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UNIVERSITY OF THE PHILIPPINES MANILA
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PROJECT TITLE : PROPOSED REHABILITATION AND REPLACEMENT OF FIRE EXIT LADDER
INCLUDING SUPPLY AND INSTALLATION OF PANIC DOOR (FIRE EXIT) AT
NUTRITION LAB, DEBs AND CPH LIBRARY
Lara Hall, College of Public Health
University of the Philippines Manila

SUBJECT : SCOPE OF WORKS AND SPECIFICATIONS



CPDMO10002746

Division 1 - General

01000 General Requirements

1. The Contractor shall furnish all materials, equipment, tools, apparatus, appliances, accessories, transportation, labor and supervision required for the complete construction of the subject project, as shown on the drawings and called for in these specifications, ready for use.
2. All Contractors submitting proposal for this project shall first examine the site. All proposals shall take into consideration all such conditions that may affect the work under this contract. The specifications and plans shall form part as one. Anything mentioned on plans and not mentioned on the scope of work and specifications and vice versa shall be properly consulted to the CPDMO Project Architect/Engineer for clarification. Any work or materials not in accordance with the drawings or specifications shall be replaced with new at the Contractor's expense.
3. The Contractor shall coordinate his work with all parties to ensure proper phasing or schedule of works. The Contractor shall engage under him, a registered Engineer or Architect to supervise his work. He shall remain at all times in the construction site.
4. A logbook shall be available at the site. It shall contain the daily activities in the site, including weather condition, delivery, manpower and other matter pertaining to the condition of the project. It will also serve as data for Contractor and the Project Inspector.
5. Identification Card of construction workers and engineer/representative shall be supplied by CPDMO with corresponding fees; it should be worn at all times while inside the building/campus premises. Those without IDs shall not be allowed to enter the premises for security purposes.
6. No alteration or additional work that will result in an additive or deductive cost change from the Contract shall be allowed without the approval of the chancellor.
7. Complete specifications with product sample shall be submitted by the contractor to CPDMO and end-user for evaluation. Inspection of the Project Architect/Engineer in-charge shall be required prior to installation of any item/material on the construction.
8. Regular coordination meeting shall be conducted with CPDMO, Contractor and End-user for proper project monitoring.

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9. Existing condition of the work site shall be documented by the contractor and photos shall be taken before commencement of work to ensure such status. Any damage on the areas due to the contractor's on-going work shall be refurbished at his expense.
10. The Contractor shall provide a complete copy of "As built plans" of the project/unit concerned which shall include all the civil, architectural, plumbing, electrical and other related layouts in 20" x 30" original sheets. It should be properly drawn indicating all the specifications, layouts, tables and necessary data. An initial layout should be submitted in a B4 sheet for checking and approval of Project Architect/Engineer. Final "As built plans" shall be submitted with soft and hard copies.
11. The Contractor shall promptly remove from the premises all rubbish, trash, debris, and all superfluous building materials weekly. After the completion of all works, restore all areas that were damaged as affected by the construction works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.
12. All materials removed from the unit shall be properly documented prior to turn-over to the End-user for proper safe keeping.

01510 Temporary Facilities

- Provide temporary enclosure/canvass on roof areas upon removal of the roofing sheets for building protection. Such coverings shall be adequate enough to cover all the building facilities throughout the span of the project.
- Charges for the restoration or replacement of any damage facility, equipment, material and the like shall be made on the Contractor due to his negligence in providing suitable temporary covering.
- Provide the appropriate scaffoldings, board ups, safety nets and related items to ensure proper installation of all framing system and protection on the area, at the expense of the Contractor as its basic equipment.

Division 2 – Site Construction

02200 Site Preparation

Mobilization / Demobilization

- This work includes mobilization process, provision for warning signs, including barricades, temporary facilities, temporary fences, warning lights and similar safeguards shall be provided by the Contractor as they are required for protection of his manpower and others during the construction life of this project.
- Demobilization procedure shall include clearing of the affected areas from all rubbish, trash, debris, and all superfluous building materials and restore all areas that were damaged as affected by the works and leave the site clean to the satisfaction of the Project Inspector or his representative and End-user.

02230 Site Clearing

- Clear the area from all obstructions or as affected by the construction works, except those structures indicated on the drawings or designated by the Project Architect/Engineer to be left standing. It shall be properly protected from incidental damage due to construction works by the erection of suitable barriers upon approval of the Project Architect/Engineer.

02290 Site Monitoring

- Site monitoring shall be a must to the contractor for the effective implementation of the project. Any discrepancies on plans and actual site conditions shall be properly coordinated with the Project Architect/Engineer concerned for verification.
- Regular coordination meeting shall be done between the contractor or its representative and the Project Architect/Engineer concerned at CPDMO.

Division 5 – Metals

Section 05500 Metal Fabrication

Scope of Work

- This item shall consist of fabrication/installation of emergency fire exit ladder and platform, including labor, tools, equipment, and the satisfactory performance in undertaking the proper installation of the system as shown on the Plans and in accordance with this Specifications.
- The work covered by this Item shall consist of structural steel framing including but not limited to: in accordance with Plan and/or standard detail and as herein specified.
 - Platform
 - Ladder
 - Railings
 - Counter Balance Ladder
 - Braces & Supports

Material and Construction Requirements

- 2" DIA GI PIPE HANDRAIL @ 6m
- 2" X 3/16" SQUARE TUBING STILTS SUPPORT@ 6m
- 2" X 8 "STRUCTURAL TUBING @ 6m
- 2" X 4" X 3/16 " STRUCTURAL TUBING @ 6m
- 2" X 3/16" THK FRAMING @ 6m
- 1 ½ " X 3/16" CROSS BAR @ 6m
- 1 ½ X STRIP NOSING @ 6m
- 1 ½ X 3/16 BEARING BAR @ 6m
- 16MM DIA. EXPANSION BOLT @ 0.15m
- 1" X ¼" FLAT BAR @ 6m
- 12MM SQUARE BAR @ 6m

Submittals

- Shop Drawings: Submit shop and erection drawings clearly showing each piece required for fabrication and erection. Drawings shall include material grade, camber, holes and other pertinent data. Indicate welds by standard AWS symbols showing size, length, and type of each weld.
- Coordination drawings and templates: Provide anchor setting drawings clearly showing location of all anchor bolts and embedded plates to be anchored in concrete and masonry construction. Provide templates for anchor bolts.

Quality Assurance

Welding

- Performed by certified welders in compliance with Welder's Qualification Test Certificate, AWS D1.1 and or ASME IX.
- Welders shall be duly qualified (test passed in the preceding 12 months) in the position in which they are to weld and the qualifications and specifications for workmanship shall comply with the AWS requirements "AWS Structural Welding Code – Steel"

Delivery and Storage

- Exercise Care during unloading, storage and erection to avoid damage, dumping on the ground is not permitted.
- Support material stored at the site completely free of the ground, and cover to avoid damage from the elements.

Materials

- General: Materials shall be new, of uniform quality, suitable and without defects affecting the strength or service of the structure.
- Structural Steel, Pipes, Tubes and bolts: in accordance with General Structural Notes on drawings.

Execution

Examination:

- Verify anchor bolt locations, grouting, and elevation of base and setting plates and other material set by other trades before commencing work.

Erection:

- Erect work to the proper lines and levels, plumb and true, and in correct relation to other work and maintain this condition to completion.

Connections:

- **Machine Bolting:**
 - Fair-up holes with pins to align holes before bolting.
 - Ream unfair holes to obtain alignment or drill new holes.
 - Enlargement of holes with drift pins or burning of new holes is not permitted.
 - Draw bolt up tight after members are aligned and leveled, and set or deformed threads to prevent loosening.
- **Welding:**
 - Weld by shielding arc method as per AWS standard code for arc and gas welding in building construction.
 - Submit certification that welders have passed Welder's qualification test.
 - Certification must be dated no earlier than 3 months prior to beginning of project.
 - Close joints exposed to weathering with continuous 1/8" weather welds.
 - Grind smooth exposed welds, but grinding shall not reduce weld strength or required cross section.
 - Connect members temporarily and align completely before making permanent connections.
 - Temporary connections shall consist of bolts on no less than 1/3 of the holes and in no case less than 3 bolts in any single connections.
 - Surfaces in contact shall be thoroughly clean when assembled.
 - Provide necessary temporary bracing and guying to align the structure

properly for permanent connections, and to safety resist erection dead load and wind stress.

- o Take particular care to have the work plumb and level (maximum tolerance 1- 500 for interior members, 0- 1000 for exterior members) before making permanent connections
- o Remove bracing and guys only after permanent alignment and assembly and structure area capable of completely sustaining design and temporary construction loads.

Cleaning

- During the course of the work and on completion of the work, remove excess materials equipment and debris and dispose of away from premises in a legal manner.

Division 8 – Doors and Windows

08000 Doors and Windows / Glass Structure

Doors

Scope of Work

- The work covered by this Item shall consists of furnishing all fabricated door and jambs, equipped with fixing accessories and locking devices in accordance with Plan and/or shop drawings and as herein specified.

Material Requirement

a. Single Panel Fire Rated Steel Flush Swing Type Door – D1

- Panel: G.I. Sheet, G.A. # 18 thk., 44 mm thk.
- Jamb: G.I. Sheet, G.A. # 16 (97mm), 2" x 4" single rabbet
- Insulation: 44 mm thk. Honeycomb
- Hinges: 4pcs/ Panel S/S 4.5" x 4" x 3.5" mm thk Butterfly Ball bearing hinges
- Handles: Panic Device, 90 minutes Fire Rating
- Door Closer: Surface Mount Door Closer (60kg-Weight Capacity) ISO 9002
- Fire rate: 4 hours fire rated as per BS476, Part 22
- Finished: Epoxy Primer (Gray)/Duco Paint Finish
- Signage: Fire Exit Signage with Emergency Light

b. Double Panel Fire Rated Steel Flush Swing Type Door – D2

- Panel: G.I. Sheet, G.A. # 18 thk., 44 mm thk.
- Jamb: G.I. Sheet, G.A. # 16 (97mm), 2" x 4" single rabbet
- Insulation: 44 mm thk. Honeycomb
- Hinges: 4pcs/ Panel S/S 4.5" x 4" x 3.5" mm thk Butterfly Ball bearing hinges
- Handles: Panic Device, 90 minutes Fire Rating
- Door Closer: Surface Mount Door Closer (60kg-Weight Capacity) ISO 9002
- Fire rate: 4 hours fire rated as per BS476, Part 22
- Finished: Epoxy Primer (Gray)/Duco Paint Finish
- Signage: Fire Exit Signage with Emergency Light

Division 9 – Finishes

09910 Paints and Coatings

Scope of Works

- This Item shall consist of furnishing all paints, enamels, epoxy and other products to be used including labor, tools and equipment required as shown on the Plans and in accordance with this Specification.

Materials Requirements

- Specified materials shall be delivered to the job site bearing manufacturers' name, brand name, type of paint, analysis showing all important constituents of the paint, color of paint and instructions for thinning.
- Specified item and/or its components shall be handled in such manner as to prevent damage. The same shall be properly protected from harmful elements or damage by other work prior to its incorporation into the Project.
- Store materials in a well ventilated space designated for the storage and mixing of paint. Materials delivered to the site shall be properly stored as to minimize exposure to extremes of temperature.

Quality Assurance

- The University reserves the right to subject material samples to test at his expenses. If such material tests do not meet the specified standards, the cost will be charged to the Contractor.
- Number of coats, where specified, is minimum. Contractor shall apply as many as required to meet specifications for solid, uniform appearance. Where film thickness in mils is specified, spot checks will be made to determine compliance with specified thickness.

Submittals

- Submit 2 samples of each and every color or finish (including all coats). Where the same color or finish is to be applied over different materials, samples of each shall be submitted on different materials, where practical.
- Sample size shall be a minimum of 150 mm x 150 mm (6" x 6").

Protection

- Paint materials shall be properly protected from damage, providing for adequate storage space. Take all necessary precautions to prevent fire, such as keeping oily rags in U. L. approved metal containers or removing from building at the end of each day's work.
- All work fittings, furniture, etc., are to be suitably protected during execution of the work. Splashes on floors, walls, etc. are to be removed during progress of work and on the whole, left clean and perfect upon completion.
- No exterior or exposed painting shall be carried out under adverse weather conditions, such as extremes of temperature, during rain, fog, etc., or if there is excessive dust in the air.

Lead Content and Warning Labels

- The material manufacturer shall state the lead content on the label of any paint product container based on metal percentage of total solids.
- The label of any paint product exceeding 0.5% lead content shall include the following statement: "This paint contains more than 0.55 lead content and shall not be used on surfaces accessible to children."

Repair of Defective Work

- All defective or damaged work shall be restored to initial condition.
- All voids, cracks, nicks, etc., will be repaired with proper patching material and finished flush with surrounding surfaces.

- Marred or damaged shop coats on metal shall be spot-primed with appropriate metal primer.
- Defective or damaged items and/or components, which cannot be repaired or restored to initial conditions, shall be removed and replaced to the satisfaction of the Architect at no additional cost to the Owner.

Cleaning

- Upon completion of the building, the Painting Contractor shall remove all paint spots from all finished work, remove all empty cans and leave the entire premises free from rubbish or other debris caused by his work. He shall remove his equipment from the premises. He shall clean off all glass free from paint spots and smears and shall present the work clean and free from all types of blemishes.

Products

General:

- Materials are specified to establish the standards of grade and quality desired for the work, principal pigments and vehicle types and minimum percentage of solids content by volume.
- The products of Manufacturers not named may be submitted for use provided they are equal in quality and grade to the primers and finishes specified as approved by the Architect. If substitute paint products are desired, a statement shall be submitted to the Architect giving the Manufacturers name, proposed primer and finish for each paint system, analysis for each type of paint, and the use or uses intended. Failure to submit such statements will be cause for rejection.
- In cases where the name of a brand or supplier is mentioned under a particular specification, only paint or primer of that manufacturer is acceptable and no substitution shall be permitted on the grounds that the brand specified is not available in the local market. Materials of one manufacturer shall not be applied over that of another, except in the case of shop primer coat.

Color, Gloss And Texture:

- Refer to Finish Schedule. All work is to be completed without deviation from these unless written approval is received from the Architect. No extra cost shall be allowed because of the color variety scheduled.

Execution

General:

- Work-in-place, on which specified work is to be applied, shall be examined to insure that conditions are satisfactory for application of specified materials. Any defect, which may influence satisfactory completion of specified work, shall be report, in writing, to the Architect. Absence of such notification will be construed as acceptance of work-in-place.
- Do not apply exterior paint in damp or rainy weather or until surfaces have thoroughly dried from the effects of such weather.
- Before start of painting, remove finish hardware, accessories, plates, lighting fixtures, and similar items, as approved by the Architect, except UL Labels on Fire Door and Frames, which must not be removed. Use only workmen skilled in the applicable building trade for removal and reinstallation of finished item in-place.
- The following items shall be masked or protected with suitable covering:
 - Sealing, caulking and glazing compounds (unless otherwise directed by the Architect).
 - Glass.
 - Gauges, thermometers and other recording devices.

- Moving parts of machinery and other mechanical equipment - such as: shafts, couplings, valve stems, and the like.
- Coated decorative sheet metal work.
- Sprinkler heads and the like.
- U.L. Labels

Surfaces Preparation as Applied to Various Substrate

(a) Metal

New Surface:

- Surface to be painted should be clean and dry, free from oil, grease, dust, dirt, wax, solder flux, and other contaminants by wiping with mineral spirits or paint thinner.
- Remove rust by wire brushing, sanding or scraping.
- Where maximum performance of protective coatings is necessary (e.g. Industrial Plants), prepare surface by blast cleaning.

Paint Application

- **General:** Specified work shall be done by skilled painters in a workmanlike manner. All spaces shall be broom-cleaned before painting is started. Surface to be painted shall be clean, dry, smooth and adequately protected from dampness. Each coat of paint shall be allowed to dry at least twenty-four (24) hours before succeeding coat is applied. Finish work shall be uniform, of approved color, smooth and free from runs, sags, defective coverage, clogging or excessive flooding. If surfaces are not adequately covered, as determined by the CPDMO Architect/Engineers/Inspectors, further coat shall be applied to the satisfaction of the CPDMO Technical Group. Edges of paint adjoining other materials or colors shall be sharp and clean without overlapping.
- **Paint Mixing:** Paint mixing and thinning shall be done only in accordance with directions of Manufacturer. Paint must be strained free from all skin and extraneous substances and shall be thoroughly mixed in a clean container during use.
- **Methods of Application:** Exterior first coats and Interior first coats shall be applied by brush, except on shop-primed surfaces, which shall be applied by brush or roller. All primer shall be applied by brush. Succeeding coats over field-primed surfaces and all coats over shop-primed surfaces may be applied by brush roller or spray. Distemper brushes are to be of approved type and less than 15 cm in width. Rollers for applying enamel shall have a short nap. Spray equipment shall be as recommended by the manufacturer of the paint used. Areas inaccessible to spray painting shall be coated by brushing or suitable method.
- **Coating:** Consecutive coats of paints are to be slightly differing tints except in the case white. Each coat shall be allowed to harden before the next is applied. Rubbing down between coats is to be done with fine abrasive paper.
- **Wood Finishing:** Wood to have natural satin varnish finish shall be stained as required and sealed as soon as such items are delivered to the job site. Seal all ends to exclude moisture. Knotting shall be carried out by using shellac dissolved in spirit or approved ready mixed compound.
- **Woodwork and Metal Work:** Primed or undercoated woodwork and metalwork shall not be left in an exposed or unsuitable situation for an undue period before completing the painting process. Stopping and filling shall be deemed to be included for all metal works, plaster works, and wood work specified to be used to produce a surface ready for priming and painting.

- *Final Touch-Up:* Upon completion, finish work shall be touched-up and restored where damaged and left in good condition.

NOTE

The foregoing list of item of works does not in anyway limit the responsibility of the Contractor to perform all other works necessary for the completion of the project, **PROPOSED REHABILITATION AND REPLACEMENT OF FIRE EXIT LADDER INCLUDING SUPPLY AND INSTALLATION OF PANIC DOOR (FIRE EXIT) AT NUTRITION LAB, DEBs AND CPH LIBRARY.**

GUARANTEE

The Contractor shall guarantee all works under this contract to be free from any technical, material, workmanship and/or factory defects and shall replace and repair to the satisfaction of the Project Architect / Engineer and/or to the Chief of CPDMO on any part or portion of the work which may fail within **a period of one (1) year after the final acceptance of the system.**

COMPLETION PERIOD

The Contractor is given **Ninety (90) calendar days** to execute the construction works including the installation all system requirements. The Contractor shall coordinate to the CPDMO Inspector and End-users for the schedule of testing of systems and other related job.

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