

TERMS OF REFERENCE

UPGRADING OF STATION'S UPS SYSTEM (PHASE 2) AND DEPOT ELECTRICAL ROOM

BACKGROUND

The Uninterruptible Power Supply (UPS) is a back-up power protection for emergency lightings, fire alarm system and signaling system in case of power outage. In the event of failure or brownout of the AC utility supply, the UPS will continue to provide safe, clean continuous power without interruption from the battery, for duration dependent on the battery capacity and output load. When the AC utility supply returns to normal, the UPS automatically recharges the battery ready for any future power failure.

The Line 2 system is equipped with twelve (12) UPS units at the mainline stations and one (1) at Depot, seven (7) units of which have been replaced with an upgraded UPS. Currently, the remaining six (6) units of UPS located at Legarda, Pureza, J.Ruiz, Gilmore, Betty-Go and Depot are to be upgraded under this proposed project as they have already reached their maximum serviceable life. Three (3) units located at Pureza, Gilmore and Betty Go station are non-operational.

The objective of this Project is to restore the six (6) UPS into its full operational capacity and provide a reliable back-up power protection for essential mainline and depot equipment, as well as other interrelated systems equipment.

1. SCOPE OF WORK

Replacement of six (6) UPS located at Legarda, Pureza, J.Ruiz, Gilmore, Betty-Go and Depot. It includes batteries and all other accessories, but shall not be limited to the following:

Electrical and Mechanical works:

- 1.1 Decommissioning of old UPS and batteries.
- 1.2 Supply, delivery and installation of five (5) units 60 KVA, 3 Phase UPS and its accessories for Legarda, Pureza, J.Ruiz, Gilmore and Betty Go Station;
- 1.3 Supply, delivery and installation of one (1) unit 80 KVA, 3 Phase UPS and its accessories for Santolan Depot;
- 1.4 Supply, delivery and installation of one (1) battery bank VRLA Batteries, 12Volts and its accessories for each five (5) units 60 KVA, 3 Phase UPS and two (2) battery banks for the 80 KVA, 3 Phase UPS;
- 1.5 Testing and commissioning;
- 1.6 Comprehensive local technical (theory and actual) training on the operation and maintenance of the UPS, of at least ten (10) LRTA Technical Personnel.
- 1.7 Delivery and functionality training (Local) of the following test instrument of at least 10 LRTA Technical Personnel:
 - 1.7.1 One (1) unit Battery Tester
 - 1.7.2 One (1) unit Power/Quality Analyzer
 - 1.7.3 One (1) unit Infrared Thermometer.

CERTIFIED TRUE COPY
NO VALID WITH ERASURES

DEPARTMENT OF BUDGET AND MANAGEMENT
PROCUREMENT SERVICE

CERTIFIED TRUE COPY OF THE ORIGINAL

[Handwritten Signature]

1.8 Turn-over and acceptance.

2. GENERAL REQUIREMENTS:

- 2.1 The Contractor shall supply all materials, tools and equipment (including all necessary works, testing, etc.) and all the needed manpower (supervision and labor) needed for the satisfactory performance of all works necessary for the contract under bid.
- 2.2 Prior to shipment, the LRTA shall perform Factory Acceptance Tests of the Uninterruptible Power Supply (UPS) in the country of origin to be attended by not less than four (4) qualified technical staff of LRTA Line 2 particularly the end-user. The factory test shall be arranged as recommended in applicable industry standards and as many tests as possible shall be conducted together. LRTA shall have the right to call for such additional tests as may be necessary to prove compliance with the specifications.
- 2.3 The Contractor, prior to commencement of works shall submit a detailed work methodology outlining all electrical and relevant works, as well as all necessary testing and commissioning works. All relevant works must not impede the revenue operation and shall be subjected to the approval of LRTA.
- 2.4 The Contractor shall submit all equipment manuals from the manufacturer such as but not limited to the following:
 - 2.4.1 Operation and maintenance manual;
 - 2.4.2 Parts list and catalogue;
 - 2.4.3 Detailed schematic diagram;
- 2.5 The Contractor shall conduct all necessary tests on each of the UPS and Batteries prior and after commissioning and submit a duly signed data report, test results and certification. The Functional testing shall include, among others the power quality analysis on each of the UPS.
- 2.6 The Contractor shall provide inventory of all waste materials (UPS, Batteries and accessories), arrange the return to LRTA central warehouse subject to the usual accounting and auditing rules of LRTA.
- 2.7 All equipment supplied (UPS, electrical and all requested accessories) shall undergo quarterly preventive maintenance to ensure proper operation. All contract work shall be performed by the manufacturer's factory trained service personnel. During the warranty period, the Contractor shall provide complete technical support for the hardware and software components.
- 2.8 The Contractor shall provide a certification of having a high level of after sales support of at least Five (5) year's period.
- 2.9 Any material and/or equipment necessary for the proper implementation of the works contemplated, which is not specified or described herein, shall be deemed part of the specification.

3. TECHNICAL SPECIFICATIONS:

- 3.1 60KVA / 60KW, 3Φ, 480Vac / 230Vac, 60Hz; 5 UPS Systems with 1-hour back-up time at Full load.
- 3.2 80KVA / 80KW, 3Φ, 480Vac / 230Vac, 60Hz; 1 UPS System with 1-hour back-up time at Full load.
- 3.3 Continuous duty, on-line double conversion, IGBT Technology.
- 3.4 Stand-alone back-up operation.
- 3.5 Downloadable data/history logs for all parameters (Voltage, Ampere, PF, etc.)

TOR – Upgrading of Station's UPS System (Phase 2) and Depot Electrical Room

2 of 8

CERTIFIED TRUE COPY
NO VALID WITH ERASURES

DEPARTMENT OF BUDGET AND MANAGEMENT
PROCUREMENT SERVICE

CERTIFIED TRUE COPY OF THE ORIGINAL

AGENCY SERVICING DIVISION

3.6 IGBT Technology UPS shall consist but not limited to the following components:

- 3.6.1 Rectifier / Charger (IGBT)
- 3.6.2 Inverter
- 3.6.3 Static Switch
- 3.6.4 Static bypass
- 3.6.5 Batteries
- 3.6.6 Manual bypass
- 3.6.7 Monitoring and control panel
- 3.6.8 Battery management system
- 3.6.9 Capable for parallel and /or N+1 configuration

3.7 Standard Communication and Management Kit:

- 3.7.1 RS232 / RS485 Interface port and manufacturer's standard
- 3.7.2 Battery Management System:

- Real time calculation of the remaining back-up time.
- Real time measure battery voltage, current and capacity.
- Periodical battery test for monitoring battery efficiency and for programming preventive or curative maintenance in case of abnormal situations.
- Manages battery charger that responds to the networking temperature to maximize battery lifetime.
- With adaptive algorithm that automatically selects the recharging method according to the environmental and battery conditions.

3.8 Standard Electrical Kit:

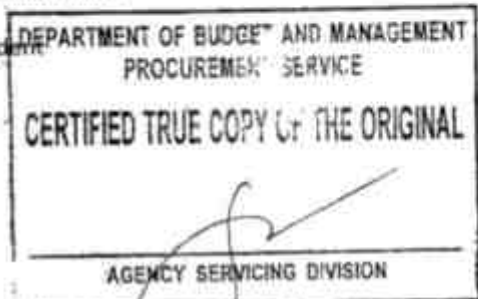
- 3.8.1 Integrated maintenance by-pass
- 3.8.2 Double input network (optional separate Auxiliary Mains)
- 3.8.3 Integrated back feed protection
- 3.8.4 Smart batteries recharge temperature dependent
- 3.8.5 Output synchronization

3.9 Standard Mechanical and Environmental Kit:

- 3.9.1 IP 20
- 3.9.2 Battery temperature sensor

3.10 Input Parameters:

- 3.10.1 Voltage 480Vac line to line with ground (used input isolation transformer if necessary).
- 3.10.2 Voltage Tolerance: +/- 20% of nominal voltage
- 3.10.3 Frequency Tolerance: 60 Hz +/-10%
- 3.10.4 Power factor: >0.99
- 3.10.5 THDI: <2.5% without any external filter



CERTIFIED TRUE COPY
NOT VALID WITH ERASURES

3.11 Output Parameters:

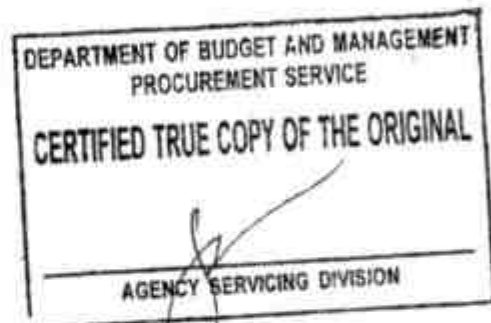
- 3.11.1 Voltage: 230Vac line to line with ground (used output transformer if necessary)
- 3.11.2 Voltage Regulation Static: $\pm 1\%$
- 3.11.3 Dynamic: VF-SS-111 (EN62040-3) compliant
- 3.11.4 Frequency Regulation: $\pm 2\%$ Hz
- 3.11.5 Power factor: 1.0
- 3.11.6 Crest factor: 3:1
- 3.11.7 Harmonic Distortion: $< 1\%$ for linear loads, 6% for non-linear loads
- 3.11.8 Overload: 110% continuous, 125% for 10 minutes, 150% for 60 seconds
- 3.11.9 Inverter Short Circuit: 3.2 in 40ms capability
- 3.11.10 Bypass: Automatic and Manual

3.12 Efficiency (TUV SUV TESTED):

- 3.12.1 Online mode: 96% at nominal load
- 3.12.2 ECO MODE: Up to 98%
- 3.12.3 Certification: TUV

3.13 Battery System:

- 3.13.1 Back-up time: at least 1-hour
- 3.13.2 Charging type: Floating / Intermittent
- 3.13.3 Temperature: Standard
- 3.13.4 Compensating: Charger
- 3.13.5 Battery Charger: Independent
- 3.13.6 Battery Charging Current: 15 Max
- 3.13.7 Flywheel Compatibility: Yes



3.14 Controls and Indicators:

- 3.14.1 Microprocessor controlled circuitry:
 - Fully automatic operation of the UPS shall be provided through the use of microprocessor controlled logic.
- 3.14.2 Control Panel indicator:
 - The UPS control panel shall consist of a Monitoring panel in LCD display for the UPS System data, status, messages, alarm Messages settings and other important Parameters.
- 3.14.3 Minimum requirements for control panel indicator in LCD shall consist but not limited to the following:
 - UPS status;
 - Alarm messages;
 - Input voltages and its condition;
 - Output voltages;
 - Frequency (input and output);
 - Autonomy time/back-up time of the battery;
 - Power delivered by the UPS;

- Battery voltages;
- Bypass enable/disable;
- Other standard control panel in LCD display;
- User friendly operation buttons.

3.15 Mechanical Design:

- 3.15.1 Enclosures: The UPS and any extended battery cabinets shall be designed for office or computer room applications. The cabinets shall be lined up and match in style and appearance and taking also into consideration the space to be occupied.
- 3.15.2 Ventilation: Forced air cooling

3.16 Environmental requirements:

- 3.16.1 Operating Condition: 0-95% non-condensing humidity, 0-40°C or in accordance with the US, European, Japan & Philippine standard.
- 3.16.2 Storage Condition: 0-95% non-condensing humidity, -20 to 40°C or in accordance with the US, European, Japan & Philippine standard.

3.17 Communication and Management:

- 3.17.1 Interface port: RS232 / RS485; Embedded LAN interface; MODBUS / JBUS interface.

3.18 Standards:

- 3.18.1 Safety: EN 62040-1 (TUV SUD certified, EN 60950-1-1)
- 3.18.2 Performance and Topology: EN 62040-3 (VFI-SS-111)
- 3.18.3 EMC Standard: EN 62040-2
- 3.18.4 Product Certification: CE

3.19 Battery:

- 3.19.1 Valve regulated Lead Acid (VRLA) battery
- 3.19.2 Voltage rating: 12V
- 3.19.3 Capacity: 100Ah (minimum)
- 3.19.4 Constant Voltage: 13.6 – 13.8V Charge for Standby use
- 3.19.5 Self-discharge at 20°C < 2% / month
- 3.19.6 400W/cell/15 min to 1.67V/cell at 26°C (77°F)
- 3.19.7 Terminal: M8/18

3.20 Diagnostic Tools and Equipment:

- 3.20.1 Battery Tester:
- Resistance Range: 3.000m/30.00m/300.0m/3.000Ω
 - Resistance Accuracy: ±0.8 % reading ±6 digit, 3.000 mΩ, ±1.0 % reading, ±1.0 % digit
 - Voltage Range: ±6.000 V/60.00 V



CERTIFIED TRUE COPY
NOT VALID WITH ERASURES

- Voltage Accuracy: $\pm 0.08\%$ reading, ± 6 digit
- Temperature Measurement Range: $-10.0^{\circ}\text{C} \sim 60.0^{\circ}\text{C}$
- Temperature Accuracy: $\pm 1^{\circ}\text{C}$
- Measurement Frequency: $1\text{kHz} \pm 30\text{Hz}$
- Measurement Current (Range): $150\text{mA}(3\text{m}/30\text{m}\Omega)$, $15\text{mA}(300\text{m}\Omega)$, $1.5\text{mA}(3\Omega)$, Open terminal voltage: 5V max.
- Max. Allowable Voltage: DC 60V
- Comparator: Primary and secondary resistance levels, minimum voltage limit
- No. of Comparator Settings: 200
- Data Storage: 4800 sets(date & time, resistance, voltage, temperature, comparator value, comparator decision)
- PC interface: USB (with bundled software for data transfer to PC)
- Power Supply: battery operated
- The unit shall be delivered with the following accessories:
 - Pin type lead, one USB cable, Data management PC software, Rigid carrying case, Zero adjustment board, Spare Batteries, and one Spare fuse

3.20.2 Power Quality Analyzer shall include the following features and specifications:

- Energy loss calculator for active and reactive power measurements, unbalance and harmonic power;
- Power inverter efficiency for simultaneous measurement of AC power and DC input power;
- Power wave data capture of fast RMS data, half-cycle and waveforms;
- Waveform capture;
- Capable of capturing Inrush, flicker and transients;
- Automatic transient mode capable of capturing 200 kHz waveform data in all phases simultaneously up to 6 kV;
- Fully Class-A IEC 61000-4-30 compliant;
- Mains signaling for measuring interference from ripple control signals at specific frequencies;
- 400 Hz measurement;
- 600 V CAT IV / 1000 V CAT III safety rating for service entrance;
- Capable of measuring all three phases and neutral;
- Automatic trending;
- Shall include analysis software;
- 32 GB memory card;
- Hard case enclosure;
- Unit must come with the standard accessories that shall include, but not limited to batteries, power adapter, USB cable, etc.

3.20.3 Infrared Thermometer:

- Measure -30°C to 900°C (-22°F to 1652°F);
- 60 : 1 distance to spot ratio with dual laser sighting for fast, accurate targeting;
- Multi-language interface (user select);
- Current Temperature plus MAX, MIN, DIF, AVG temperature displays;

TOR – Upgrading of Station's UPS System (Phase 2) and Depot Electrical Room

**CERTIFIED TRUE COPY
NOT VALID WITH ERASURES**

DEPARTMENT OF BUDGET AND MANAGEMENT PROCUREMENT SERVICE CERTIFIED TRUE COPY OF THE ORIGINAL ASST. SERVICING DIVISION

- Compatible with standard mini-connector K-type thermocouples, including ones you already own and have installed;
- Adjustable emissivity and predefined emissivity table;
- Infrared and thermocouple temperature on backlit display;
- Last reading Hold (20 seconds);
- High and low temperature alarm;
- Data storage and review (99 data sets).

4. CONTRACT DURATION

- 4.1 The Contractor agrees and obligates itself to perform and complete all works provided under the Contract and Contract Documents within **Four (4) Months** and to proceed **Seven (7) Calendar Days** after receipt of a Notice to proceed (NTP) from LRTA. Working window time is from 11:00PM to 3:00AM including mobilization and clearing of site. However, works shall be permitted during revenue hours provided that the proper isolation of each work site and equipment are secured and with prior approval by LRTA.
- 4.2 When the Contractor fails to satisfactorily deliver goods under the contract within the specified delivery schedule, inclusive of duly granted time extensions, if any, the Contractor shall be liable for damages for the delay and shall pay LRTA liquidated damages, not by way of penalty, an amount equal to one-tenth (1/10) of one percent (1%) of the cost of the delayed goods scheduled for the delivery and installation for every day of delay until such goods are finally delivered, installed and accepted by LRTA.
- 4.3 LRTA need not prove that it has incurred actual damages to be entitled to liquidated damages. Such amount shall be deducted from any money due or which may become due to the Contractor, or collected from any securities or warranties posted by the Contractor, whichever is convenient to LRTA. In no case shall the total sum of liquidated damages exceed **ten percent (10%)** of the total contract price, in which event LRTA shall automatically **rescind** the contract and impose appropriate sanctions over and above the liquidated damages to be paid.

5. CONTRACT PAYMENT

5.1 The Contract Price

Price quotation shall be in current terms and cost/price breakdown shall be made in accordance with the bidding form.

5.2 Payment

Payment will be on a **turn-key** basis upon submission of complete documents and acceptance by LRTA.

6. OTHER TERMS AND CONDITIONS

Other terms and conditions of the Contract are contained in **Annex A** which is attached hereto and made integral part of this Terms of Reference.

TOR – Upgrading of Station's UPS System (Phase 2) and Depot Electrical Room

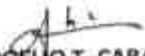
CERTIFIED TRUE COPY
NO VALID WITH ERASURES

DEPARTMENT OF BUDGET AND MANAGEMENT
PROCUREMENT SERVICE
CERTIFIED TRUE COPY OF THE ORIGINAL
AGEN SERVICING DIVISION

Prepared by:


FRANCIS A. ARCHIVIDO JR.
Senior Engineer A

Reviewed by:


ENGR. ROGELIO T. CABANILLA
Manager, Line 2 RSIS Division


Certified Correct by:


ENGR. FEDERICO J. CANAR JR.
Manager, Engineering and Maintenance
Department.

Recommending Approval by:


ENGR. EMERSON L. BENITEZ
Deputy Administrator for Operations
and Engineering

Approved by:


HON. HONORITO D. CHANECO
Administrator
JUN 29 2015

NOTE:
PAGE 8 of 8
TERMS OF REFERENCE
UPGRADING OF STATION'S UPS SYSTEM
(PHASE 2) AND DEPOT ELECTRICAL
ROOM)

DEPARTMENT OF BUDGET AND MANAGEMENT
PROCUREMENT SERVICE
CERTIFIED TRUE COPY OF THE ORIGINAL
AGENCY SERVICING DIVISION

**CERTIFIED TRUE COPY
NOT VALID WITH ERASURES**

ANNEX A

TERMS OF REFERENCE

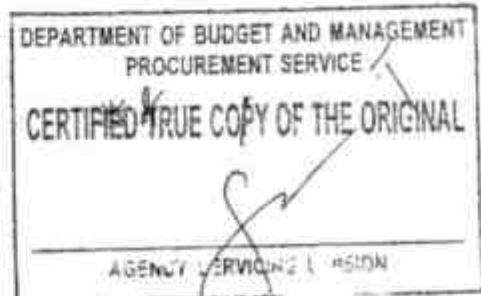
Project Name: UPGRADE OF STATION'S UPS SYSTEM (PHASE 2) AND DEPOT ELECTRICAL ROOM

PR No.

1. RESPONSIBILITIES OF THE CONTRACTOR

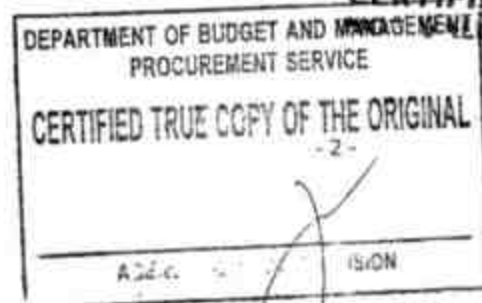
- 1.1 Satisfactorily render, perform, deliver, finish and complete all of the works stipulated under Clause 1 Project Scope of Work and its sub-clauses of the TOR.
- 1.2 Procure all imported spare parts or materials, if there is a need for such, and include the lead time for their ordering, delivery and receipt, and reasonably maintain substantial inventory of needed materials and spare parts in its own warehouse. Tariffs, duties, taxes, and all other payments to be made for the delivery of all spare parts or materials shall be to the full account of the Contractor.
- 1.3 Provide for itself storage compartments and facilities for its tools, equipment, and materials necessary for the project. Such storage compartments and facilities as well as the tools, equipment, and materials prior to their entry to the premises of the LRTA Line 2 Systems, should be duly covered by an approved entry pass and the same must be presented during withdrawal/s in the presence of authorized LRTA personnel.
- 1.4 Strictly adhere to the Work Program, Schedule and Work Methodology It has submitted and approved, and accepted by LRTA for the timely completion of the project as well other related documents.
- 1.5 Ensure at all times that any work activity work will not in any manner cause any form of delay in the day-to-day operation of the LRTA Line 2 System.
- 1.6 Notify LRTA in writing of any incident/accident occurring during the performance and delivery of the contract soonest time possible but should not be later than twenty four hours (24 hrs.) from occurrence of said accident/incident.
- 1.7 Assume full responsibility of the conduct of all its employees during the execution of the contract. Safety of its workers, LRTA employees and all other individuals within the designated workplace should always be part of the prime concern of the Contractor.
- 1.8 Ensure that while performing the services, the behavior of all its employees shall conform to generally accepted standards and act in a manner consistent with the physical safety of all persons in LRTA premises. LRTA reserves the right to remove from or to refuse admittance to its premises any person engaged in performing the services who, in the judgment of concerned LRTA personnel/staff is affected by alcohol, drugs or any intoxicating substance or banned by Philippine law, or who for

CERTIFIED TRUE COPY
NOT VALID WITH ERASURE



any other reason be deemed incapable of reliably carrying out the prescribed duties and responsibilities.

- 1.9 Immediately stop/cease/abort any work in progress and/or clear the work area/s concerned if needed and upon receipt of a written order from LRTA.
- 1.10 Shoulder the notarial fee for the Contract.
- 1.11 Provide the needed and required manpower to satisfactorily finish the subject contract, taking in for consideration the following concerns:
 - 1.11.1 ensure that all personnel are adequately trained for their respective individual jobs/assignments/duties;
 - 1.11.2 ensure that each personnel is at all times free from any communicable diseases, and is physically and mentally fit for each job assignment/duty;
- 1.12 The Contractor shall, as soon as practicable prior to the commencement of the services, submit to LRTA the names of its nominated personnel, designation, and home address, for the proper issuance of an approved duty/access pass. LRTA reserves the right to refuse entry to any personnel of the Contractor whose name does not appear in the approved roster or listing of personnel with duly issued duty/access pass.
- 1.13 Apply for needed work clearance/s from LRTA forty eight (48) hours before the commencement of work.
- 1.14 Twenty four (24) hours prior to any approved night work schedule, the Contractor should formally notify LRTA in writing of such schedule and attach the duly approved work clearance for immediate reference and allocation of the needed personnel by LRTA.
- 1.15 Provide all the necessary and mandated bonds such as but not limited to, performance, warranty and third party bonds within the specified period. Warranty for the work done and materials/spare parts delivered and installed must be free from any form of defect one (1) year from their installation and commissioning.
- 1.16 Immediately replace free of labor and material/s charge/s and cost/s any identified defective materials/spare parts delivered and installed by them.
- 1.17 The Contractor shall formally notify LRTA of its intent to submit conceptual design/s or spare parts or any material/s due for installation/use on the subject contract for purposes of technical analysis, testing, and acceptance.
- 1.18 All the required measuring and testing equipment and devices for the conduct of acceptance procedure/s shall be for the full account of the Contractor.



- 1.19 The Contractor shall warrant that it has all the necessary permits and clearances from concerned government agency/ies for the execution of the works subject of the Contract.
- 1.20 For security purposes, each employee of the Contractor shall have a valid NBI Clearance prior to and during his employment under the Contract.
- 1.21 In the event that the contractor fails to complete the works within the specified duration, the Contractor shall pay LRTA by way of liquidated damages as defined in Clause 4 of the TOR. The liquidated damages shall be imposed by the sole fact of delay, and it is not necessary that LRTA suffered loss of production, profits, business opportunity or any other indirect or consequential damages by reason of the said delay.

2. RESPONSIBILITIES AND RIGHT OF THE LRTA

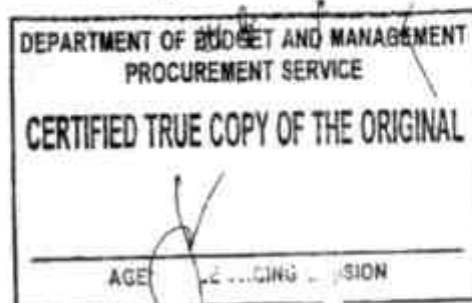
- 2.1 Pay the Contractor the cost of works duly accepted and covered with the necessary documentation within the prescribed period.
- 2.2 Attend to the needs of the Contractor upon presentation of a formal notice.
- 2.3 Monitor the over-all performance of the Contractor for the whole duration of the contract.
- 2.4 The LRTA has the right to reject any or all bids and/or to declare a failure or bidding if there is, among others, reason to suspect an evident collusion among Contractors resulting in no competition; and to waive any defect therein and to accept bids considered most advantageous to the LRTA and the Philippine Government in general.

3. QUALITY CONTROL REQUIREMENTS AND CRITERIA FOR ACCEPTANCE

- 3.1 All works/jobs done shall fully conform to all approved and issued bid and contract documents [instructions to bidders, specifications, terms of reference, plans, repair/rehabilitation methodology, submittals, quality workmanship, punch list/balance of works, and all other documents issued and received by the Contractor].
- 3.2 All materials but which shall not be limited to its conceptual design/s and spare parts shall be subject for submission for purposes of inspection, testing and acceptance by the LRTA.
- 3.3 All measuring and test devices and equipment shall be duly covered by a valid certificate of calibration from concerned regulatory agency/ies.
- 3.4 The Contractor shall submit:
 - 3.4.1 Certified True Copy of the Notice of Award/Notice to Proceed

CERTIFIED TRUE COPY
NOT VALID WITH ERASURES

- 3 -

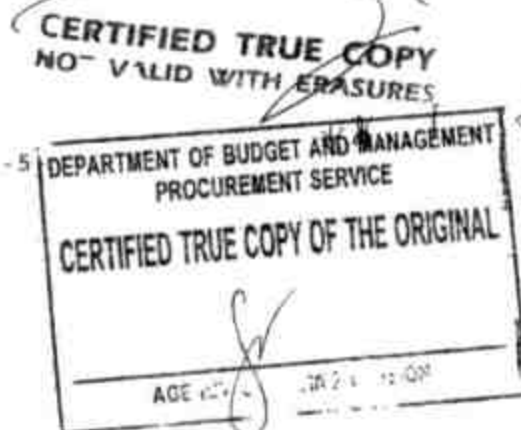


4.2 WARRANTY BOND

4.2.1 In order to assure that defects shall be corrected by the Contractor, a warranty shall be required from the Contractor for a minimum of period of two (2) years after performance & completion of the contract and acceptance of the materials provided and services rendered. The obligation for the warranty shall be covered by either retention money in an amount equivalent to at least ten percent (10%) of the total contract price or a special bank guarantee equivalent to at least ten percent (10%) of the total contract price. The said amounts shall only be released after the lapse of the warranty period; Provided, however, that the goods supplied and services rendered are free from patent and latent defects and all the conditions imposed under the contract have been fully met.

5. GENERAL TERMS AND CONDITIONS

- 5.1 LRTA may at any time terminate the Contract forthwith if, in the reasonable opinion of LRTA, the Contractor is in breach of any provision of the Contract and fails to remedy the breach within seven (7) days after written notice from LRTA. The termination of the Contract shall not affect the right and remedies of either party against the other for any previous breach of Contract.
- 5.2 The Contractor is to understand that any work not specifically mentioned in the specifications, TOR, and all other bid and contract related documents officially issued or submitted during the contract period and its extension as the case may so apply, but which is necessary, either directly or indirectly, for the proper carrying out of the intent thereof, shall be required and supplied, and Contractor shall perform such work just as if it was particularly defined, described or required. Proper documentation for such occurrence should be on the initiative of the Contractor and will be for the evaluation, approval, acceptance, and payment of LRTA subject to existing guidelines, laws, and standards. Unless specifically mentioned above, all works shall conform to the standards of the LRTA system.
- 5.3 All and every acts, activities and behaviors, in the execution of the contract, shall in no way contravene any existing law, rules, regulations, and government and LRTA policies.
- 5.4 There shall be no assignment whatsoever of any or all parts of the contract to a third party without prior written consent of LRTA.
- 5.5 LRTA shall not bind itself in any manner to any agreement for the exclusion of certain competitions of the Contractor.
- 5.6 The Contractor must exercise all due diligence in carrying out its obligations under contract.
- 5.7 The Contractor is an independent Contractor of LRTA and that no employer and employee relationship is created between LRTA on one hand and the Contractor or its employees or other persons engaged in performing the services on the other hand.



5.8 The Contractor shall hold LRTA free and harmless from any and all fines, penalties, losses, liabilities and litigation expenses incurred or suffered on account of death, injury, loss or damage to persons and properties arising from the execution/implementation of the Contract.

5.9 LRTA shall review the performance of the Contractor's personnel engaged in the carrying out the services. In the event that LRTA determines the performance of any of the personnel is not in accordance with accepted industry/commercial standards, LRTA, may request the replacement of such, personnel within a reasonable time, subject to pertinent requirements of Philippine Labor Laws or the rules or regulations of any government agency or of LRTA.

5.10 **CHANGES IN THE WORK**

LRTA may at anytime, without invalidating the Contract and after prior notice and with the conformity of the sureties, order extra work or make changes by altering, adding to or deducting from the work where it is found necessary as covered by the specifications and other documents pertinent to the Contract and within the general scope thereof. LRTA in writing shall order such changes and the Contractor shall immediately proceed with the implementation of the written order within two (2) days from receipt thereof.

6. **FORCE MAJEURE**

The contracting party shall not be liable for non-performance of any of the provisions of the Contract when the same is due to force majeure such as, but not limited to, fires, floods, earthquakes, typhoons, storms, strikes, lockouts, civil commotion, riots, rebellion, insurgency, blockades or any government embargo, regulation or restriction, epidemic, acts of God, wars or any other causes beyond their control, regardless of whether such causes arises directly or indirectly.

7. **PHILIPPINE LAW**

7.1 The Contractor shall comply with all relevant requirements of Philippine Laws such as and of the rules and regulations of any government agency or LRTA, including laws, regulations and policies concerning the employees of the Contractor engaged in performing the services.

7.2 The Contractor shall give all notices and secure all permits and certificate required by such laws, regulations and decrees. The Contractor shall be solely liable for any and all Contractor's taxes, levies, duties and fees pertinent to the performance of the subject services.

7.3 The provisions of R.A. No. 9184 and its implementing rules and regulations shall, among other laws, shall primarily govern the Contract.

**CERTIFIED TRUE COPY
NO VALID WITH ERASURES**



- 3.4.2 Bar Chart Schedule and S-Curve showing among others the comparison of planned vs. actual done activities.
- 3.4.3 Project pictorials on weekly intervals upon receipt of the Notice to Proceed with caption including negatives in any form of electronic media, i.e. cd's, dvd's, USB's.
- 3.4.4 Test Reports and Certificates
- 3.4.5 As-built drawings (1 set original, 1 set white print, each in hard and electronic copy) if applicable.
- 3.4.6 Copies of approved changes in design/specification/contract documents (if applicable).

4. BOND REQUIREMENTS

4.1 PERFORMANCE BOND

- 4.1.1 Within ten (10) calendar days after the signing of the contract, the winning bidder shall be required to post a performance security in favor of LRTA according to the following schedule:

Acceptable Form	Required amount in percent of total Contract Price
Cash, Manager's Check, Cashier's Check	Five Percent (5%)
Bank Guarantee	Ten Percent (10%)
Surety Bond, callable on demand issued by the GSIS or any Surety Company accredited by the Insurance Commission and acceptable to LRTA.	Thirty Percent (30%)

- 4.1.2 If the performance security is in the form a bank guarantee it must be confirmed by a reputable local bank or in the case of a foreign winning bidder, bonded by a foreign bank.
- 4.1.3 Subject to the conditions of the contract, the performance security may be released after the issuance of the "Certificate of Completion and Acceptance" of the goods provided and services rendered and that there are no claims filed against the contractor or its bondsmen.
- 4.1.4 The winning bidder shall post additional performance security proportionate to cover any increase of more than ten percent (10%) over the original value of the contract, or extend the validity of the performance security to cover approved contract time extensions, if any.

**CERTIFIED TRUE COPY
NO VALID WITH ERASURES**

DEPARTMENT OF BUDGET AND MANAGEMENT
PROCUREMENT SERVICE
CERTIFIED TRUE COPY OF THE ORIGINAL
AGENCY: SERVICING DIVISION