



REQUEST FOR QUOTATION (RFQ)
For Installation of Fire Alarm and Public Address System at UN House,
Pulchowk.

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|------------------------|-----------------------------|
| NAME & ADDRESS OF FIRM | DATE: August 6, 2019 |
| | REFERENCE: UNDP/RFQ/18/2019 |

Dear Sir / Madam:

We kindly request you to submit your quotation for **Installation of Fire Alarm and Public Address (PA) System at UN House, Pulchowk**, as detailed in Annex 1 of this RFQ. When preparing your quotation, please be guided by the form attached hereto as Annex 2.

Quotations may be submitted on or before **5:00PM, August 23, 2019** in sealed envelope by *courier mail or hand delivery* to the address below:

United Nations Development Programme
Ref: UNDP/RFQ/18/2019
The Registry, Reception, UN House
Pulchowk, Lalitpur, Nepal

It shall remain your responsibility to ensure that your quotation will reach the address above on or before the deadline. Quotations that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation.

Please take note of the following requirements and conditions pertaining to the above mentioned services:

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| Delivery Terms [INCOTERMS 2010] (Pls. link this to price schedule) | <input checked="" type="checkbox"/> Other: N/A |
| Customs clearance, if needed, shall be done by: | <input checked="" type="checkbox"/> Supplier/Offeror |

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| Exact Address/es of Delivery Location/s (identify all, if multiple) | UN House, Pulchowk, Lalitpur Nepal |
| UNDP Preferred Freight Forwarder, if any | Not applicable |
| Distribution of shipping documents (if using freight forwarder) | Not applicable |
| Latest Expected Delivery Date and Time (if delivery time exceeds this, quote may be rejected by UNDP) | <input checked="" type="checkbox"/> 8-10 weeks upon signing of the contract |
| Delivery/Work Schedule | <input checked="" type="checkbox"/> Required |
| Packing Requirements | |
| Mode of Transport | |
| Preferred Currency of Quotation ¹ | <input checked="" type="checkbox"/> Local Currency: Nepalese Rupees (NPR.) inclusive of VAT |
| Value Added Tax on Price Quotation | <input checked="" type="checkbox"/> Must be inclusive of VAT and all other applicable indirect taxes |
| After-sales services required | <input checked="" type="checkbox"/> Warranty on Parts and Labor as mentioned in the specifications <input checked="" type="checkbox"/> Technical Support <input checked="" type="checkbox"/> Provision of Service Unit when pulled out for maintenance/repair |
| Deadline for the Submission of Quotation | 5:00PM, <u>August 23, 2019</u> |
| All documentations, including catalogs, instructions and operating manuals, shall be in this language | <input checked="" type="checkbox"/> English |
| Documents to be submitted | <input checked="" type="checkbox"/> Duly Accomplished Form as provided in Annex 2, and in accordance with the list of requirements in Annex 1; <input checked="" type="checkbox"/> Latest Business Registration Certificate; <input checked="" type="checkbox"/> Latest VAT/PAN Registration Certificate; <input checked="" type="checkbox"/> Latest Tax Clearance Certificate; <input checked="" type="checkbox"/> Self-certification showing successfully supplied and installed at least 2 (two) Addressable Fire Alarm System and PA System in the past 4 years with the same brand the bidder is bidding; <input checked="" type="checkbox"/> Minimum 2 client certificates to evidence successful completion of similar work |

¹ Local vendors must comply with any applicable laws regarding doing business in other currencies. Conversion of currency into the UNDP preferred currency, if the offer is quoted differently from what is required, shall be based only on UN Operational Exchange Rate prevailing at the time of UNDP's issuance of Purchase Order.

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| | <input checked="" type="checkbox"/> Brochures including technical specifications of the proposed items should be provided; <input checked="" type="checkbox"/> Written Self-Declaration of not being included in the UN Security Council 1267/1989 list, UN Procurement Division List or other UN Ineligibility List; |
| Period of Validity of Quotes starting the Submission Date | <input checked="" type="checkbox"/> 90 days In exceptional circumstances, UNDP may request the Vendor to extend the validity of the Quotation beyond what has been initially indicated in this RFQ. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Quotation. |
| Partial Quotes | <input checked="" type="checkbox"/> Not permitted |
| Payment Terms | <input checked="" type="checkbox"/> Payment will be made upon completion of the project and acceptance by UNDP |
| Liquidated Damages | <input checked="" type="checkbox"/> Will be imposed under the following conditions: Percentage of contract price per day of delay: 0.5% of the contract value Max. no. of days of delay: 15 days After which UNDP may terminate the contract. |
| Evaluation Criteria | <input checked="" type="checkbox"/> Technical responsiveness/Full compliance to requirements and lowest price ² <input checked="" type="checkbox"/> Sample Verification Bidders will be requested to provide demonstration of proposed system. <input checked="" type="checkbox"/> Full acceptance of the PO/Contract General Terms and Conditions |
| UNDP will award to: | <input checked="" type="checkbox"/> One and only one service provider |
| Type of Contract to be Signed | <input checked="" type="checkbox"/> UNDP's Contract for Civil Works/ Refurbishment |

² UNDP reserves the right not to award the contract to the lowest priced offer, if the second lowest price among the responsive offer is found to be significantly more superior, and the price is higher than the lowest priced compliant offer by not more than 10%, and the budget can sufficiently cover the price difference. The term "more superior" as used in this provision shall refer to offers that have exceeded the pre-determined requirements established in the specifications.

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| Special conditions of Contract | |
| Conditions for Release of Payment | <input checked="" type="checkbox"/> Written Acceptance of completion of the services, based on full compliance with RFQ requirements |
| Annexes to this RFQ ³ | <input checked="" type="checkbox"/> Scope of Work and Technical Specifications (Annex 1) <input checked="" type="checkbox"/> Form for Submission of Quotation (Annex 2) <input checked="" type="checkbox"/> General Terms and Conditions / Special Conditions (Annex 3). <input checked="" type="checkbox"/> Layout Drawings (Annex 4) Non-acceptance of the terms of the General Terms and Conditions (GTC) shall be grounds for disqualification from this procurement process. |
| Contact address for Inquiries (Written inquiries only) ⁴ | <p><i>Procurement Unit</i> <i>UNDP Nepal</i> <i>Email: query.procurement.np@undp.org</i></p> <p>Written inquiries must be submitted mentioning RFQ Ref: UNDP/RFQ/18/2019 (SA), on or before 10:00AM, August 15, 2019. UNDP shall post the compiled inquiries with the responses in UNDP Website: http://www.np.undp.org/content/nepal/en/home/operations/procurement.html. Inquiries received after the above date and time shall not be entertained.</p> <p><i>Interested bidders are encouraged to attend a pre-bid meeting planned as follows:</i> Date: 15 August 2019 Time: 11 am to 1 pm Venue: UN Conference Room, UN house, Pulchowk, Lalitpur Phone: +977-1-5523200</p> <p>Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers</p> |

Goods offered shall be reviewed based on completeness and compliance of the quotation with the minimum specifications described above and any other annexes providing details of UNDP requirements.

The quotation that complies with all of the specifications, requirements and offers the lowest price, as well as all other evaluation criteria indicated, shall be selected. Any offer that does not meet the requirements shall be rejected.

³ Where the information is available in the web, a URL for the information may simply be provided.

⁴ This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

Any discrepancy between the unit price and the total price (obtained by multiplying the unit price and quantity) shall be re-computed by UNDP. The unit price shall prevail and the total price shall be corrected. If the supplier does not accept the final price based on UNDP's re-computation and correction of errors, its quotation will be rejected.

After UNDP has identified the lowest price offer, UNDP reserves the right to award the contract based only on the prices of the goods in the event that the transportation cost (freight and insurance) is found to be higher than UNDP's own estimated cost if sourced from its own freight forwarder and insurance provider.

At any time during the validity of the quotation, no price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the quotation. At the time of award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Purchase Order that will be issued as a result of this RFQ shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a quotation implies that the vendor accepts without question the General Terms and Conditions of UNDP herein attached as Annex 3.

UNDP is not bound to accept any quotation, nor award a contract/Purchase Order, nor be responsible for any costs associated with a Supplier's preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.

Please be advised that UNDP's vendor protest procedure is intended to afford an opportunity to persons or firms not awarded a purchase order or contract in a competitive procurement. **In the event that** you believe you have not been fairly treated, you can find detailed information about protest procedures in the following link:
<http://www.un.org/content/undp/en/home/operations/procurement/protestandsanctions/>

UNDP encourages every prospective Vendor to avoid and prevent conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, specifications, cost estimates, and other information used in this RFQ.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its suppliers to adhere to the UN Supplier Code of Conduct found in this link : http://www.un.org/depts/ptd/pdf/conduct_english.pdf

Thank you and we look forward to receiving your quotation.

Sincerely yours,



Niraj Shrestha

Assistant Resident Representative (Operations), UNDP Nepal

August 6, 2019

Scope of Work:

1. Project Description

Supply, Install, Commissioning and provide Operational Training of Addressable Wired Fire Alarm System with Manual Public Address System at the UN House, Pulchowk with the following works:

- a. **Background:** There are a total of 4 multistory buildings and 9 single story buildings. The Building Drawing is attached at Annex 4 along with the Wiring Diagram.

The Objective of this SoW is to install Addressable Wired Fire Alarm System with Manual Public Address (PA) System for the Fire Safety at the UN House.

The Cabling and installation of Manual PA System, Speakers, Devices, modules, cabinet, repeater panel, required components and Wired Fire Alarm System should be carried out to minimize damages to the furniture and fixtures, existing wires, pipes, ducts and the building structures. All civil work design must be submitted to UNDSS in written format for approval from Security Adviser/representative, prior to any civil work.

- b. **Addressable Fire Alarm System:** Supply and Install a complete working Addressable Wired Fire Alarm System with Manual PA System. All systems and its components must be approved and certified by governing bodies like European Standards, Underwriters Laboratories, Communauté Européenne, British Standards or Similar governing bodies with their numbers.

Install :

- i. Wired Addressable Smoke Detector
- ii. Wired Addressable Heat Detector
- iii. Wired Addressable Hooter/Sounder/Siren
- iv. Wired Addressable Strobe/Sounder Beacon
- v. Wired Addressable Manual Call Point/Manual Pull Station
- vi. Fire Alarm Control Panel
- vii. Manual PA System
- viii. Speakers
- ix. Repeater Panel, Cables, Conduits and/or other necessary devices required to bring the equipment into operation

- c. **Testing and Commissioning:** After the Contractor submits a letter certifying that the work mentioned in the above point (ref. bullet point b) has been completed, an appropriate test described in "Technical Specifications" will be carried out in presence of Consultant, CS and UNDSS representatives to ensure that all the components are fully functional. Any product found to be defective should be replaced without any additional cost.

2. LABOUR, MACHINES AND CIVIL WORK

Contractor has to supply all labour, machines, ladders, scaffoldings, Safety Equipment like Harness, and related to Civil Work. The UN House will not provide any equipment, material or labour to complete the project.

All Safety Equipment shall be provided by Contractor and all labour safety shall be the responsibility of the Contractor.

Any damage caused to the building shall be the responsibility of the Contractor. The Contractor shall repair or replace any damage caused to the building, equipment etc.

3. PROJECT SCHEDULE

Contractor has to provide the schedule of work and time frame during the submission of work. The contractor should have resources to work at off hours and weekends. The timings will be finalized during the signing of the contracts. The starting date will be determined by UN House and will be inform to the contractor by Email ID, at least One Week prior to start.

4. PRODUCT DEMONSTRATION

The UNDSS and CS shall have the right to request the Contractor to provide Demonstration of the proposed System before accepting the bid. During the Demonstration, the proposed system shall be evaluated based on its performance. In such scenario, the Contractor shall provide the Demonstration at no additional cost.

5. SUMMARY OF ITEMS

| Serial | Building Details | Op. Smoke | Heat | MCP | Hooter | Speaker |
|--------|---------------------------------------------------|--------------|------|-----|--------|---------|
| 1 | Main Building – Building 1 | 123 | 3 | 12 | 12 | 26 |
| 2 | Building 2 | 52 | 4 | 4 | 9 | 14 |
| 3 | Building 3 | 6 | 0 | 2 | 2 | 2 |
| 4 | Reception Building -4 | 7 | 0 | 2 | 2 | 3 |
| 5 | UN Emergency Operations Center - Building 5 | 6 | 0 | 1 | 2 | 3 |
| 6 | UN Department Of Safety And Security – Building 6 | 13 | 0 | 2 | 2 | 2 |
| 7 | Fuel Storage and Generator Area | 0 | 1 | 0 | 0 | 0 |
| 8 | Mains Supply | 2 | 1 | 1 | 1 | 0 |
| 9 | UN Clinic | 6 | 0 | 1 | 2 | 2 |

| | | | | | | |
|----|---------------------------------|-----|----|----|----|----|
| 10 | Store/Parking Area | 1 | 0 | 0 | 0 | 0 |
| 11 | Guard House | 1 | 0 | 0 | 0 | 0 |
| 12 | Electrician/Gardener's Room | 3 | 0 | 0 | 0 | 0 |
| 13 | Electric Block | 1 | 1 | 0 | 0 | 0 |
| 14 | Driver Waiting | 1 | 0 | 0 | 0 | 0 |
| 15 | Creche | 1 | 0 | 0 | 0 | 1 |
| 16 | Flag Area Outdoor Speakers Only | 0 | 0 | 0 | 0 | 6 |
| | Total | 223 | 10 | 25 | 32 | 59 |

Annex 1A: TECHNICAL SPECIFICATION

I. INTELLIGENT ADDRESSABLE FIRE DETECTION & ALARM SYSTEM

1. DESCRIPTION OF WORK

- a. This specification outlines the requirements for an Intelligent, addressable fire detection and alarm system.
- b. The work described in this specification consists of all labor, materials, equipment and services necessary and required to complete and test the automatic fire detection and alarm system. Any material not specifically mentioned in this specification or not shown on drawings but required for proper performance and operation shall be furnished and installed for a complete and operational system, by the contractor at no extra cost.
- c. The contractor shall furnish, and install complete and ready for intended use and operation, an automatic fire detection and alarm system including control panel (s), initiating devices (Manual Call Point, intelligent smoke and heat detectors, etc.) indicating devices (Sounders, Strobes etc.) and supervisory devices wiring apparatus and accessories.
- d. The installation and locations of equipment and devices in the building shall be governed by the specifications and drawings with due regard to actual site conditions, manufacturers' recommendations, ambient factors affecting the equipment and other operations in the vicinity. If any departure from the specifications or drawings is necessary, approval shall be obtained from the UNDSS before work is started.
- e. Materials and equipment shall be new, first grade, standard; current models of the manufacturer and shall be suitable for this system.
- f. All materials, devices, and equipment shall be compatible with the circuits or systems in which they are utilized.
- g. The system shall have provisions for interfacing the same with compatible Building Management System(BMS).

2. APPLICABLE STANDARDS

| | |
|-------------------------------------|----------------------------------------------------------------------------------------|
| IS : 2175 | SPECIFICATION FOR HEAT SENSITIVE FIRE DETECTORS FOR USE IN AUTOMATIC FIRE ALARM SYSTEM |
| IS : 2189 | SELECTION, INSTALLATION AND MAINTENANCE OF AUTOMATIC FIRE-DETECTION AND ALARM SYSTEM |
| IS : 11360 | SPECIFICATION FOR SMOKE DETECTORS FOR USE IN AUTOMATIC ELECTRICAL FIRE ALARM SYSTEM |
| BS : 5445, EN/UL/CE FM/ NFPA/VDS | FIRE DETECTION AND ALARM SYSTEM |

3. SUBMITTALS

3.1 Tests & Test Reports

- a) Manufacturer's Test Certificates/Reports shall be furnished for approval of all Fire alarm devices and all system devices.
- b) All available Test Report shall be furnished.

3.2 Warranty

- a) Statement of Warranty of Material for minimum of 2 Years.
- b) Statement of Warranty of Work for minimum of 1 Year.
- c) Statement to Supply, Install and Repair of Spare parts at Market Price beyond the Warranty Period.
- d) Statement to Supply, Install and Repair Critical Parts. Critical parts should be available locally for five years. .

3.3 Letters from Manufacturer(s)

- a) Letter from Manufacturers to provide 5 years' Spare Parts support for the Fire Alarm Panel, Devices and all proposed Systems.
- b) Letters from Manufacturers declaring full compatibility of Fire Alarm Panel, Protocols, Devices and all proposed System.
- c) Letters from Manufacturers declaring that they shall Supply, Install and Repair the Fire Alarm System and provide Local Service/Support beyond the Warranty Period.

4. SPECIFICATIONS

4.1 FIRE ALARM SYSTEM DEVICES

4.1.1 Addressable Manual Call Point

- i. The Addressable Manual Call Point shall be of Addressable type.
- ii. It shall be able to communicate with the Fire Alarm Panel and be identified with its unique identifier.
- iii. It shall be of rugged die cast without any sharp edge. They shall have key to reset lock, and shall be designed so that after actual emergency operation, they cannot be restored to normal use except by the use of a key.
- iv. Provisions shall be made such that the address cannot be changed merely from opening it.
- v. The Voltage of the Fire Alarm Panel must bring it into operational mode.

4.1.2 Addressable Heat Detectors

The Specification shall meet the IS 2175: Specification for Heat Sensitive Fire Detectors for use in Automatic Fire Alarm System.

Features

- i. The Addressable Heat Detector shall be of Addressable type.
- ii. It shall be able to communicate with the Fire Alarm Panel and be identified with its unique identifier. The Base shall be compatible with the Detector.
- iii. It shall be able to detect fire with heat detection sensing. It shall be able to withstand temperature variations without giving false alarms. The relative Humidity shall not hamper its performance.
- iv. The Voltage of the Fire Alarm Panel must bring the detector into operational mode.
- v. The Detector shall meet standards such as EN, UL, CE etc. The approved coverage per Detector for unhampered areas shall not be less than 30 sq. M. The detector shall be capable of being reset automatically after any alarm condition.
- vi. It shall be with in-built fault isolators. (an external isolators must be included if not inbuilt)

4.1.3 Addressable Smoke Detectors

The Specification shall meet the IS 11360: Specification for Smoke Detectors for use in Automatic Fire Alarm System.

Features

- i. The Addressable Smoke Detector shall be of Addressable type.
- ii. It shall be able to communicate with the Fire Alarm Panel and identified with its unique identifier. The Base shall be compatible with the Detector.
- iii. The Addressable Smoke Detector shall have an optical sensing chamber that operates on the light scattering principle and responds to those particles in smoke.
- ii. The Detector shall be able to sense fire by detecting the presence of smoke without giving false alarms. The relative Humidity shall not hamper its performance.
- iii. The approved coverage per Detector for unhampered areas shall not be less than 50 sq. M. This coverage area will reduce depending upon structural configurations or partitions etc. It shall be possible to adjust the sensitivity of Detector to suit the site requirement.
- iv. The Voltage of the Fire Alarm Panel must bring the detector into operational mode.
- v. The Detector shall meet standards such as EN, UL, CE etc.
- vi. It shall be with in-built fault isolators. (an external isolators must be included if not inbuilt)

4.1.4 Strobe / Alarm Hooters

The Strobe / Alarm Hooters shall have frequency range of 500 Hz to 1000 Hz of minimum 65dB and shall meet all the requirement of IS 2189: Selection, Installation and Maintenance of Automatic Fire Alarm Detection and Alarm System.

Strobe / Alarm hooters shall be suitable for indoor use. It shall be addressable type and with fault isolation (an external isolators must be included if not inbuilt). It shall be audible and visible both.

4.1.5 FIRE ALARM PANEL (FAP)

Fire Alarm panel shall be modular with Liquid Crystal Display (LCD), function key pad or touch screen, and as specified below.

a. Functions

The Fire Alarm Control Panel (FACP) shall include a full featured operator interface control and shall include a liquid crystal display, with system status LEDs, and an alphanumeric keypad or touch screen for the field programming and control of the fire alarm system.

It shall have a provision for battery storage. The FACP shall be capable of PA Integration with the use of RS232 module or with the use of relays. Each loop shall accommodate at least 250 detectors and devices in with a loop length capable at least 1.6kms with 2 Core x 1.5sqmm cable.

The FACP shall be capable of disabling an individual detector for building maintenance purposes. Facility shall be provided on the FACP for simulating the fire condition for effective testing of alarm circuits.

All the fire alarm modules (loop cards, networking cards, and communication card. Etc. should be pluggable and swappable to facilitate easy replacement of faulty modules. All the electronic components shall be compatible to non-air-conditioned environment. The FACP shall be resettable only by authorized users after the clearance of a fault.

The FACP shall have Alarm Verification to eliminate False alarms due to Dirt/Dust/Disturbance values. It shall have EMI(Electro-Magnetic Interference) Monitoring to inform the possibility of a false alarm caused due to interferences from sources such as Motors, power cables, Wi-Fi routers, fluorescent lamps, network switches, mobile signals, etc.

All programming or editing of the existing program in the system shall be achieved without special equipment and without interrupting the alarm monitoring functions of the fire alarm control panel.

The main FACP shall perform the following functions:

- a. Supervise and monitor all addressable detectors and monitor modules connected to the system for normal, trouble and alarm conditions.
- b. Supervise all initiating signaling and notification circuits throughout the facility by way of connection to monitor and control modules.
- c. Detect the activation of any initiating device and the location of the alarm condition. Operate all notification appliances and auxiliary devices as programmed.
- d. Visually and audibly annunciate any trouble, supervisory, security or alarm condition on operator's terminals, panel display, and annunciators.

When a fire alarm condition is detected and reported by one of the system initiating devices or appliances, the following functions shall immediately occur:

- a. The system alarm shall flash.
- b. An audible device connected to the control panel shall sound a distinctive signal.
- c. The LCD display shall indicate all information associated with the fire alarm condition, including the type of alarm point and its location within the premises.
- d. Event information log must be created with a time and date stamp.
- e. All system outputs assigned via preprogrammed outputs for a particular point in alarm shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.

c. **Central Processing Unit / Signal Loop**

The Central Processing Unit shall communicate with monitor, and control all other modules within the control panel. Removal, disconnection or failure of any control panel module shall be detected and reported to the system display by the Central Processing Unit.

The Central Processing Unit shall contain and execute all control-by-event programs for specific action to be taken if an alarm condition is detected by the system. Such control-by-event programs shall not be lost with system primary and secondary power failure.

The Central Processing Unit shall also provide a real-time clock for time annotation of all system events. The time-of-day and date shall not be lost if system primary and secondary power supplies fail.

The CPU shall be capable of being programmed on site without requiring the use of any external programming equipment. Systems that require the use of external programmers or change of EPROMs are not acceptable.

The CPU and associated equipment are to be protected so that they will not be affected by voltage surges or line transients consistent.

The Single Line Circuit(SLC) interface board shall not require any special settings to initialize operations.

The SLC interface board shall provide power and communicate with all addressable detectors and modules with full compatibility.

The SLC interface board shall receive all information from all addressable detectors and shall process this information to determine whether normal, alarm, or trouble conditions exist for that particular device. The software shall be included to automatically maintain the detector's desired sensitivity level by adjusting for the effects of environmental factors, including the accumulation of dust in each detector. The information may also be used for automatic detector testing and the automatic determination of detector maintenance requirements.

The control panels shall be housed in a cabinet suitable for surface or semi-flush mounting. Cabinet and front shall be corrosion protected, given a rust-resistant prime coat, and manufacturer's standard finish.

d. **POWER SUPPLY**

- a. The control panel shall derive 220-230 Volts power from main supply. A standby power supply shall be immediately available in the event of failure of normal supply and shall automatically be connected so as to maintain the equipment in condition such that fire alarm originating from the operation of Detector can be given. The standby battery as secondary supply shall be such that when charged by associated battery charging equipment it can operate independently for 12 hours. It shall have enough power supply to cope with additional load resulting in alarm originated from two separate zones for 30 minutes. Batteries shall be of Lead Acid type and sealed Maintenance free.
- b. Necessary automatic changeover from normal to standby DC supply in case of main supply failure shall be provided by the Contractor.
- d. In addition to the batteries, a battery charging mechanism shall be available.
- e. Visible and audible annunciation for troubles or failure in the power supply system like "charger Failure", "Battery Low Voltage", etc. shall be provided.
- f. Battery earth/fault indication/annunciation shall be included in the panel.

e. **Wiring**

Wiring shall be carried out with 2 core, 1.5 sq. mm. stranded copper conductor which shall be PVC insulated.

4.1.6 **Repeater Panels**

- 1) It shall have an LCD display.
- 2) Repeater panels shall be suitable for Wall mounting to exactly locate the fire.
- 3) It shall be compatible to receive data from FACPs.
- 4) Audio visual Alarms during fire shall be generated in case of fire.
- 5) It shall connect to Fire Panels in the Network using a 2 core – 1.5 sq.mm wire.
- 6) The Power supply to the Repeater Panel shall be drawn from the nearest Fire Panel or locally and also be supervised by the Main Panel.
- 7) The Repeater Panel shall display Messages like Alarm & Fault similar to the Main Panel and shall be accessed only by Authorized Users through a password.
- 8) The Repeater Panel's screen should be readable in normal indoor lighting.
- 9) The Repeater panel shall allow the users to login locally or login to the remote FACP.
- 10) The Repeater panel shall allow to create users with different access levels locally and shall also allow users of panels to login based on access levels.
- 11) The repeater panels shall integrate with the main panels without any additional interface or the bidder shall consider necessary accessories required to complete the system and quote as part of this model.

5 TESTING AND COMMISSIONING

5.1 SMOKE DETECTOR:-

The testing shall be carried out for each loop initially one detector in a loop and subsequently two or more disassociated detectors in each loop with some time gap between the detectors for alarm acknowledge and Reset.

An identified detector will be subjected to smoke aspiration from burning paper or cigarette puffs, held at 0.3 m distance from the detector. The panel should indicate through sounder and hooter that alarm signal has been transmitted throughout the system.

This test shall be carried out in different loops as well as two loops simultaneously. This part of the detector test shall be repeated again.

5.2 HEAT DETECTOR:

The same test in the same sequence shall be carried out for this type of detector but with the application of heat from a hair dryer-held at approximately 60 cm distance. Repeat testing of the same detector shall be carried out.

5.3 Combined Test:-

The next test will be in combination of smoke/heat detector, simultaneously with a time gap between application of smoke or heat or as required by the Employer's representative.

The panel shall be checked for basic tests, such as, visual checking of input voltage and amperage. All loops one by one, shall be D-wired to check for fault signal indication in the panel.

Subsequently, in every loop of panel, a detector shall be subjected to smoke or heat test and signals shall be checked on the panel.

The hooter shall sound automatically and the sounders shall also sound. It shall also be possible to check that the hooters of all panels sound automatically through the panels.

The power source shall be cut off and checked for standby supply from the batteries.

Tests shall be conducted for AC failure, charger failure, battery disconnected or battery failure. In all such cases the relevant indication should come and the sounder shall also sound alarm.

5.4 Manual Call Point:

The manual call point's glass shall be removed by unscrewing the back. The micro switch shall instantaneously give a fire signal in the panel. In case of pull type stations test procedures as recommended would be carried out.

5.5 Random Sample Testing:

About 5% of all fire alarm components shall be subjected to random testing by connecting to the panels.

All smoke detectors shall be tested as given above and later cleaned with a vacuum cleaner.

Hooters shall also be tested through direct 24V supply. It shall be tested for 10 minutes.

5.6 Testing of Earthing system:

The earth continuity conductor including metallic parts of the equipments shall be tested for earth to electrical continuity. All tests shall be carried out and resistance of complete installation shall not be more than one ohm.

5.7 COMMISSIONING AND ACCEPTANCE TESTS

The commissioning and acceptance tests shall be apart from the standard or routine tests prescribed and normally conducted by the manufacturer/Contractor and will be irrespective of the fact whether the same are covered by such tests or not.

- a. Each sounder circuit shall be energized separately and the sound level reading taken to check for conformity with the minimum standards.
- b. Mains failure performance.
- c. Battery disconnection test.
- d. Open circuit of each sounder circuit to be tested.
- e. Short circuit of each sounder circuit to be tested.
- f. The results of the above tests either by fault warning or fire alarm shall be recorded in the log books which will be signed both by the Contractor and the UNDSS's Representative.

5.8 TESTS AT SITE

- i) All commissioning tests will be carried out at the site.
- ii) Following test shall be conducted:-
 - a. Loop Checking
 - b. Checking of smoke detectors, Heat detectors etc. by simulation.
 - c. Functional tests for fire alarm panel.
 - d. The Mock trial of the complete Fire Detection and Alarm system.

II. MANUAL PUBLIC ANNOUNCEMENT(PA) SYSTEM

The PA Panel shall have a standby power supply. It shall be immediately available in the event of failure of normal supply. Using the standby power, it shall be able to operate for 2 hours.

1 PA Panel (Audio Mixer)

- i. The system shall be capable of delivering multi-channel audio messages simultaneously over copper or fiber media.
- ii. All audio messages and live voice announcement shall originate at the one-way PA Panel.
- iii. It shall have universal, balanced input connector.
- iv. It shall have speech filter for improved speech clarity and optimized for speech application.
- v. It shall have zone selector switches.
- vi. It shall be EN 60065, EN 55103 certified.

2 Audio Amplifier

Amplifiers shall be of same make as PA Panel. It should be ideally suited for distributed audio transmission. The Amplifier's Watt output should be minimum of 600Watts and must match the specifications of the speakers and must not overload the amplifiers. Speakers shall be able to connect directly to the output of the amplifier. On-board status LEDs shall be provided for quick visual indication of amplifier status. The Amplifiers shall be placed in a Cabinet with the capability to incorporate two amplifiers. (in case the Amplifier is different from PA Panel, then a separate Manufacturer's Certificate of Compatibility must be submitted).

3 Ceiling/ Wall/Outdoor Speakers

The ceiling speakers shall be small, compact, and attractive audible emergency announcing devices. It shall protruding no more than one inch from the ceiling. Speakers shall blend with any décor with quality anchors and accessories. The speakers shall produce a minimum sound of 80db at 1 meter. The Ceiling Speakers shall be EN 60849 certified. It shall withstand two times their rated power for short durations to ensure reliability under extreme conditions for longer operating life and less chance of failure.

The Ceiling Speakers shall have housings in architecturally neutral white or eye-catching fire alarm red. It shall be locked in place to prevent movement after installation and shall have water and dust protection. The Ceiling Speaker shall be compatible with Audio Amplifier. The Ceiling Speakers shall be designed for use in Emergency Voice Announcement application and EN 60065 certified.

The Wall Speakers shall be EN60065 certified. It shall have dust and water protection. The Wall Speakers shall be UL94 certified for self-extinguishing property. Speakers shall blend with any décor with quality anchors and accessories.

The outdoor type speakers shall be weatherproof and have Ingress Protection rating, IP66, with appropriate mounting accessories.

All Speakers shall have matching transformer and built-in protection to ensure that in the event of damage to the loudspeaker the integrity of the system is maintained. All Speakers shall not reduce line losses on longer distance and shall have product specifications sheet with frequency response graph.

(in case any Speaker is different from Amplifier, then a separate Manufacturer's Certificate of Compatibility must be submitted).

PREAMBLE TO BILL OF QUANTITIES

1. The Bill of Quantities should be read with all the other sections of this Tender. All the items of work mentioned in the Bill of quantities covered by this contract shall be carried out as per the drawings, specifications and directions of the Owners and shall include the cost of all labor, materials, tools and materials, testing if any with sub-Contractor's testing appliance.
2. The Tenderer shall be deemed to have studied the drawings, specifications and details of work to be done within the time schedule and to have acquainted of the conditions prevailing at site. The Quoted Rates shall be applicable for all works in any section/size/shape and Design etc.
3. In case where the specifications given in the Description of the item of work given in Bill of Quantities needs clarity, the General Specification for Electrical Works shall be followed. In case of any ambiguity in interpretations the Owners decision shall be final and binding.
4. The rate(s) shall include the cost of providing / executing all ancillary – jobs / activities e.g. necessary excavations of earth, back filling, Brick Masonry, Cement mortar, Cement Plaster, Cutting holes, fixing clamps, screws, drilling holes, all steel works, welding, locking devices etc. in any items for the scope of works contained in the tender documents, whether mentioned in description of item of work or not; and the contractor shall make the job complete as per drawings and direction of UNDSS, and nothing extra shall be payable on all such activities / jobs.
5. The rates quoted for items of work shall include working in all conditions at all heights/depths including work necessary to avoid existing pipes or cables till the completion of work including all suspension period and delays whatsoever.
6. The Quantities in this schedule are provisional. The Contractor will be paid for the actual quantity of work executed at site at the rates quoted in his tender. The Owner reserves the right to increase or decrease any of the quantities or to totally omit any item of work and no claims by the Contractor on these accounts shall be entertained.
7. All the items of work given in this schedule of quantities shall be executed strictly in accordance with Nepal Electricity rules and requirements.
8. The contractor shall visit the site and shall satisfy himself as to conditions under which the work is to be performed. No extra claim consequence of ignorance or on grounds of insufficient description will be allowed at a later date.
9. No Alteration whatsoever is to be made to the text or quantities of this Bill of quantities unless alteration is authorized in writing by the Owner. Any such alterations, notes or additions shall, unless authorized in writing be disregarded when tender documents are considered.
10. In the event of error occurring to the amount column of the Bill of quantities, as a result of wrong extension unit rate and quantity, the unit rate quoted by the Tenderer shall be regarded as firm and the extension shall be amended on the basis of the rates.
11. All error in totaling in the amount column and in carrying forward totals shall be corrected by owner. Any error in description or in quantity or omission of items from the contract Bill of quantities shall not vitiate this contract but shall be corrected and deemed to be a variation required by the owner.
12. Any approvals required from local authorities shall become part of the contractual obligations of the CONTRACTOR and nothing extra shall be payable.

FORM FOR SUBMITTING SUPPLIER'S QUOTATION⁵

(This Form must be submitted only using the Supplier's Official Letterhead/Stationery⁶)

We, the undersigned, hereby accept in full the UNDP General Terms and Conditions, and hereby offer bid for **Installation of Fire Alarm and Public Address (PA) System at UN House, Pulchowk**, in conformity with the requirements of UNDP as per RFQ Reference No. UNDP/RFQ/18/2019

TABLE 1 : Offer for Installation of Fire Alarm and Public Address (PA) System at UN House, Pulchowk

NOTE: Please fill the detail cost in Bill of Quantity (MS Excel file)

The Contractor must establish Group Insurance of its workers and a copy of the Group Insurance shall be provided to UNDP upon signing of the Contract

⁵ This serves as a guide to the Supplier in preparing the quotation and price schedule.

⁶ Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

TABLE 2 : Estimated Operating Costs (if applicable)

| List of Item/s | Months | Unit Price | Total Price (NPR) |
|--------------------------------------------------------------------------------------------|--------|------------|-------------------|
| Annual Maintenance Cost (AMC) for Fire Alarm System (with applicable tax and VAT) | | | |
| Annual Maintenance Cost (AMC) for Public Announcement System (with applicable tax and VAT) | | | |

TABLE 3 : Offer to Comply with Other Conditions and Related Requirements

| Other Information pertaining to our Quotation are as follows : | Your Responses | | |
|------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|-------------------------------------------------------------|
| | <i>Yes, we will comply</i> | <i>No, we cannot comply</i> | <i>If you cannot comply, pls. indicate counter proposal</i> |
| Delivery Lead Time | | | |
| Estimated weight/volume/dimension of the Consignment: | NA | NA | |
| Country/ies Of Origin ⁷ : | | | |
| Warranty and After-Sales Requirements | | | |
| a) Training on Operations and Maintenance | | | |
| b) Defects Liability Period | | | |
| c) Service Unit to be Provided when the Purchased Unit is Under Repair | | | |
| d) Brand new replacement if Purchased item is not working at the time of delivery/installation | | | |
| e) Others | | | |
| Validity of Quotation | | | |
| All Provisions of the UNDP General Terms and Conditions | | | |
| Other requirements <i>[pls. specify]</i> | NA | NA | |

All other information that we have not provided automatically implies our full compliance with the requirements, terms and conditions of the RFQ.

[Name and Signature of the Supplier's Authorized Person]
[Designation]
[Date]

⁷ If the country of origin requires Export License for the goods being procured, or other relevant documents that the country of destination may require, the supplier must submit them to UNDP if awarded the PO/contract.

General Terms and Conditions for Services

<http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html>