



U.S. Consulate General
Karachi, Pakistan
Date: **Jan 08th, 2020**

To: Offeror Page 1 of 23

Request Number: **PR8921085**
From: Procurement & Contracting Department
U.S. Consulate General
Plot No- 3, 4, 5, New TPX, Area
Mai Kolachi Road
Karachi, Pakistan.
E-mail: KRCProcurementContracting@state.gov
POC: **Azmat Khan** Phone: 92-21-320 110 2218

RFQ- PR8921085 - KHI-FM SERVICES FOR CHW PIPING AT OLD-SDA.

The U.S. Consulate Karachi requests your participation in quoting for the said **services per below mentioned SOW**. Please provide us cost, delivery charges and estimated delivery period of the following services to **U.S. Consulate General Plot number 3, 4, 5- New TPX Area, Mai Kolachi Road, Karachi.**

Walk Through

The site visit/survey will be conducted on Jan 16th at 11 am, sharp. All the interested participants will be required to send their names, CNIC # and vehicle details (reg#, model, make, color) at least 24 hours prior.



U.S. CONSULATE GENERAL, KARACHI.



US CONSULATE KARACHI, PAKISTAN
STATEMENT OF WORK

For

Reinsulating and Recladding of CHW pipes in SDA building

JANUARY, 2020



The project is described as **“Reinsulating and Recladding of CHW pipes in SDA building”**. The Contractor shall furnish all necessary skilled labor, transportation, approved material, fabrication tools & equipment (third party certified, if thus required/specified for project or asked by COR to fulfill safety requirements as practiced by the Post), and supervision for this project. All work will be performed within firm fixed-price contract.

BACKGROUND

US Consul General Karachi (Post) is subjected to drastic environmental conditions as it is in close vicinity of the Arabian sea. These conditions head considerable environmental effects on HVAC Chilled Water Supply Return piping insulation, jacketing, color coding/stenciling, hangers and supports. Post requires replacement of old deteriorated cladding and insulating with new insulation, cladding, color coding/stenciling, and pipe hangers’/supports’ rehabilitation in old SDA building. At this stage the intended scope is limited to areas at roof top, penthouse, AHU/mechanical rooms and the wall/slab crossings associated to these areas. For better understanding and perceive the correct scope of work, potential bidders need to visit the site. In which case they will also understand the fundamental requirements of project related safety and security standards.

SOLUTION

Services of skillful contractor will be hired for removal, supply, and installation of CHW piping insulation and jacketing as following;

- removal of old deteriorated insulation cladding from effected piping, equipment and hangers/supports.
- supply of as per specifications approved material including insulation, vapor retarders, aluminum jacketing, adhesives, hardware, anti-rust paint and stenciling.
- installation of approved material on piping, equipment, and supports/hangers.

The specifications for material, method of application, approved brands, and safety standards are mentioned but not limited to in this scope of work. All material design and implementation should comply to international codes and standards such as IBC, NFPA, NEC, IMC, ASHRAE, SMACNA, ASTM, and procedural safety should be in complete coherence with OSHA.

Drawings will be provided for onsite references only.

GENERAL CONDITIONS

CO: Contracting Officer

COR: Contracting Officer’s Representative

FM: Facility Manager



GSO: General Services Officer

RSO: Regional Security Officer

POSHO: Post Occupational Safety and Health Officer

APOSHO: Assistant Post Occupational Safety and Health Officer

1. COR:

A Contracting Officer's Representative (COR) will be assigned to ensure quality assurance goals are met.

2. Fixed-Price Proposal:

The Contractor shall provide one fixed-priced Proposal for the complete Project that includes every aspect of the Work. Contractors will measure and verify quantities needed to complete this project prior to bid submission.

3. Services and Deliverables:

Provide a comprehensive project execution plan mentioning the details of personnel, equipment used and Job Hazard Analysis. The site supervisor of the job must be experienced.

1. Supply of approved material for the project and storage on site specified location.
2. Systematic removal of old damaged aluminum cladding and insulation from required lengths of pipes, fittings, accessories and equipment.
3. Preparation of pipes for new insulation as per specification.
4. Preparation of insulation for new aluminum cladding as per specification.
5. Rehabilitation of pipe hangers & supports by replacing damaged members or the whole support.
6. Repainting pipe hangers & supports as per specifications.
7. Stenciling on new system as per specifications and approved samples.
8. Removal of project generated trash to onsite specified location

**MATERIAL**

Sr.#	PRODUCT	SPECIFICATION	MANUFACTURER (Meet OR Exceed policy applies)
1	Flexible Elastomeric Insulation: Extruded closed-cell foams	<ul style="list-style-type: none"> • Products shall not contain asbestos, lead, mercury, or mercury compounds. • Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process. • Contact Adhesive: As recommended by insulation material manufacturer for use at all end seams and longitudinal seams. • Ultraviolet-Protective Coating: As recommended by insulation manufacturer. 	<ul style="list-style-type: none"> • Armstrong World Industries (as Armacell LLC). • RubatexInternational LLC. • Aeroflex USA Inc.; Aerocel. • Armacell LLC; AP Armaflex. • RBX Corporation;
2	Insulating Cements	<ul style="list-style-type: none"> • Flexible Elastomeric Adhesive: Comply with MIL-A-24179A, Type II, Class I. • For indoor applications, use adhesive that has a VOC content of 50 g/L or less (EPA Method 24). 	<ul style="list-style-type: none"> • Aeroflex USA Inc.. • Armacell LCC. • Foster Products Corporation. • RBX Corporation.
3	Vapor Retarders	<ul style="list-style-type: none"> • Mastics: Materials recommended by insulation material manufacturer that are compatible with insulation materials, jackets, and substrates. 	<ul style="list-style-type: none"> • Aeroflex USA Inc.. • Armacell LLC; AP Armaflex. • Foster Products Corporation, • RBX Corporation.
4	Aluminum Cladding:	<ul style="list-style-type: none"> • Aluminium Cladding 1060, 3003 1060, 3003, 5005 Temper H14 Aluminum Comply with ASTM B 209M, 3105 or 5005, Temper H-14, minimum .5mm or 24 gauge or as per ASHRAE & SMACNA. • Moisture Barrier for Indoor Applications: 0.075-mm-thick, heat-bonded polyethylene and kraft paper. • Moisture Barrier for Outdoor Applications: 0.075-mm-thick, heat-bonded polyethylene and kraft paper. 	<ul style="list-style-type: none"> • Childers Products, Division of ITW; Metal Jacketing Systems. • PABCO Metals Corporation; Surefit. • RPR Products, Inc.; Insul-Mate.
5	All-service jacket (ASJ) Adhesive, and Foil, scrim, kraft paper (FSK) Jacket Adhesive	<ul style="list-style-type: none"> • Comply with MIL-A-3316C, Class 2, Grade A for bonding insulation jacket lap seams and joints • For indoor applications, use adhesive that has a VOC content of 80 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24). 	<ul style="list-style-type: none"> • Foster Products Corporation, H. B. Fuller Company; 85-60. • ITW TACC, Division of Illinois Tool Works. • Marathon Industries, Inc. • Mon-Eco Industries, Inc.
6	Tapes	<ul style="list-style-type: none"> • Foil-face, vapor-retarder tape matching factory-applied jacket with acrylic adhesive; complying with ASTM C 1136 and UL listed 	<ul style="list-style-type: none"> • Avery Dennison Corporation, • Compac Corp. • Ideal Tape Co., Inc., an American Biltrite Company. • Venture Tape. • ABRO Industries Inc.
7	Hardware	<ul style="list-style-type: none"> • All nuts, bolts and self-taping/screws shall be SS and have standard metric or SAE threads. • All riveting is to be aluminum. 	<ul style="list-style-type: none"> • Good quality US Origin



8	Anti-Rust Paint	• Fungus-inert / Fungus resistance: No growth Meets requirement of ASTM D 3273, TT-C-00555B Fed test Method 141 Sect. 6271.1, and ESTM E3152	• Good quality US Origin
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TABLE -1. PIPE INSULATION SCHEDULE

PIPING SYSTEM & OPERATING TEMPERATURE	NOM. PIPE SIZE	INSULATION		VAPOR RETARDER (See Note 1)
		MATERIAL(S)	THICKNESS	
CHILLED WATER 40-75°F (4 -24°C)	1/2" to 1-1/4"	Extruded Closed-Cell Foams: Polyurethane, Polystyrene, Polyolefin, or Flexible Elastomeric (See Note 2)	1"	FSK or ASJ or Polyethylene with Taped Joints; olyvi-nylidene chloride (PVDC) film or tape (See Note 3),
	1-1/2" to 2"		1 1/2"	
	3" to 6"		2"	
	8" & above		2 1/2"	
DUAL TEMP. WATER SYSTEMS 40-200°F (4-93°C)	Same as Chilled Water			
EQUIPMENT DRAINS, ROOF DRAINS, & PLUMBING VENTS	(Ambient Temp.) All	Flexible Elastomeric	5/8" min.	None
A/C CONDENSATE DRAINS 40 - 75°F (4 - 24°C)	All	Flexible Elastomeric	5/8" min.	None
UNDERGROUND PIPING, ALL SYSTEMS 40-300°F (4-140°C)	All	Only Pre-Manufactured, Pre-Insulated, and Pre-Jacketed Pipe and Fittings.	As noted above or equivalent.	As noted above or equivalent

Notes to Table-1.

- (1) Vapor Retarder does not include final-finish jacketing; see Table-2 for jacket requirements.
- (2) For all extruded foams, butt and longitudinal seams are to be sealed with contact adhesive, factory applied pressure sensitive adhesive (PSA), or other methods specifically recommended by the insulation manufacturer.
- (3) FSK means foil, scrim, kraft paper facing; ASJ means foil-backed all-service jacket.

TABLE-2. PIPE JACKETING/CLADDING SCHEDULE

PIPE SYSTEM	SERVICE LOCATION	NOM. PIPE SIZE	VAPOR RETARDER	INSULATION JACKET
ALL	Interior – Exposed, including Mechanical Rooms	ALL	See Table -1	20-Mil PVC with Molded Fittings, White In Color, Joints Glued Or Solvent Welded Joints.
ALL	Interior – Concealed by Wall, Floor, or Ceiling, or Similarly Protected	ALL	See Table -1	None



ALL	Exterior, Including Rooftops and Penthouses	ALL	See Table -1	20 Mil Stainless Steel with Molded Fittings and 0.020" x 0.75" SS Bands; Joints Glued Watertight with 25 Year RTV Silicone, Clear or Silver In Color, or 3003 H-14 Aluminum, 0.5mm or 24 Gauge 0.016" Thick, with Preformed Fittings, and 0.020" x 0.75" Alum Bands; Joints Glued Watertight with 25-Year RTV Silicone, Clear or Silver In Color.
ALL	Underground	ALL	Use Only Pre-Insulated and Pre-Jacketed Pipe and Fittings Manufactured Especially for Underground Use. Exceptions by Approval Only.	

Approximate Quantity - Reinsulating & Recladding Project - CHW

Pipes

Old SDA Roof

(A) Removal of Cladding & Insulation from Pipes including fittings, Valves, and other accessories, hangers/supports, and equipment to making it ready for application of new material as per specifications.			
Sr. #	Description	Quantity	Line Item Total PKRS/-
1	Cladding & Insulation Removal	01 Job	

(A) Total (PKRS) = _____

(B) Rehabilitation of Pipe supports & hangers by replacing damaged members and hardware with new ones, removal of rust, application of dual coat anti corrosion primer, application of dual coat weatherproof epoxy paint as specified.			
Sr. #	Description	Quantity	Line Item Total PKRS/-
1	Hangers & supports	1 Job	

(B) Total (PKRS) = _____



(C) Supply and installation of Flexible Elastomeric Closed-cell insulation with vapor retarder on indoor CHW Pipes including fittings, Valves, and other accessories as per specifications.

Sr. #	Size (dia)	Quantity (approx.)	Rate per RFT PKRS/-	Line Item Total PKRS/-
1	1 "	200 rft		
2	1.25 "	30 rft		
3	2 "	20 rft		
4	4 "	120 rft		
5	5 "	225 rft		

(C) Total (PKRS) =

(D) Supply and installation of Flexible Elastomeric Closed-cell insulation with vapor retarder in protection with Aluminum Cladding/Jacketing on CHW system's accessories and equipment as per specifications.

Sr. #	Size (dia)	Quantity (approx.)	Rate per RFT PKRS/-	Line Item Total PKRS/-
1	2 "	30 rft		
2	4 "	20 rft		
3	6 "	375 rft		
4	8 "	30 rft		

(D) Total (PKRS) =

(E) Supply and installation of Flexible Elastomeric Closed-cell insulation with vapor retarder in protection with Aluminum Cladding/Jacketing on CHW system's accessories and equipment as per specifications.

Sr. #	Description	Quantity (approx.)	Line Item Total PKRS/-



1	Primary Pumps	2 Each	
2	Secondary Pumps	2 Each	
3	Makeup Water Tank	1 Each	

(E) Total (PKRS) =

Grand Total (PKRS) =

[Adding totals from A, B, C, D, & E]

[In Words]

Note:

Quantities are approximate.

Contractors to verify quantity on site for bidding with site technical team.



GENERAL REQUIREMENTS

4. Design Criteria:

The Work shall be governed by referenced standards and drawings contained within this Scope of Work.

Notify the COR in the event of conflicting design criteria. In general, the more stringent criteria shall be applied, subject to COR approval.

The Contractor is responsible for compliance with all design criteria; Work not in compliance shall be deemed unacceptable.

The Contracting Officer's Representative shall inspect and approve or reject all materials and equipment prior to their use.

5. Execution:

The Work shall be executed in a diligent and workmanlike manner in accordance with the negotiated fixed price, this Scope of Work, the Project Schedule. When pursuing the work, the contractor is to take extra care as not to damage existing structures. The Contractor is responsible for preventing any damage to surrounding properties arising from the Contractors performance of the work. Contractor shall be responsible for repairing any damage to adjacent properties as a result of its activities on the Project Site. If the damage is not repairable, the cost will be calculated by the Facility Manager and deducted from the payment of the final invoice.

PROCEDURES

Examination

Examine substrates and conditions for compliance with requirements for installation and other conditions affecting performance of insulation application. Verify that systems and equipment to be insulated have been tested and are free of defects. Verify that surfaces to be insulated are clean and dry.

Preparation

- A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
- B. Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation.
- C. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

Common Insulation Requirements

- A. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment, ducts and fittings, and piping including fittings, valves, and specialties.



- B. Install insulation materials, forms, vapor barriers jackets, and thicknesses required for each item of equipment, duct system, and pipe system as specified in insulation system schedules.
- C. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.
- D. Install insulation with longitudinal seams at top and bottom of horizontal runs.
- E. Install multiple layers of insulation with longitudinal and end seams staggered.
- F. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
- G. Keep insulation materials dry during application and finishing.
- H. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.
- I. Install insulation with least number of joints practical.
- J. Seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic.

Install insulation continuously through hangers and around anchor attachments. Extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic. Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield.

- K. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses.
- L. Install insulation with factory-applied jackets as follows:
 - Draw jacket tight and smooth. Cover circumferential joints with 75-mm- wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip, spaced 100 mm o.c. Overlap jacket longitudinal seams at least 38 mm. Install insulation with longitudinal seams at bottom of pipe. Clean and dry surface to receive self-sealing lap. Cover joints and seams with tape as recommended by insulation material manufacturer to maintain vapor seal. Apply vapor-barrier mastic on seams and joints and at ends adjacent to duct and pipe flanges and fittings.
- M. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.
- N. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
- O. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 100 mm beyond damaged areas. Adhere and seal patches similar to butt joints.
- P. For above ambient services, do not install insulation to the following:
 - Vibration-control devices, Testing agency labels and stamps, Nameplates and data plates, Manholes, Handholes, and Cleanouts.

Flexible Elastomeric Insulation Installation.

- A. Seal longitudinal seams and end joints with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated. Protect insulation located outside building envelope with the manufacturer's standard or recommended UV protective coating. Apply the coating in accordance with the manufacturer's written instructions.



B. Insulation Installation on Pipe Flanges:

Install pipe insulation to outer diameter of pipe flange. Make width of insulation section same as overall width of flange and bolts, plus twice the thickness of pipe insulation. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with cut sections of sheet insulation of same thickness as pipe insulation. Secure insulation to flanges and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

C. Insulation Installation on Pipe Fittings and Elbows:

Install mitered sections of pipe insulation. Secure insulation materials and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

D. Insulation Installation on Valves and Pipe Specialties:

Install preformed valve covers manufactured of same material as pipe insulation when available. When preformed valve covers are not available, install cut sections of pipe and sheet insulation to valve body. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation. Install insulation to flanges as specified for flange insulation application. Secure insulation to valves and specialties and seal seams with manufacturer's recommended adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.

Aluminum Cladding Installation

A. Field-applied cladding shall comply with standards as mentioned in schedule with minimum gauge thickness of 24 or 0.5mm or as per ASHRAE & SMACNA whichever is more stringent in material selection.

B. Installation of new aluminum cladding should include the following steps;

Check the pipe insulation to make sure there are no rips or tears in the outer foil covering or vapor barrier.

Decide on a starting point for the installation of the cladding. This may be from a vessel or flange.

Make it reasonably possible to keep the joints hidden and out of view to add to the overall appearance of the job.

When installing a round pipe section, the cylindrical pipe will have to be pulled apart to fit over the insulated pipe, so it is important that the cladding pipe is not damaged.

Make sure while fitting the cladding pipe over the insulated pipe that enough care is taken for not to tear the insulation of protective foil covering.

Temporarily fix the cladding pipe in place using self-tapping screws. Install the next section of pipe or fitting in place by fitting the male swage of one section into the female section of the other fitting. Secure in place using the self-tapping screws ensuring that the joint is tight and free from movement.

Confirm measurements at installation of each section to avoid a problem at the end of the overall installation. As each section is installed measurements can creep thus increasing the overall length and make it difficult to install the final pieces.

When the installation is complete make sure there are no finger or hand marks on the job, wipe the cladding with a soft clean cloth to remove such marks.



Hangers & Supports Rehabilitation

- A. In rehabilitation of pipe hangers and supports the following steps should be considered;
- All pipe hangers and supports are to be treated against environmental conditions.
- If any member of a support/hanger is damage or if the hardware is rusty, either will have to be replaced.
- Two layers of antirust primer is to be applied on metallic hangers/supports and their hardware with enough interval for getting the primer dry before next treatment. This activity should follow cleaning of rust from any area where paint is to be applied.
- Minimum two layers of weather resistant anti fungus epoxy paint is to be applied after primer, or up to the level till good looking finishing is achieved. Color to be selected at the time of application.
- No stains of any paint or primer on cladding, floor, pipe accessories and equipment or unintended areas are to be left behind. All such stains are to be cleaned immediately and brought back to original.
- For redoing activities on hangers or supports there will be many hangers and supports to be removed from the system. The number of supports and hangers to be removed should be one at time and with enough care taken to remove chance of piping collapse under its weight or vibration.

Field Quality Control

- A. Perform the following field tests and inspections and prepare test reports:
- Inspect ductwork, randomly selected by Architect/Engineer, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be limited to one location for each duct system defined in the "Duct Construction and Insulation Schedule."
- Inspect field-insulated equipment, randomly selected by Architect, by removing field applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be limited to three location for each type of equipment.
- Inspect pipe, fittings, strainers, and valves, randomly selected by Architect, by removing field-applied jacket and insulation in layers in reverse order of their installation. Extent of inspection shall be limited to five locations or 10 percent as per COR.
- B. All insulation applications will be considered defective Work if sample inspection reveals noncompliance with requirements. Remove defective Work. When defective Work is discovered, sampling shall start over until no defects are discovered at no additional cost to the Owner.
- C. Install new insulation and jackets to replace insulation and jackets removed for inspection. Repeat inspection procedures after new materials are installed.

6. General:

1. All work is to comply with the US building regulations.
2. The contractor will rectify any damage to all areas on completion of the works.
3. The contractor shall supply all materials and labor in order to complete the works.
4. The transportation or carriage charges must be bared by the contractor.
5. All waste material to be taken from site and dumped at designated location within compound. No logistic supports from Post.
6. Site is always to remain tidy and cleaned up on completion of works.



7. All work to be carried out in a workmanship like manner.
8. All documentation regarding warranties, guarantees and instructional literature are to be handed over to GSO/FAC representative.
9. All care must always be taken to protect the furnishing within the property and drop sheets to be used when necessary.
10. All measurements, quantities are to be confirmed by the contractor on site.

NOTE: Any damage caused by the contractor or his contractors is to be made good at the contractor's expense.

7. Work Hours:

The contractor can work 6 days a week between the hours of 0830hours and 1800hours.

- Designated labors must be at consulate compound at 0800hrs
- Must carry original NICs
- Break Hour for Friday – 1200-1400hrs
- Break Hour for Monday to Thursday – 1300-1400hrs

If any aspect of this work is deemed by the COR, the FM, the RSO or the POSHO/APOSHO to be interruptive of normal US Consulate operations, the Consulate security or safety, the contractor shall be required to perform that portion of the work on Saturdays and Sundays.

8. Safety:

The Contractor shall be responsible for conducting the work in a manner that ensures the safety of employees and visitors at the US Consulate, and the Contractor's employees. Safety standards must meet or exceed current EM 385 US Corps of Engineers Safety and Health Requirements Manual requirements available online.

The Contractor shall be solely responsible for risk assessments, managing health, and safety issues associated with this project. Based on hazard assessments, Contractors shall provide or afford each affected employee personal protective equipment (PPE) that will protect the employee from hazards. At a minimum PPE shall consist of eye protection, hard hats, and closed toe shoes. Sandals or athletic shoes are not acceptable. PPE such as gloves, dust masks, are recommended. These items must be provided at the Contractor's expense.

Workers may use discretion if they feel unsafe in using the equipment in a hostile environment.

Any worker at an elevated location above 1.8 meters, with the exception of a portable ladder OR scaffolding will be provided a safety harness by the Contractor for their use.



The contractor must document in the bid for work how the hazard controls will be implemented and maintained during the project.

The Contractor shall prepare and implement an Activity Hazard Analysis (AHA) prior to the start of work.

The Contactor must have a competent person on-site for inspection of equipment, training workers in the safe use of equipment and the recognition of hazards related to their use, supervision, and identifying and correcting unsafe work practices for high hazard work.

All contractor personnel shall wear hard hats, safety glasses, ear-plugs, gloves, close-toes shoes and any other Personal Protection Equipment deemed necessary by the Facility Manager.

Safety Training:

- Provide specific training to supervisory personnel and all craft workers of the Contractor and subcontractors in proper use and care of specific personal protective gear, equipment, and clothing.
- Contractor and subcontractor employees shall be trained and supervised by qualified persons to perform, safely and confidently, recognized hazardous work/conditions to which they have been assigned.
- Workers must be wearing coveralls or at least trousers shirt. Loose clothing is strictly prohibited for site-based activities.
- If hot work activity (Cutting/ grinding, Welding) is involved, it is contractor's responsibility to provide their site team with fire protection/ prevention equipment i.e. fire extinguishers and fire blankets etc.
- Welding hood and face shields must be provided to workers in case of welding or grinding activity
- MSDS (material safety data sheets) must be provided for all/any kind of chemicals that will be used at worksite.
- A safety briefing and inspection for all the equipment will be done prior starting the activity by APOSHO.

9. Workforce:

The contractor shall provide all supervision, skilled and unskilled labor needed to perform the work.

The Contractor shall be responsible for total integration of effort and control of the works. The Contractor shall be responsible for planning, monitoring, coordinating, and controlling the works.

The contractor shall provide Foremen and other supplemental staff as necessary to perform the work within the timelines and quality standards specified. Staff shall demonstrate knowledge, skill, and experience with the netting installation, supports fabrication/ hooked up required by the contract. Contractor employees shall have access to the equipment and equipment areas and will be escorted by US Consulate personnel.

The Contractor's employees shall wear clean, neat and complete professional's uniform when on duty. All employees shall wear uniforms approved by the Contracting Officer's Representative (COR). The Contractor shall provide, to each employee and supervisor, uniforms and personal equipment. The Contractor shall be responsible for the cost of purchasing, cleaning, and repair of the uniforms.



The Contractor shall supply everything necessary for the Execution and Completion of work. Site preparation and installation performance shall be in accordance with US Government agreement.

Neglect of duties shall not be condoned. This includes sleeping while on duty, unreasonable delays or failures to carry out assigned tasks, conducting personal affairs during duty hours and refusing to render assistance or cooperate in upholding the integrity of the worksite security.

The Contractor shall not condone disorderly conduct, use of abusive or offensive language, quarreling, and intimidation by words, actions, or fighting. Also included is participation in disruptive activities that interfere with normal and efficient Government operations.

The Contractor shall not allow its employees while on duty to possess, sell, consume, or be under the influence of intoxicants, drugs or substances which produce similar effects.

The performance standard is that the Government receives no more than one (1) customer complaint per month. The COR shall notify the Contracting Officer of the complaints so that the Contracting Officer may take appropriate action if any of the services exceed the standard. The COR shall, as a minimum, orally notify the Contractor of any valid complaints.

Repeat customer complaints are not permitted for any services. If a repeat customer complaint is received for the same deficiency during the service period, the COR will contact the Contracting Officer for appropriate action under the Inspection clause.

10. Accommodations:

Toilets: The contractor shall/can utilize toilets on the US Consulate Compound.

Drinking water: The contractor shall also provide an adequate number of drinking water dispensers, distributed for convenience and efficiency-of-use around the project areas. Always maintain supply of disposable paper cups at each dispenser.

11. Site Preparation and Cleaning Up:

The contractor shall always keep the work area free from accumulations of waste materials. Before completion of work, the contractor shall remove the work and premises any rubbish, tools, ladders, equipment, and materials that are not the property of US government. Unsightly materials and debris including access sand, cement, garbage and equipment should be removed as required; while materials should be scheduled for delivery only as required for immediate use.

12. Housekeeping:



The contractor is responsible to clean up daily. The contractor is responsible to dispose of all dirt, concrete, stone and construction debris outside of the property before the close of business each day. Any dirt, concrete, stone and other construction debris may not be piled on the ground. Immediately upon removal, it must be loaded into a truck and disposed of immediately once the vehicle is full. At the end of the day even partially loaded trucks must be removed from the US Consulate compound and the contents disposed of properly at authorized dump sites.

The Contractor shall coordinate and supervise the protection, cleaning, and maintenance work at the Project Site during receipt, handling, storage, installation, curing, and similar stages of construction execution to affect minimum exposure to hazards by personnel and minimum deterioration to the US Consulate compound.

13. Subcontractors:

Contractor shall be responsible for the conduct and workmanship of Subcontractors engaged in the Project, and for Subcontractors compliance with the terms of this Statement of Work. The Contractor is responsible for the behavior and workmanship of Subcontractors while on US Government property.

14. Modification to Contract:

The Contractor shall not incur any costs beyond those described in this SOW unless directed otherwise in writing by the Contracting Officer.

Any work performed by the Contractor beyond this SOW without written direction from the Contracting Officer will be at the Contractor's own risk and at no cost to the US Consulate.

15. Stop Work:

At any time during the Project, the Contracting Officer (CO) reserves the right to Stop Work for protection of employees or visitors, security, or any other reason at his/her discretion.

16. General Submittals:

The contractor shall provide the detailed qualification of all the key personnel.

The contractor is also responsible to submit a detailed construction schedule indicating when the various portions of the work will be commenced and completed within the required schedule in the form of a bar chart. This bar chart shall be in sufficient detail to include all significant milestones.



The contractor shall provide the detailed qualification of all the key personnel.

The contractor shall provide products data's and shop drawing for every portion of the project. This includes but is not limited to: Details on pipes and fitting to be used, Aggregate gradations, Concrete Mix Design, Steel Reinforcement Specification and Source, Joint Filler and mechanical works.

17. Close-out:

Prior to final acceptance, the COR will conduct a QA/QC inspection to check compliance with the SOW.

18. Notification to proceed:

The contractor shall start the work within 15 days of Notice to Proceed. However, prior to the commencement of any excavation, the contractor and the COR shall locate and mark any underground water or electric utilities or other lines which may be present. The contractor is required to provide orange spray paint to mark the ground.

19. Point of Contact:

The COR shall be the main point of contact for this Project. The Contractor shall report to the COR on (a) status of the Project, (b) changes in Schedule, (c) accidents and safety issues, (d) disruptions to the property accessibility; and all other important information pertaining to the Project

20. Contractor's Representative:

The Contractor shall provide a representative on-site during all working hours with the authority to make all decisions on behalf of the Contractor and subcontractors.

21. Site Security:

The contractor shall comply with US Consulate Karachi security policy.

The contractor shall prepare list of all the names of personnel working for the contractor and any subcontractors, with national ID numbers and submit the list to the Facility Manager for vetting of employees by the RSO at least 30 days prior to commencement of work.



The contractor shall also provide a list of all equipment, listing the manufacturer, model, serial number of all equipment to be used on this project at least 30 days prior to the commencement of any work. Any vehicles utilized by the contractor are also considered equipment. The contractor must provide make, year, model number and license plate number. All vehicles will be inspected prior to entering and prior to leaving the premises.

The COR will assign a holding area for the equipment. Equipment, other than vehicles, should remain on site for the duration of the project to avoid having to have a security screening of it each time it enters the compound.

Any vehicle that is leaking oil will be immediately removed from the US Consulate compound.

The contractor must notify the COR in writing at least 24 hours in advance of the pending removal of any contractor owned equipment.

The contractor is 100% responsible for securing their working materials and equipment. Any damage to facilities or infrastructure, which happens due to a lack of security, will be the responsibility of the Contractor to correct at no cost to the U.S. Government.

22. Defects in Work:

Neither the required quality control procedure, nor detection of defects, nor correction of defects, nor the re-inspection or re-testing of corrected work, provides a basis for Contractor's claim for Contract Modification/Additional Compensation, or request for extension of Contract Time.

23. Coordination meetings:

Pre-Construction Conference: The COR shall conduct an initial construction conference on or near the date of Notification to Proceed. Agenda items shall include a review of the general plans, conditions, procedures, and requirements as shall be necessary for the effective scheduling and prosecution of the construction work. Further, all parties shall review security and material delivery requirements, personnel assigned, and contract communication procedures as have been established for the Project. This meeting shall be scheduled and conducted at the place agreed to by the COR and the Contractor.

Construction Coordination Meetings: The Contractor and COR will hold weekly construction coordination meetings to discuss schedule and status of outstanding issues upon request of COR. Weekly coordination meetings shall commence immediately upon mobilization to the Project Site. All parties shall seek the expeditious resolution of issues before they become problems. Progress of the work shall be reviewed. Contractor shall revise, balance, and submit an updated project execution. This review shall be based upon a subset report of the Project Execution Schedule in which all project execution activities have been entered. This review shall include:



- Status of continuing activities.
- New activity starts since last meeting.
- Activity planned completion dates.
- Activity interruptions.
- Activity completions.

Activity interruptions should include the reason for the interruption.

An activity will be considered complete only when it has been approved by the COR.

Meeting Minutes: The Contractor shall provide minutes of each meeting held under this contract the next working day after each construction coordination meeting. The COR will sign the meeting minutes upon agreeing to their accuracy. Final minutes signed by the COR and the Contractor will be submitted to the COR no later than two working days after the coordination meeting and shall become part of the final project record set.

24. Site Organization:

The contractor shall have at least one safety monitor / traffic flagman to keep pedestrians out of the work area.

Install new barricades to delineate the project area.

25. Delays:

Delays that are found to be caused by the Contractor's actions or inactions shall not be a cause for a time extension to the contract completion date.

26. Work execution:

Coordinate all phases and aspects of the works carefully to achieve desired solution, Remove and replace workmanship and/or material that are found to be not in compliance.

In all aspects of the work, fully comply with construction safety and occupational health requirements.

Upon completion of the work, return all disturbed area to original conditions.

27. Work execution:



Coordinate all phases and aspects of the works carefully to achieve intended results, including best overall visual effect. Remove and replace workmanship and/or material that are found to be not in compliance.

In all aspects of the work, fully comply with construction safety and occupational health requirements.

Explosive Actuated Tools are not permitted.

Install each element of project only during weather conditions that will contribute to successful workmanship and allow for proper curing, protection, and concealment.

The Contractor shall schedule and perform Quality Control services during the work progress.

Upon completion of the work, return all disturbed area (to include lawn) to original conditions.

28. Services and Deliverables

Provide the following services and deliverables:

- Direct the scope of the field investigation to validate existing conditions.
- Provide Construction Documents (submittals) for all work.
 - Provide for COR technical review and comment.
 - Address all COR comments from the prior submittal.
- Within 10 days after award, provide a work schedule to the COR for review and approval.
- Removal of old deteriorated insulation cladding from effected piping, equipment and hangers/supports.
- Supply of approved material (as per specifications) including insulation, vapor retarders, aluminum jacketing, adhesives, hardware, anti-rust paint and stenciling.
- Installation of approved material on piping, equipment, and supports/hangers.
- Make ready the piping system, for installation of new insulation and cladding. All new material to be US made or equivalent (if approved by the CO or COR).
- All required material to be furnished by the contractor after approval from CO or COR in case the CO is not available.
- Wherever required, Provide grounding and lightening protection as per direction of an Electrical Engineer.
- Provision of skill labor as per site requirements decided after discussion & agreement with the CO with all accessories tools and equipment that might be required during this operation.
- Contractor will be responsible to move all materials to site from relevant store.
- The provision of skilled labor means Certified/trained laborers with at least three years' experience in their particular field, equipped with required Hand/electrical tools, etc. necessary to carry out their work
- All equipment used by the contractor will be new and of good quality unless otherwise required.

29. Attachments

- Drawings (after award of contract but for site use only)



Prices:

Firm Fixed Price.

TAX: Your prices shall be duty/tax free. U.S. Consulate General Karachi will neither deduct nor pay any tax for this service.

Inspection & Acceptance:

A Government representative will inspect the service(s) delivered to determine the quality and acceptability. Substandard services/products shall be unacceptable at vendor's expense.

Payment Terms:

Payment will be made within 30 days through Electronic Funds Transfer (EFT) upon complete delivery to the US Consulate General, Karachi and submission of legitimate invoice to Financial Section after delivery, and submission of receipt.

SUBMISSION OF INVOICE:

Each invoice shall include vendor invoice number, purchase order/contract number, date issued, brief description of supplies/services provided, quantities, unit and total price, and signed by the signing authority.

Invoices must be routed to:

1. One original invoice in pdf format to the Financial Management Center to KarachiFMCIvoices@state.gov
2. One copy clearly marked "DUPLICATE Copy for Proc & Contracting." Krcproc@state.gov

Although email is the preferred method, invoices may also be submitted by mail (do not send electronically if you mail the invoice to the following address to avoid duplication):

Karachi Fiscal Office
U.S. Consulate General
Plot No- 3, 4, 5, New TPX Are
Mai Kolachi Road
Karachi



For payment related queries contractor will contact Karachi Fiscal Office KarachiFMCInquiries@state.gov. Contracting Officer takes no responsibility for payment and/or associated queries.

Contract Clauses:

FAR & DOSAR (attached) clauses will apply to this purchase order. These clauses can be accessed through following link:

http://aopepd.a.state.gov/Content/documents/overseas_comm-item-fac-2005-36.docx

52.249-2 Termination for Convenience of the Government (Fixed-Price)

(MAY 2004) Alternate I (APR 1984)

52.212-4 Contract Terms and Conditions--Commercial Items (May 2015)

52.212-5 Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items (Feb 2016)

Offer Due Date:

1. Please submit your quote on or before **Jan 21st, 2020** to **Procurement Contracting Officer, U.S. Consulate General Karachi**, or via Email to following email addresses:

KRCProc@state.gov

No quote will be acceptable after the due date.

2. Please prepare a quotation on your company letterhead in accordance with the requested details of this RFQ.
3. Please provide reference of our Request Number **PR8921085**, in all your correspondence regarding this request for price quotation