

**STATEMENT OF WORK
DCR Kitchen Renovation
PROPERTY OBO-293
Presidential Villas
USA EMBASSY KHARTOUM, SUDAN**

1. Description of Services: Description of Services:

The US Embassy, Khartoum has a requirement to renovate the kitchen in the designated Deputy Charge' d' Affaires Residence (DCR) in the newly leased residential compound, known as OBO # 293 in Shatti neighborhood, Khartoum. The works shall be done as per drawings, scope of work, specifications and General contract conditions. This project requires an experienced contractor execute the job.

The Contractor shall provide all labor, material tools, equipment, supervision and other related items required to the 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. Scope of work

The general scope of work for each apartment can be summarized as follows:

1. Furnish and Install of new kitchen cabinets.
2. Complete rough-in & finish work for the plumbing works of the kitchen and the maid's room.
3. Complete rough-in & finish work for the additional electrical works in the kitchen and the maid's room.

A- Carpentry work

A- Kitchen Cabinets

A.1 The extent of the carpentry work shall include all the finish work for the kitchen as detailed below:

- The contractor shall dismantle the existing kitchen cabinets in professional way. The old kitchen cabinets parts shall be moved by the contractor to the storage area inside the compound as directed by the COR.
- The contractor shall furnish and install new kitchen cabinets as shown in diagram. The kitchen cabinets shall be of MDF wood with laminate coating finish. The doors shall have solid flat surface. The minimum thickness of the cabinets' exterior frame, doors and drawers shall be 18 mm. The kitchen cabinets shall be dark natural wood in color.
- The kitchen wall cabinets shall be around 10 meter length as shown in drawings.
- To increase the storage area, the top kitchen cabinets shall be installed all the way to the ceiling. The height of the kitchen walls is 3 meters high.
- The countertops shall be of natural high durable marble top. The marble countertops shall be 3 cm thick at least, grade level 1 with a half-bevel edge profile. The marble shall be of fine quality- Italian marble approved by the COR. The tiles shall be Model, "Carrara", or equal approved.

- The complete kitchen design and wood, accessories, hinges, handles...etc samples shall be submitted to and approved by the COR prior fabrication.
- The Contractor shall furnish and install two wall mount stove range hoods for exhaust with all the related duct work.
- All other electrical appliances shall be furnished by the USG upon completion;; fridges, dishwasher, distiller, ice makers...etc

A.2 Submittals

A. 2.1 Shop Drawings

Submit full designs and elevations indicating door sizes, construction, swing, label, undercut, and applicable hardware locations.

A.3 Execution

A.3.1 Fabrication

A. Fabricate all wood doors in strict accordance with the referenced standards specified herein.

A.3.2 Installation of Hardware

A. Contractor shall install hardware according to approved hardware schedule for proper locations.

B. Install with full-threaded wood screws furnished by hardware manufacturer.

C. Drill proper size pilot hole for all screws. (Full mortise hinges require 5/32" pilot holes.)

D. Securely anchor hardware in correct position and alignment.

E. Adjust hardware and door for proper function and smooth operation, proper latching, without force or excessive clearance.

F. Install high quality door stoppers and all hardware items for all kitchen doors and drawers.

B- Plumbing Works

B.1 The extent of the plumbing work shall include all the rough-in and the finished plumbing work for the extra works in the kitchen and the maid's room as detailed below:

- Adjust/ Install the required supply & drainage piping for the dishwasher sink in their new location as shown in diagram.
- Install new high quality double bowl kitchen sink
- Install new kitchen Pull-Out Spray Kitchen Faucet and its accessories.
- Install the required supply & drainage piping and fixtures icemaker and distiller in their new location as shown in diagram.

- E. The ice maker shall run from the nearby bathroom. The drain of the icemaker shall go out the villa's walls to the nearest garden through the interlocking tiles.
- F. All the plumbing piping works shall be embedded in the walls or below the ground floor suspended slab, in the service area in the basement.
- G. The contractor shall be responsible to restore the original finish, texture and color of the walls and ceilings for all affected walls and floor.
- H. As part of the works, the contractor shall check and maintain all the existing plumbing fixtures in the kitchen.

B.2 Products:

The contractor shall furnish:

PPR Pipes: for hot & cold water supply (¾ inch at least)

Polyvinyl Chloride (PVC): for waste water (2 inch pipe)

Valves: Built-in valves, Grohe or approved equal.

Kitchen sink: high quality stainless steel commercial sink (double bowl) premium-grade steel - 18 gauge- stainless steel Type 302, with adjustable "p" trap with cleanout plug tubing to wall and escutcheon.

Pull-Out Spray Kitchen Faucet: - Grohe, German made, zedra brand or equal approved.

B.3 Execution

B.3.1 Pipes, joints & fittings

1. Install the pipes, fittings & joints to connect to the existing system in the same installation method and following the instructions listed below.
2. Install pipes, joints & fittings, in accordance with recognized industry practices which will achieve permanently leak proof piping systems, capable of performing each indicated service without piping failure. Install each run with minimum joints and couplings, but with adequate and accessible unions for disassembly and maintenance/replacement of valves and equipment. Align piping accurately at connections, within 2 mm (1/16") misalignment tolerance.
3. Locate piping runs except as otherwise indicated, vertically and horizontally (pitched to drain) and avoid diagonal runs wherever possible. Orient horizontal runs parallel with walls and column lines.
4. Clean exterior surfaces of installed piping system of superfluous materials. During construction, properly cap all lines and equipment nozzles so as to prevent the entrance of sand, dirt, etc. Each system of piping to be flushed prior to testing for the purpose of removing grit, dirt, sand, etc., from the piping for as long as time is required to thoroughly clean the system.
5. In erecting pipe, friction wrenches and risers shall be used exclusively; any pipe cut, dented or otherwise damaged shall be replaced.

B.3.2 Plumbing fixtures and accessories

1. Install plumbing fixtures and accessories as indicated, in accordance with manufacturer's written instructions, applicable codes and regulations, and in accordance with recognized industry practices to ensure that installation complies with requirements and serves intended function.
3. Fasten plumbing fixtures securely to supports on building structure. Secure water supplies behind or within wall construction to provide rapid installation.
4. Provide a stop valve in an accessible location in the water connection to each fixture
5. Seal (caulk) all fixtures to walls and floors using G.E. silicone sealant. Match sealant color to fixture color.
6. Replace washers of leaking or dripping faucets and stops.
7. Clean fixtures, trim, and strainers using manufacturers recommended cleaning methods and materials.
8. Upon completion of installation of plumbing fixtures and trim, and after fixtures are water pressurized, test fixture to demonstrate compliance with requirements. Where possible correct malfunctioning units, retest to demonstrate compliance, otherwise remove and replace with new equipment and retest at no cost to Owner.
9. Apply the proper joint sealant and silicone for all joints around all the finished fixtures and accessories as required to provide sealed installations.

C- Electrical Works

C.1 The extent of the electric work shall include all the rough-in and the finished electric work for the entire kitchen as detailed below:

The contractor shall furnish and install all the wiring, conduits, etc... in order to the new electrical layout of the kitchen as shown in diagram

- The contractor shall furnish and install the following

- 10 electrical duplex receptacles 220V, 13 Amp,
- 3 electrical receptacles 220 V, 15 Amp.
- 2 GCFI receptacles **(The GFCI receptacles shall be Furnished by USG)**
- Electrical switches for the lighting, rolling shutters, air conditioner.

All the conduits shall be embedded in the walls. Minimum damage shall be allowed to the walls' plaster and paint. For all new wiring, the wiring and conduits shall be connected from the electrical panel from the utility room through the gypsum ceiling. The contractor shall repair the gypsum ceilings prior delivering the project.

- **The exterior walls of the villas is made of two 10 cm thick CMU separated by 5 cm void (25 cm total). The inner walls made of 15 cm thick CMU blocks.**

C.2 General

- C.2.1 Do not scale from the layout drawings, work according to architectural drawings unless otherwise indicated .
- C.2.2 All equipment layouts are provisional. Final layouts are to be determined by the contractor after coordination with other trades .
- C.2.4 Conductors for receptacles outlets circuits shall be in general 4 mm² & protected by 20 amp circuit breakers unless otherwise indicated .
- C.2.5 Protective earth conductors are not indicated on the drawings, but are to be run with all circuits in accordance with the NEC 70 (article 250).
- C.2.6 All lighting switches and receptacles outlets located in general areas shall be installed at 1200 & 450mm above F.F.L. respectively. Lighting switches shall be mounted inside the room on the side of the door handle within 200mm from door frame unless otherwise indicated .
- C.2.7 All receptacles outlets in wet areas, stores shall be mounted at 1200 A.F.F.L unless otherwise shown.
- C.2.8 The contractor shall coordinate all works with other trades and services and incorporate all their exact and final requirements .
- C.2.9 In the absence of any indication on the drawings or in the specifications, the installations are to be in accordance with NEC 70.
- C.2.10 All receptacles in wet areas shall be protected from a ground fault current interrupter GFCI 10mA.
- C.2.11 Equipment ampere ratings are for continuous operation in 50 C ambient temperature outdoors, or in non-air conditional space indoor and 40 C in air-conditioned spaces unless otherwise noted.

C.3 Products

- C.3.1 All materials will be supplied and installed by the contractor. The contractor shall be responsible for furnishing any other materials to finish the required work stated herein.

1. Receptacles ,switches, products of (MEM), or equal approved
2. Wires and cables, products of (El Sewedy, alsharag), or equal approved
3. Conduits and boxes, products of (Engineering home) or equal approved

C.4 Execution

- C.4.1 The work will be performed according to approved shop drawings. Any changes due to field condition are to be discussed with the COR.
- C.4.2 Conduit joints shall be made by brushing plastic solvent cement on insides of plastic coupling fittings and on outsides of duct ends. Each duct and fitting shall be slipped together with a quick 1/4th turn twist to set the joint tightly.
- C.4.3 A 1/4th nylon or polypropylene pulling rope shall be pulled in each unused or spare conduit.
- C.4.4 All embedded conduits shall be rigid PVC conduit.
- C.4.5 Field-made bends and offsets shall be made with an approved conduit air heaters or a special fittings can be used. Crushed or deformed raceways shall not be installed.

- C.4.6 Conduits shall be securely and rigidly fastened in place at intervals of not more than 2 meters and within 300 mm of boxes, cabinets, and fittings with approved wall brackets, conduit clamps, conduit hangers or ceiling trapeze.
- C.4.7 Conduits shall be fastened to boxes and cabinets with connectors, locknuts and bushings.
- C.4.8 Exposed raceways shall be installed parallel or perpendicular to walls or structural members.
- C.4.9 Power raceways shall not contain more than four 90-degree bends or the equivalent in any one run. Communication raceways shall not contain more than two 90-degree bends or the equivalent in any one run.
- C.4.10 A conduit-coupling fitting, threaded on the inside, shall be installed flush with the finish floor.
- C.4.11 The bottom of boxes installed in ceramic tiles for concealed wiring shall be mounted flush with the tiles and at edges of the tiles to minimize cutting of tiles.
- C.4.12 Color-coding shall be provided for service, feeder, branch and ground conductors. Color shall be green for grounding conductors and white for neutrals. Grounding conductor shall be bare copper, except where installed in conduit with associated phase conductors. Insulated conductors shall be of the same material as phase conductors and green color coded.
- C.4.13 When the installation is complete, the conduits shall be sealed with approved sealing compound.
- C.4.15 Conductor phase and voltage identification shall be made by color-coded insulation. Conductors with black insulation may be furnished and identified by the use of half-lapped bands of colored electrical tape wrapped around the insulation for all entire length inside power panels and boxes. Phase identification shall be maintained continuously for the length of a circuit, including junctions.
- C.4.16 The color coding for 3-phase low voltage system shall be as follows: Red (A), Yellow (B), and Blue(C).
- C.4.17 The feeders shall be tagged to indicate the electrical characteristics (voltage, HZ, cable size, circuit number and panel designation).
- C.4.18 Control circuit conductors shall be identified by color-coded insulation (black color-coded) and marked by numbers.
- C.4.19 All wires and C.B.'s inside power panels shall be marked by numbers.
- C.4.20 All wires inside light fixtures, receptacles, disconnect switches and boxes shall be marked with circuit numbers and panel configuration.
- C.4.21 All power panels shall be provided with circuit directory card to indicate clearly circuit no., CB size, wire size and load.
- C.4.22 All power panels, disconnect switches... etc, shall be tagged with labels.

C.5 Test:

- C.5.1 Megger test for cables and wires.
- C.5.2 Performance test for light fixtures, receptacles...etcetc

D- PLASTER WORK

D.1 The extent of plaster work is:

- repair all the damaged surfaces for the installation of the plumbing and electrical works

D.2 Products

- 2.1 Cement: Ordinary Portland cement complying to ESS 373, 1962.
- 2.2 Sand: Natural desert sand, hard, clean and free from any adherent coating, clay or any deleterious material likely to affect adversely the hardening, strength, durability or appearance of the plaster.

D.3 Execution

- 3.1 Examine all masonry surfaces which are to receive plaster, the masonry surfaces to receive plaster must provide good suction (ability to absorb water) or mechanical key (surface roughness), or both.
- 3.2 A dash-bond coat shall be applied and shall be proportioned 1 part by volume of Portland cement to 1 parts by volume of sand, mixed to a slurry consistency.
- 3.3 Apply two coats (brown and finish coat) directly over plastered masonry substrates.
- 3.4 Plaster thickness: Apply total plaster thickness to a minimum dimension of 15 mm.
- 3.5 Finish plastered surfaces plumb, leveled and true to lines.
- 3.6 Cut, patch, and repair plaster as necessary to restore cracks, dents and imperfections. Repair or replace work to eliminate blisters, buckles, excessive crazing and check cracking, dry-outs and similar defects, including areas of the work where bonding to the substrate has failed.

E- PAINT

Paint includes painting and finishing of exposed interior items "Paint" as used herein means all coating system materials including primers, emulsions, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

E.1 The extent of Paintwork is:

- repair all the damaged surfaces for the installation of the plumbing and electrical works

E.2 Products

All Paint materials shall be contractor furnished, subject to compliance with requirements to products of "JOHTUN", "SCIB", or equal.

E.3 Paint schedule:

Emulsion paint for all interior walls and ceilings
Texture paint for exterior walls
Paint color: Same as existing.

E.4 EXECUTION

E.4.1 Preparation

1. General Procedures: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, for complete painting of the items and adjacent surfaces. Cover all the wood works, aluminum work, and built in work to protect them during the painting operation.
2. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved. Prepare the surfaces to be painted by removing efflorescence, chalk, dust, dirt, grease, oils, and by roughening as required to receive paint primers. For newly plastered walls, apply sufficient layers of primers necessary for receiving paint. For previously painted walls, remove the deteriorated and damaged paint layers as required. For wooden frames and trims, remove previous paint layers by sanding and scraping and prepare surfaces as required to receive new paint. Use washed enamel technique to have smooth finished surfaces. For the corner beads, sand previous paint layers and prepare to reach aligned and true vertical corners.
3. Schedule cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
4. Stir material before application to produce a mixture of uniform density; stir as required during application.
5. Use only thinners approved by the paint manufacturer, and only within recommended limits.

E.4.2 Application

1. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied and to ensure full and adequate coverage.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
3. Provide finish coats that are compatible with primers used.
4. Apply a minimum of two coats; do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.
5. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance.

6. Texture of Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling such as laps, irregularity in texture, or other surface imperfections.

E.4.3 Cleaning

1. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
2. Upon completion of painting, clean glass and paint- spattered surfaces. Remove spattered paint by washing and scraping using care not to scratch or damage adjacent finished surfaces.

F. Tiling:

In case of damaging the existing tiles, The contractor shall install new tiles with the following specifications:-

1 Products

- 1.1 Ceramic tiles for walls and floors: similar to the existing tiles or equal approved. The size shall be 300 x 300 mm. The tiles shall be as the existing- Gawhara- Egyptian made. Any alterations or modifications shall not be used without the approval of the COR.
- 1.2 Thin set mortar or tile adhesive: Readymade, for installing ceramic on top of existing mosaic tiles, or on plastered surfaces product of Scib, or equal approved.
- 1.3 Grout: white cement.

3-The Contractor shall be responsible to carry out all the works to that is required to restore the disturbed area to its original texture and color, this includes but not limited to plastering, painting, touch up painting, sanding, tiling etc...

4- The contractor shall maintain existing utilities indicated to remain and protect them against damage during the project. Damages caused by works, shall be repaired by the contractor at no additional cost to the Government.

5- The contractor shall transport from site all debris, rubbish, and materials resulting from operations and dispose off site on a daily basis in accordance with local regulations.

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.

The duration of the project shall be 20 working days.

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 [OSHO] 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.

11. 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.