTK: GPS L1/L2, GLONASS F1/F2, BeiDou B1/B2, Galileo E1/E5
- GNSS: GPS L1, GLONASS F1, Galileo E1
- Battery : DJI-approved battery pack (AB2-17500mAh-51.8V)
- Max Power Consumption: 5600 W
- Hovering Power Consumption 4600 W (Takeoff weight of 39.5 kg)
- Hovering Time**18 min (Takeoff weight of 24.5 kg with a

- 17500 mAh battery)
- 10 min (Takeoff weight of 39.5 kg with a 17500 mAh battery)
- Max Tilt Angle: 15°
- Max Operating Speed : 7 m/s
- Max Flying Speed 10 m/s (With strong GNSS signal)
- Max Wind Resistance : 8 m/s
- Max Service Ceiling Above Sea Level : 2000 m
- Recommended Operating Temperature : 0° to 40°C (32° to 104°F)
- Up to 128 GB of storage
- **PROPULSION SYSTEM – MOTOR**
 - Stator Size 100×15 mm KV 75 rpm/V
 - Max Thrust 13.5 kg/rotor
 - Max Power 2400 W/rotor
 - Weight 616 g
- **PROPULSION SYSTEM – FOLDABLE PROPELLERS (R3390)**
 - Diameter × Pitch 33×9 in
 - Weight (Single propeller) 90 g
 - **PROPULSION SYSTEM – ESC**
 - Max Working Current (Continuous) 40 A
 - Max Working Voltage 58.8 V (14S LiPo)
 -
- **AERIAL PORTABLE REPEATER**
 - Multi-Mode Communication
 - Ultra High Channel Capacity
 - Single Frequency capability
 - Voice Calls
 - Voice and Data encryption
 - Multi Analog Signalling
 - Roaming
 - Ultra High battery Capacity
 - GPS Capability
 - Transmit Power 20W
 - Frequency Stability 1.5 ppm
 - Frequency Range: 350 - 400
 - Channel Capacity 24

5. Command and Control Center

- 5.1. **C3 System Integration** - Integration, Design, Supply, Development and Establishment of the Command and Control Center.
- 5.2. **C3 Architectural Design, Engineering, Construction and MEP** - Submission of Architectural and Structural Plans and Design in Autocad and 3D Max.
- 5.3. **C3 Joineries and Furniture** - Renovations Works on the following

Sections:

- Wall finishes -CHB wall, Dry wall, Glass partition and Wall cladding
- Ceiling Works- Aluminum frames, Gypsum ceiling works, Gypsum Moisture resistant
- Aluminum Composite Panel
- Floor finishes- Raised flooring- Tile works Common Areas- Tile works
- Doors- Metal door including fixtures-Glass door including fixtures
- Window- Glass alum. Tempered
- Joineries –Command and Control Console
- Furnishing -Tables and chairs
- Cables trays and ladder
- 7ft Server Cabinet

5.3.2. Standby Generator

- Engine Type Diesel
- Method of Start Battery starting
- Generator
 - Rated Power 25 KVA
 - No. of Phases Single
 - Rated Voltage 220 VAC
 - Frequency 60 Hz
- An automatic transfer switch (ATS) has to be provided for controlled timing of transfer of loads to emergency power and retransfer to normal.
- The generator sets are housed in acoustic weatherproof enclosures.

6. Services

- 6.1.** Engineering, Network Design, RF Path Profiling and Bandwidth Allocation
- 6.2.** Engineering and Design Works, Site Preparation, Documentation and Training
- 6.3.** Implementation, Testing, Commissioning, Integration & System Acceptance
- 6.4.** Warranty Support Services
 - 6.4.1.** Warranty shall commence from the date of acceptance of complete delivery of items and submission of warranty certificate issued by Supplier.
 - 6.4.2.** Warranty for project components shall be provided, valid for Five (5) years on all parts and services.
 - 6.4.3.** Support and maintenance services shall be provided for five (5) years by Supplier and shall have the necessary solutions, tools, equipment and facilities to perform the troubleshooting, maintenance repair and upgrade.
 - 6.4.4.** Supplier shall assist on updating of applicable/required software to guarantee proper installation and updates
 - 6.4.5.** Warranty Support Services from the Supplier during the warranty period shall be capable of on-call basis or via email support within one

(1) hour response time upon notification.

6.4.6. Supplier must be able to provide next-business day on-site support.

6.5. Other Expenses: Delivery, Hauling and Mobilization

E. ADDITIONAL CONDITIONS ON THE EMERGENCY RESILIENCY PROJECT IMPLEMENTATION

1. The Supplier shall perform the supply, delivery, installation, configuration, commissioning and testing of all the components of the emergency resiliency project (hardware, software, peripherals and other necessary services) at eight (8) sites identified for this project.
2. The Supplier shall provide and guarantee the highest quality of engineering work for the installation of DMR Tier 3 System for The National Telecommunication Commission.
3. The Supplier shall supply all the complete materials, labor, equipment for the installation of the items and its accessories.
4. The Supplier shall include any such item, although not specifically mentioned, that can be reasonably inferred as being required for the operation and maintenance of the system as if such items were expressly mentioned herein.
5. The Supplier shall ensure that the system is equipped with lightning and surge protection devices.
6. The Supplier shall not interrupt any power system and/or any electric service presently connected without the presence of NTC representative and if there will be any such interruption, it must be done with the least possible time.
7. The Supplier shall provide the most appropriate layout plan using the latest technology and materials thereby producing the least maintenance and operating cost but without sacrificing the safety and functionality of the completed system.
8. The supplier shall provide, construct, and maintain all repeater sites and equipment inclusive of rental payments for five (5) years with the cost to be borne by the supplier. The Supplier warrants the uninterrupted availability of the selected/designated repeater sites for the next five (5) years by submitting its respective contracts of lease with a validity of ten (10) years.
9. The Supplier shall ensure Regulatory compliance (Building Permit and applicable Clearances e.g. Excavation, NTC, and Environmental) prior to project commencement.
10. The Supplier shall be solely responsible in providing the necessary protection of deliverables to prevent damage, theft and others during storage, transit and handling. In the event of damage or loss of equipment during the delivery of services or during warranty period, either accidental or due to negligence of the Supplier, the company representatives or employees, supplier is obliged to immediately replace, repair, or resolve the issues as may be deemed appropriate

by NTC. Damaged solution or components shall not be installed or accepted

11. The Supplier shall furnish all materials and labor to provide full and complete repair and restoration of ceiling, walls and other parts of the building during the installation period.
12. The Supplier shall be solely responsible for the safekeeping of their own property such as the equipment, tools and materials on the job sites. The Supplier shall maintain a safe and clean job site throughout the project duration. Upon project completion, the job site shall be neat and clean with all debris picked up and barricades removed.
13. During the Defects Liability Period, the Supplier shall respond within 48 hours reference to time/date of reported system/mechanical failure to undertake necessary inspection and/or repair on any defects, malfunctions, errors, damages, breakdowns and other improper system operation.
14. The Supplier shall provide after-sales support through a service helpdesk (i.e. telephone, email, text) and provide the direct contact numbers of their service engineers and technicians.
15. The Supplier shall ensure that all system components are operational/ functional.
16. The Supplier shall ensure that all works must be done within six (6) months period. No work shall start unless the Supplier's personnel are properly escorted by the NTC assigned personnel.
17. The Supplier shall provide Onsite technical training on Basic functionality of the newly installed DMR Tier 3 System for twenty (20) NTC personnel. The Supplier shall provide the transportation, accommodations, meals, and other expenses of the trainees during the length of the training period (both Off-site and On-site training).
18. The Supplier together with NTC representatives shall test all the hardware, software and other ancillary of the project to ensure all system components are operational and functional
19. The Supplier shall, when required by NTC, conduct an end-to-end demonstration of the system, product features equipment and actual application of the entire project.
20. The Supplier shall provide insurance coverage with NTC as "assured party" for at least one (1) year through Government Service Insurance System (GSIS) Electronic Equipment Insurance Policy.
21. Other Requirements for Supplier for the Communications Equipment.
 - a. The Supplier must submit Manufacturer's Certificate stating that they are duly certified and authorized distributor/dealer of the manufacturer in the Philippines.

- b. The Manufacturer of DMR radio must be at least 20 years present in the Philippine Market and must have its own office and representatives in the Philippines.
- c. The Supplier must have valid and current NTC Service Center Permit. The Supplier shall facilitate/handle the process of repair as authorized by the manufacturer.
- d. The Supplier must have its own service center duly authorized by its principal manufacturer. The Supplier shall handle the process of repair as authorized by the manufacturer.
- e. The Supplier must submit a notarized certification from the Manufacturer stating that the availability of spare parts for all proposed DMR equipment shall be at least Ten (10) years from the commissioning of the system.
- f. The Supplier must submit a certification from the manufacturer that their proposed Digital Mobile Radio (DMR) and sub-systems is fully compliant with DMR Associations specifications and can be able to adapt and inter-operate with the existing NTC's analog radios.

F. PERSONNEL

1. The Supplier shall organize a Project Management Team which shall be available to provide timely services for the entire duration of the contract. It shall be composed of Project manager and implementation team.
2. The project management shall include, but not limited to the following:
 - Project Reporting – submit project accomplishment report every end of the week during deployment phase, or as requested by NTC
 - Change Management – process Project Change request
 - Project Completion – conduct technical testing and quality assurance of services and deliverables which the NTC representative shall validate conformance to the specification in the TOR.
3. The Supplier shall identify a single point of contact within their organization for project coordination activities.
4. The Supplier shall assign Site Engineer/s (Professional Electronics Engineer/Electronics Engineer) to supervise all work activities at the project site/s.
5. The Supplier shall ensure that all works must be done by Supplier's trained/competent engineers and technicians duly coordinated with NTC assigned personnel.
6. The Supplier's personnel shall be distinctly recognizable while within the premises. The Supplier's personnel shall wear uniforms and Personal Protective Equipment (PPE) with proper identification (NTC and Company ID).

7. The Supplier shall submit and facilitate approval of the following documentation :

- Project Gantt Charts and Schedules
- List of Personnel/ Project Team
- Work Breakdown Structures (WBS)
- Implementation and Acceptance Plan
- Complete design, configuration, test script and others.

G. DOCUMENTATIONS AND MANUALS

1. The Supplier shall provide standard documentation and manuals (in hard and soft copy) pertinent to the systems and software tools as well as additional infrastructure offered as part of the project.
2. The Supplier shall provide documentation on policies and procedures for good practice usage of the system and administration of system implemented.
3. The Supplier shall provide documentation on specific configuration/ setup specifications and parameters of the system, software developer sets such as but not limited to the following documentations and manuals (in English language):
 - a. User's Manual/ Operational Procedures including backup/restore and Disaster recovery
 - b. Training Materials
 - c. Functional Specifications
 - d. Installation and Configuration
 - e. System Administration and Maintenance
 - f. Preventive Maintenance Plan (for five (5) years)
 - g. Copy of Software entitlements and licenses
 - h. Insurance Policy and Official Receipt for One (1) year
 - i. Certificate of Warranty for Equipment, Parts and Services and Software Update for at least five (5) Years from acceptance by the NTC End-User/Project Manager.
 - j. Copy of the ten (10) years rental agreement/contract on the eight sites (8) identified for the project.
4. The Supplier shall surrender system administration accounts/or copy of licenses keys to NTC.

***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 product¹.
- (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).

¹ An Apostille is a certificate that authenticates the origin of a public document. It is issued by a country that is party to the Apostille Convention to be used in another country which is also a party to the Convention. On 14 May 2019, the Philippines officially became a party to the Apostille Convention. Authentication is still required for all Philippine documents to be used abroad, but this time with an Apostille instead of an Authentication Certificate ("red ribbon") as proof of authentication. After authentication by the Department of Foreign Affairs - Office of Consular Affairs (DFA-OCA), as Competent Authority, there is no more need for authentication (legalization) by Foreign Embassies or Consulates except for countries that have not acceded to the Convention and countries that objected to the Philippine accession. (Source: <https://www.dfa.gov.ph/dfa-news/dfa-releasesupdate/22280-question-and-answer-and-infographicsonauthenticationthrough-apostille>).

Bidding Forms

Bid Form for the Procurement of Goods

BID FORM

Date: _____

Project Identification No. : **NTC-PB-2021-09-01**

To: **National Telecommunications Commission**
BIR Road, East Triangle Diliman, Quezon City

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 the following:

Description of Requirement/Project	Approved Budget for the Contract (ABC), inclusive of all applicable taxes and other charges	Total Bid Price, inclusive of all applicable taxes and other charges (in Figures and in Words)
One (1) Lot Supply, Delivery, Installation, Testing, Integration and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency	Three Hundred Seventy-Five Million Pesos (Php 375,000,000.00) Any bid with financial proposal exceeding the above ABC shall not be accepted.	Php _____ (in figures) Peso: _____ (in words) _____ _____ _____

1. We understand that the above submitted bid price, as read, shall be evaluated and corrected for computation errors, and others bid modifications in accordance with the Price Schedules attached herewith and made part of this Bid.
2. The total bid price includes the cost of all taxes, such as, but not limited to 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,
3. 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.
4. *[Insert this paragraph if Foreign-Assisted Project with the Development Partner:* Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and address Amount and Purpose of
of agent Currency Commission or gratuity

(if none, state "None") /

5. 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.
6. We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.
7. We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.
8. 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: _____

Telephone No.: _____

Email Address: _____

Price Schedule for Goods Offered 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: _____



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
NATIONAL TELECOMMUNICATIONS COMMISSION
BIR Road, East Triangle, Diliman, Quezon City

Project ID : NTC-PB-2021-09-01
Project Name : Procurement of One (1) Lot Supply, Delivery, Installation, Testing, and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency
Location of the Project: NTC Bldg., BIR Road East Triangle, Diliman, Quezon City)

Statement of the Single Largest Completed Contract Similar to the Contract to be Bid

Business Name : _____

Business Address : _____

Name of Contract	a. Owner's Name	Nature of Work/Kinds of Goods	a. Amount at Award	a. Date of Award
	b. Address		b. Amount at Completion	b. Contract Effectivity
	c. Telephone Nos.		c. Duration	c. Date Completed

The Bidder's SLCC should have been completed within Five (5) Years prior to the deadline for the submission and receipt of bids.

Submitted by : _____
(Printed Name & Signature)

Designation : _____

Date : _____



REPUBLIC OF THE PHILIPPINES
 DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
NATIONAL TELECOMMUNICATIONS COMMISSION
 BIR Road, East Triangle, Diliman, Quezon City

Project ID : NTC-PB-2021-09-01
Project Name : Procurement of One (1) Lot Supply, Delivery, Installation, Testing, and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency
Location of the Project: NTC Bldg., BIR Road East Triangle, Diliman, Quezon City)

List of All Ongoing Government & Private Contracts including Awarded but Not Yet Started

Business Name : _____

Business Address : _____

Project Name and Description	a. Client Name b. Contact Person c. Address d. Contact Nos.	Contract References (e.g. Purchase Order/Job Order/Contract Agreement)	Date	Indicative Aggregate Contract Amount	% of Accomplishment		Indicative Aggregate Value of Outstanding Works/ Undelivered Portion
					Planned	Actual	
GOVERNMENT							
PRIVATE							

(Note: Please use additional sheets, if necessary)

Submitted by : _____

(Printed Name & Signature)

Designation : _____

Date : _____

Bid Securing Declaration Form

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

BID SECURING DECLARATION Project Identification No.: NTC-PB-2021-09-01

To: **National Telecommunications Commission**
BIR Road, East Triangle Diliman, Quezon City

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]

Project ID : **NTC-PB-2021-09-01**
 Project Name: **Procurement of One (1) Lot Supply, Delivery, Installation, Testing, and Commissioning of the National Telecommunications Commission (NTC) National Emergency Communications Resiliency**
 Location of the Project: NTC Bldg., BIR Road East Triangle, Diliman, Quezon City)

NFCC Computation for Eligibility Check

- A. Summary of the Applicant Supplier’s/Distributor’s/Manufacturer’s assets and liabilities on the basis of the attached income tax return and audited financial statement, stamped “RECEIVED” by the Bureau of Internal Revenue or BIR authorized collecting agent, for the immediately preceding year and a certified copy of Schedule of Fixed Assets particularly the list of construction equipment.

	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 assets 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.

The values of the domestic bidder's current assets and current liabilities shall be based on the latest Audited Financial Statements (AFS) submitted to the BIR.

The Bidder shall attach the AFS to the NFCC Computation for Eligibility Check Form.

NFCC=P_____

Submitted by:

 Name of Supplier/Distributor/Manufacturer

 Signature of Authorized Representative

Date:_____

Omnibus Sworn Statement (Revised)

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)

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

PERFORMANCE SECURING DECLARATION

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

To: **National Telecommunications Commission**
BIR Road, East Triangle Diliman, Quezon City

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]

Contract Agreement Form for the Procurement of Goods (Revised)

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 *National Telecommunications Commission* 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.

ATTY. GAMALIEL A. CORDOBA
Head of Procuring Entity
for:

National Telecommunications Commission

[Insert Name and Signature]

[Insert Signatory's Legal Capacity]

for:

[Insert Name of Supplier]

Acknowledgment

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

