



28 February 2022

ASTI - BIDS AND AWARDS COMMITTEE

SUPPLEMENTAL BULLETIN NO. BAC-2022-02-005

SUPPLY AND DELIVERY OF ONE (1) LOT FABRICATION AND INSTALLATION OF BASE TOWER

The ASTI Bids and Awards Committee (BAC) issues this Supplemental/Bid Bulletin to clarify, modify or amend items in the Bidding Documents and to reply to queries raised by the potential bidders through letters/emails for the information of all bidders for the procurement of:

Item:	Supply and Delivery of One (1) Lot Fabrication and Installation of Base Tower
Approved Budget for the Contract:	Two Million Nine Hundred Twenty-Two Thousand Pesos Only (₱2,922,000.00)
Request for Quotation No.:	22-01-3734 dated 17 February 2022
Purchase Request No.:	REINN-21-11-12804 dated 18 January 2022
Published Date (PhilGEPS):	19 February 2022 8448769

A. AMENDMENT TO PROCUREMENT DETAILS AND FORMS


REFERENCE	AMENDMENT/CHANGE/CLARIFICATION
Additional Forms for Negotiated Procurement	Please see attached Terms of Reference (TOR), for reference.

B. RESPONSE TO QUERIES

QUERY/ISSUE	BAC/END-USER RESPONSE/CLARIFICATION
Additional instructions regarding the TOR.	The TOR must be duly complied with and submitted as part of the technical component of the bid.

Please be guided accordingly.

Prepared by:


Digitally signed by
Ramos Katherine
Babaran
Date: 2022.02.28
11:12:57 +08'00'

KATHERINE B. RAMOS
Head, BAC Secretariat

Approved by:

BAYANI BENJAMIN R. LARA
Chairperson, BAC


Digitally signed by
Martinez
Philip Abela

TERMS OF REFERENCE
Fabrication and Installation of Base Tower & Other Requirements
As of 18 January 2022

1. Rationale

The COVID-19 global pandemic has radically altered our way of life. Given the threat of the disease, many educational institutions across the world have resorted to virtual, non-face-to-face modes of interaction and content delivery to prevent the spread of the disease.

As directed by the President in his July 2020 SONA, "to come up with an integrated program and implementation mechanism to ensure that these TV frequencies are fully utilized by the government for the utmost benefit of the Filipino people," the Philippine government, through the DOST-Advanced Science and Technology Institute (DOST-ASTI) is currently working on a research project entitled "**Resilient Education Information Infrastructure for the New Normal**".

The focus of the project is to develop innovative solutions utilizing UHF TV channels to support remote education and to provide internet connectivity since face-to-face classes are not yet allowed in the Philippines. As a requisite to this project, a 12-meter tower shall be installed as part of a low-cost, small-scale LTE base station to be deployed in two identified rural areas in the country. Hence, this would need the relevant professional services for the fabrication, installation, and deployment of the base station tower.

2. Scope of Work

The service provider must be able to provide the following:

- 2.1. Supply, Fabrication, Delivery and Installation of Base Tower (PhP 2,200, 000)
- 2.2. Supply, Fabrication, Delivery and Installation of Base Tower Perimeter Fence and Equipment Storage Area (PhP 393,000)
- 2.3. Preliminary Engineering Design, Survey and Professional Consultations (PhP 329,000)

3. Detailed Specifications

3.1. Fabrication and Installation of Base Tower (PhP 2,200,000)

3.1.1. Fabrication of Base Tower

- 3.1.1.1. Supply, fabrication, galvanization, & installation of guyed tower made of GI pipe, complete with stiffener plates, splice plates, web bars and all accessories as required in the attached base

tower design and specification (*Note: Original design is a property of UP-VBTS Project and CHED. Permission to use the design has been approved.*)

3.1.1.2. Fabrication of 3000 x 16 mm dia. ground rods, copper-clad steel embedded to the ground, including cad weld connection to the grounding wire

3.1.2. Installation of Base Tower

3.1.2.1. The LTE Base Stations are expected to be installed in two locations:

- Site 1 is in Tanay, Rizal (final location shall be provided)
- Site 2 is in Doña Remedios Trinidad, Bulacan (final location shall be provided)

3.1.2.2. Utilize the conceptual design, technical aspects, and details given by DOST-ASTI for a small-scale LTE base station tower and identify the scope of physical components and structures, specific outputs and requirements of the structures, and proposed methods of installation as necessary. (See attached design details and list of materials for fabrication for reference)

3.1.2.3. Review the space plan / allocation initially prepared by the DOST-ASTI and if necessary, prepare a revised/alternate space plan/allocation, while taking into consideration the plans for the infrastructure and, and the available budget.

3.1.2.4. Undertake value engineering / value analysis on, among others, the type of structure and utilities (mechanical, electrical, and electronic).

3.1.2.5. Proposal should include the following services:

- a. OH & Supervision
- b. Mobilization/Demobilization
- c. Temporary Facility
- d. Temporary Approach Road (as needed)
- e. Supply and Installation of Lighting Rod (5/8" x 36" Stainless Steel)
- f. Excavation works, includes all necessary equipment, dewatering, hauling and disposal of surplus materials (Ordinary soil)
- g. Equipment Rentals
- h. Rebar, includes fabrication, cutting, bending and installation
- i. Supply & Installation of Anchor Bolts

- j. Concreting Works with concrete compressive strength of 20.7 MPa
- k. Backfilling Works
- l. Installation of Tower/Tower Erection Works, installation of all tower parts
- m. Supply and installation of 20mmØ IWRC (205KN) guy wires including eyelet and assembly
- n. Electrical Grounding/ Tower Electrical and grounding works
- o. Site Development and Grounding works
- p. Supply, fabrication, galvanization, & installation of cable ladder complete with galvanized.
- q. Paving of land

3.1.2.6. Supplier must comply with all the standards, procedures, and requirements imposed by relevant government agencies prior to the installation of the Base Tower, including but not limited to:

3.1.2.6.1. National Building Code

3.1.2.6.2. Philippine Electrical Code 2017

3.1.2.6.3. Other relevant local ordinances and government policies and circular, as applicable

3.1.2.7. Prepare the necessary engineering works (based on recommended Codes/Standards) for the following:

3.1.2.7.1. Structural / Civil Works;

3.1.2.7.2. Mechanical Works; and

3.1.2.7.3. Electrical and Equipment Grounding Plan, if applicable

3.1.2.8. Prepare the design parameters by considering the following features of the Base Tower and the survey site area:

3.1.2.8.1. Base Tower is **12 m in height**, with proper earth grounding.

3.1.2.8.2. The tower should maintain structural integrity for at least 10 years and can withstand winds up to 185 kph or greater. The loading specification must bear equipment weight of at least 150 kg.

3.1.2.8.3. The site area should be at least **8 m x 8 m**, which may vary for the two sites.

3.1.2.8.4. Initial design is trussed tower, but supplier/contractor can recommend an existing design, for approval of DOST-ASTI.

3.1.2.8.5. Installation of UL-certified Lightning Protection System (LPS) in each tower. An LPS set shall include an air terminal with at least 1 inch diameter x 3m length copper bonded conventional rod paired with an air terminal base, or a copper base plate connected to a down conductor made from bare copper wire with 100 mm² size and 12-meter length, and a ground rod and ground clamp for proper earth termination.

3.2. Supply, Delivery, and Installation of Base Tower Perimeter Fence and Equipment storage Area (PhP 393,000)

3.2.1. The following are the design parameters for the perimeter fence and equipment storage area for Site 1 and Site 2:

3.2.1.1. The perimeter fence should be installed using galvanized metal.

3.2.1.2. The total area of fence should have a dimension of **8 x 8 m²** and a height of **1.5 m**.

3.2.1.3. The fence should have a steel gate.

3.2.1.4. Equipment storage should have an area of **1.5 m by 1.5 m**.

3.2.1.5. It should be properly grounded by copper rod and should have a built-in equipment cabinet.

3.2.1.6. The supplier must create/provide their own storage area during installation.

3.2.1.7. Final design of the structure shall be provided by the DOST-ASTI.

3.3. Logistics and Manpower (applicable to 3.1 and 3.2)

3.3.1. The contractor shall be responsible for the loading and transport of the equipment and components from DOST-ASTI / supplier's warehouse to the deployment site.

3.3.2. Provide a vehicle for the lifting and laying down of the equipment.

3.3.3. Provide tools and equipment for the assembly and deployment of the equipment.

3.3.4. Truck, tools, equipment shall be made available by the contractor throughout the deployment period. Any excess payments on rental fees (vehicles and equipment, if outsourced) due to extensions shall be covered by the supplier/contractor.

3.3.5. In the event that the current vehicle used encountered malfunctions or breaks down, a backup vehicle should be readily available at no additional cost to the government to avoid delays in the installation schedule.

- 3.3.6. Provide manpower for the assembly of the base tower in the identified sites, including the provision of required protective/safety gears and documents for LGU inspection (COVID-related forms, list of safety gears provided through the contractor, etc.)
- 3.3.7. Provide meals, lodging, and other allowances to all assigned personnel engaged by the contractors/supplier.

3.4.Preliminary Engineering Design, Survey and Professional Consultations (Php 329,000.00)

- 3.4.1. Conduct engineering surveys and tests at the chosen sites provided by the DOST-ASTI to comply with the requirements of the concerned LGU in building the tower structure, perimeter fencing and equipment storage area, including but not limited to:
 - 3.4.1.1. Soil boring tests,
 - 3.4.1.2. Seismic analysis,
 - 3.4.1.3. Site investigation and measurement, including the boundaries of the property, elevations and contours, location, improvements and existing utilities and other pertinent data on infrastructure
- 3.4.2. The winning bidder is required to facilitate and coordinate with the concerned Local Government Units and relevant National Government Agencies regarding building permits and other relevant documents, and requirements prior to, during and after installation, and pay the corresponding fees as required.
- 3.4.3. The winning bidder shall provide all design requirements (including printing and signing of documents by qualified personnel) necessary in the processing of permits
- 3.4.4. The DOST ASTI shall provide assistance and support in the processing of all necessary permits and requirements prior to installation of equipment.

4. Warranty, Support Service, and Liability

- 4.1. The supplier should issue a statement of limited warranty to cover defects in materials and workmanship for 60 days after the date of completion at no cost incurred to DOST-ASTI.
- 4.2. Support service must be available at least 9 hours per day, Monday to Friday (including holidays), during business hours, 9AM-6PM Philippine Standard Time (UTC+8) and must respond within 72 hours. Support service shall include answering queries regarding the installations and acknowledgement of receipt of any documentation from DOST-ASTI regarding the installations. Concerns

needing on-site verification, action, and resolution should be coordinated with DOST-ASTI.

- 4.3. The supplier shall be held liable for any accidents and damage to property and surrounding areas caused by failure to implement the work site safety procedures and protocols.
- 4.4. The supplier shall be held liable for any accidents and damage to property and surrounding areas caused by defective materials and poor workmanship.

5. Other Information

- 5.1. The Purchase Request referencing this TOR has reflected all the necessary information consistently as possible. If there are inconsistencies, all parties will refer to the information stated in this TOR.
- 5.2. The DOST-ASTI shall advise the winning bidder at least two (2) weeks prior to the final schedule and location for the execution of the above-mentioned activity. All requests for flexibility in the delivery and installation dates should be communicated in writing and must first be approved by the end-user.
- 5.3. The Supplier/contractor must have a safety plan and must have a trained first-aid provider which shall be available at the work site to render first aid if necessary. The supplier must also secure the work site to ensure that only authorized personnel are on the premises. The Supplier must implement the proper use of personal protective equipment (PPE) for its personnel and follow the current COVID-19 protocols/guidelines as recommended by the Inter-Agency Task Force (IATF).

6. Approved Budget Contract

- 6.1. The Approved Budget for the Contract is **Php2,922,000.00**, inclusive of all government taxes and other charges, which include the following:
 - 6.1.1. Cost of equipment, supplies, and materials during pre- and actual installation
 - 6.1.2. Transportation of equipment to and from the identified sites.
 - 6.1.3. Remuneration/professional fees of all manpower resources engaged by the contractor
 - 6.1.4. Incidental Expenses – which include costs for structural investigation of the existing building, engineering surveys and investigations and mapping, CNC processing, support personnel/staff, and other out-of-pocket expenses (e.g., communication and coordination meetings).
- 6.2. Any request/approved extension of contract duration shall not involve any additional cost to the Government. All equipment, software, materials, and supplies

acquired for the services shall be turned over to DOST-ASTI at the conclusion of the engagement.

6.3. No additional payment shall be provided, unless approved by the DOST-ASTI.

7. Mode of Procurement

The guidelines on competitive bidding procurement shall be followed pursuant to Section 10 of the revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184.

8. Delivery and Payment

8.1. In the event that the end-user/DOST-ASTI will change the location for the installation due to unforeseen circumstances, the supplier may request to cancel the awarded item in the contract or request for additional cost to cover charges, but not to exceed 10% of the total contract price, subject to availability of project funds.

8.2. Delivery of all requirements shall be made by the Supplier within Sixty (60) calendar days upon issuance of Notice to Proceed (NTP).

8.3. The DOST-ASTI agrees to pay the following based on the schedules listed below:

SEQUENCE OF DEPOSIT	PROVISIONS
1 st Payment (40% of the ABC)	Upon Completion of: - Tower installation (Site 1) - Issuance/approval of permits (Site 1)
2 nd Payment (40% of the ABC)	Upon Completion of: - Perimeter fence (Site 1) - Tower installation (Site 2) - Issuance/approval of permits (Site 2)
Last payment/ Balance (20% of ABC)	Service Completion: - 100% installation of Site 1 and Site 2 base tower - 100 % completion of perimeter fence (Site 2) - Submission of all designs and other related documents to DOST-ASTI

8.4. Payments will be released once a Certificate of Acceptance is issued by the end-user. All payments shall be subject to BIR Withholding Tax pursuant to existing BIR revenue regulations.

8.5. The payment shall be made upon its issuance of the billing statement and the corresponding Certificate of Rendered Service/s to the DOST-ASTI, subject to auditing and accounting rules and regulations.

8.6. Failure to comply with the Terms and Conditions of the contract will result in the payment of corresponding penalties/liquidated damages in the amount equal to one-

tenth (1/10) of one (1) percent of the total contract price by the winning service provider.

This is to certify that we hereby commit to comply and deliver all the above.

Name of the Representative of the Bidder: _____

Position: _____

Name of the Bidder: _____