

**STATEMENT OF WORK**  
**Misting system-walkway between NOB &**  
**NOX**  
**Property OBO-10000**  
**New Embassy Compound**  
**U.S. EMBASSY KHARTOUM, SUDAN**

## **1. Description of Services:**

The US Embassy, Khartoum has a requirement to provide and install misting system for the walkway between NOX & NOB in the New Embassy Compound (NEC), Khartoum. The works shall be executed as per drawings, scope of work, specifications and General contract conditions. This project requires an experienced contractor to execute the job.

The Contractor shall provide all labor, material tools, equipment, supervision and other related items required to complete the project as per scope of work, specifications and attached drawings.

Contractors are advised to visit the site, verify the existing site conditions to develop their proposal.

## **2. Submittals**

1- A general description of the system and drawings of the main components.

2- Manufacturer's technical literature with installation and storage instructions for each product specified.

3- pumps: pump performance curves indicating GPM vs. TDH, maximum efficiency point, and maximum amperage draw, together with current characteristics and service factor of motor.

## **3. Scope of work**

1- The contractor shall be responsible to provide and install high pressure flexible misting system for the walkway between NOX & NOB as shown in diagram. The misting line for the system is around 68 meters. The height of the above ceiling ranges between 2.75 & 3 meters. The misting line shall be concealed using 2 inch galvanized angled, bolted to the lower surface concrete walkway canopy slab.

### **3.1 The system shall include the following items**

1- High pressure misting system pumps at least (1000 PSI High Pressure Pump). The pump shall be 220 V, 50 HZ, 1 phase. The pump shall supply 2 gallon per minute at least. The High efficiency pump module with built-in POLY-PHOSPHATE FILTER and GFCI shock protection. The pump shall be in Powder coated steel enclosure with pressure gauge.

#### **The pump shall be equipped with the following items**

- Automatic Pressure Release : When the spray stops the pressure is automatically released from the hose to prevent leaking/dripping nozzles
- Control System: Dual timer assembly with settings for minutes and seconds to set the exact misting and stop times desired.
- Pressure Switch: The pump will automatically stop when the water supply is interrupted, protecting the pump from damage.

- Inlet Filter: 0.1mm mesh filter prevents debris from entering the pump. Stainless steel for easy cleaning.
- Motor: Low-noise motor with Low power consumption, but strong enough to create a natural fog effect.

2- Nylon 11 tubing (Black/ white) Coil 3/8' poly hose - 1000 PSI rated. Tubing will be painted to match the color of walls.

3- Misting Tee brass Nozzles, 0.008" nozzle orifice. The nozzles intervals shall be at adjusted to cover the whole line, not more than 0.75 meters intervals.

4- All necessary hardware to install complete misting system and its accessories( end caps, elbows, Tees, unions, couplings, Tube Cutters, Rubber Mounting Clamps, Nickel Plated Slip-Lock Fittings, Drain Valve, Replacement Misting Nozzles and Plugs)

### **3.2 Installation**

1- The contractor shall fix and bolt 2 inch galvanized steel angles along the edges to the covered walkway between the annex and the NOB as shown in diagram. The surface of the angles shall be painted with red oxide primer, texture and color to match the existing texture and color of the walkway.

2- The contractor shall install the system according to the manufacturer's recommendations to cover the areas as shown in drawing. The height of the tubes is around 2.75-3 meters. The new nylon pipes shall be fixed on the welded steel angle.

3- The contractor shall be responsible to connect the new mister system pump to the nearest water supply and the electrical source as shown in diagram. The contractor shall carry out all the construction works as approved by the COR. The contractor shall conceal all the system parts. All the conduits away from the walkway shall be embedded beneath the ground. All the wiring, pipes, metal conduits, fittings shall comply with US and local standards.

## **Conditions of Contract**

### **1. General**

This is a firm fixed price turnkey job for the entire work and amount quoted shall include all work described in attached drawing, scope of work and general condition of contract. The lump sum price quoted shall be fixed and nothing extra will be entertained on any account.

Contractor's staff is subject to such restriction for entry and exit as are required by the Embassy's security requirement. Contractor's staff will be subject to security cleared as required by the Embassy.

Contractor shall restore all surfaces disturbed by construction to match with existing finish.

Any deviation from the original contract/scope of work shall be informed to COR before work begins. No additional work or changes will be carried out without a contract modification.

### **2. Responsibilities of Contractor**

Contractor shall be responsible for procuring, supplying, transporting, and providing all labor, materials, tools and plant and equipment etc., required for completion of the work in all respects and as per the scope of the work.

All expenses towards mobilization at site and demobilization including bringing in equipment, workforce and materials, dismantling the equipment, clearing the site etc. shall be deemed to be included in the rates quoted by the contractor against various items of schedule of rates and no separate payment on such expenses shall be entertained.

Contractor shall employ and provide one full time engineer to supervise the project and has experienced of carrying out such type of work.

Contractor shall not proceed with next activity until previous activity will be checked and approved by COR. Contractor shall mentioned all inspection dates in the schedule chart

Contractor should keep the site clean and accessible to Embassy employee all time

### **3. Specifications**

Work under this contract shall be carried out strictly in accordance with specifications attached and will meet US and Local codes.

### **4. Execution of Work**

The Contractors are advised to review the material specifications and scope of work. The Contractor should visit and walk through the site to familiarize themselves with the site conditions to understand the exact quantum of work.

On award of the work, Contractor shall submit all items below via email:

- a. Bar chart within 3 days for approval by the Contracting Officer Representative (COR). All dates and time schedule agreed upon should be strictly adhered to. Contractor shall notify the COR in advance regarding anticipated problems through the project.
- b. Proposed start date
- c. Weekly schedule/activity plan for the duration of the project *prior to the start date*.

For dismantling/blocking or making connection to any existing services or any shut-down, contractor shall inform the COR at least three working days in advance and proceed with the work only after the permission from the COR.

## **5. Materials**

All materials used on this work shall be new and conforming to the contract specifications as per US and local codes.

Materials shall conform to the latest US Standards specifications as amended to date and carry certification mark. Contractor shall submit material samples and catalog for pre-approval.

All materials used on the project shall be approved by the Contracting Officer Representative (COR) before use. Any changes/substitutes on material shall be approved by COR before proceeding.

## **6. Storage of Materials**

All materials shall be stored in a proper manner protected from natural elements so as to avoid contamination and deterioration.

## **7. Site Clearance and Cleanup**

The Contractor shall clear away all debris and excess materials accumulated at the site and dispose of it away from Embassy premises, maintaining a neat site condition.

On completion of project, Contractor shall remove all surplus materials and leave the site in a broom clean condition.

## **8. Workmanship**

Workers working on the site shall be skilled in their job and have related job experience.

## **9. Working Hours**

Working hours shall be 8:30 A.M. to 4:30P.M Sunday to Thursday. No work shall be done on Fridays, Saturdays and holidays without the prior approval of the Contracting Officer.

## **10. Security Clearance**

The Contractor shall inform and provide in writing transportation details (vehicle registration number, drivers name, and date of delivery) to the COR at least 24 hours in advance for material deliveries.

Contractor shall give workers names at least 3 days in advance to get the security clearance. All the workers shall have an official photo ID or photo ID with the company name on it.

## **11. Safety**

Contractor is responsible and shall continue management and implementation of a safety and health program throughout construction.

The Contracting Officer and the Post Occupational Safety and Health Officer [OSHA] reserve the right to suspend work when and where Contractor's safety and health program is considered to be operating in an inadequate or non-complying manner.

Contractor shall provide all Personal Protective Equipment for the workers as per the requirement of the site. Work will be stopped in case the proper protection equipment is not found with the workers and the lapse of time shall be at the Contractor's expense.

Contractor will not leave the work site in an unsafe condition or any other condition that might cause injury to personnel, damage to existing work, plants or equipment.

Contractor will use all safety gadgets e.g. hard hats, cotton gloves and goggles as required on site to avoid the accident.

Any equipment or work considered dangerous shall be immediately discontinued.

## **12. Warranty**

The contractor shall guarantee that all work performed will be free from all defects in workmanship and materials and that all installation will provide the capacities and characteristics specified. The contract further guarantees that if, during a period of three years from the date of the certificate of completion and acceptance of the work, any such defects will be repaired by the contractor at his expenses.