CAMPUS PLANNING, DEVELOPMENT & MAINTENANCE OFFICE
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CPDMO
U.P. MANILA

CPDMO10004086

PROJECT TITLE : **PROPOSED SERVICE ENTRANCE**
College of Medicine
University of the Philippines Manila

SUBJECT : **SCOPE OF WORKS AND SPECIFICATIONS**

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Division 1 - General

Section 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

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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.

9. Existing condition of the work site shall be documented by the contractor and photos shall be taken before commence 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.

Section 01510 Temporary Facilities / Safety Signage

- Provide temporary enclosure/canvass on all areas 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

Section 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.

Section 02200 Site Demolition

Dismantling Works

- This work include de-commissioning/dismantling of all existing LVSG not necessary on the new features of the rooms but shall be coordinated properly with the Project Architect to ensure the effect and safety of such activity.

- Restoration and rehabilitation shall be done according for the improvement of the structures.

Section 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.

Section 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.

Section 02500 Utility Services

Utility Service/Consumption

- Provision of electric and water meter shall be included in the quotation to be charged to the contractor's overhead. All utility consumption shall be provided with meters to limit the usage of such during working period. Payments of bills shall be made thru the Cashiers Office after the renovation period presenting the statement of account issued by Accounting upon recommendation of the Chief of CPDMO.

Division 16 - Electrical

Workmanship and Materials

- All works shall be done in accordance with the requirements of the latest edition of the Philippine Electrical Code and National Safety Code. Nothing contained in these specifications or shown on the plan shall conflict with the requirements of these Codes, any discrepancies should be consulted to the Project Inspector / Electrical Engineer.

- All materials and equipment to be used and installed hereunder shall be of the approved type bearing the stamp or approval of the proper authorities concerned. Locally made or constructed materials shall first be approved before installation.
- All works shall be done in workmanlike manner and should present a neat and mechanical appearance when completed.

Plans

- The accompanying drawings shall indicate the general arrangement of the equipments, outlets and other works. When it is necessary to deviate from the arrangement indicated on plans in order to meet the structural conditions, such deviation shall be made at the expense of the Contractor and upon approval from the Project Inspector / Electrical Engineer.
- The outlets and circuit breakers shown on the plan are diagrammatic and approximately correct as to location. Minor changes shall be made through the Contractor at his own expense. The exact location of all outlets and switches shall be determined by the Project Inspector/Electrical Engineer and the same shall be located accordingly. The Contractor shall be responsible for the accurate location of all outlets with respect to doors, partitions, water pipes, cabinets and other facilities.

16050 Basic Electrical Materials and Methods

Conduit System

- PVC & IMC pipe is primarily required for this work. Conduit runs shall be well supported especially on ceiling and slab, concrete encased on soil. All conduits placed on walls and partition shall be embedded, exposed layout will not be allowed. Conduit ends shall be provided with an end bell or adapter with locknut and bushing. Conduit shall enter knockouts squarely. Locknuts and bushing shall be used at termination of conduits in outlets, pull or junction boxes, panels and cabinets. Locknuts shall be screwed tight. Bends and offsets shall be avoided if possible, but when necessary it shall be made with an approved Field bend or pipe / conduit bending machine. The use of pipe tee or vice bending conduits will not be permitted.

Restrictions

- Supply and installation of all material not shown in the drawing nor mentioned in this specification but necessary for the completion of the construction works shall be included. Coordination with CPDMO and Project Inspector should be done for proper installation of all wiring systems.

16070 Hangers and Supports

Hangers and Support

- All electrical pipes and accessories shall be using appropriate hangers and support follow existing features. Exposed layout on walls and partition inside offices shall not be allowed. Chipping works required.
- Hangers and Supports for Cable tray (Steel Rods, Expansion Bolts, C/Strut-Channels, and other necessary items to support raceways.)

16080 Testing

Testing of system

- Complete testing of the system involved in operation and provision of all system apparatus for making test and guarantee for a period of one (1) year after acceptance of the project and shall agree to repair and make good at no additional cost to the end user.

16090 Restoration and Repair

Restoration Works

- All the necessary restoration works in all affected areas in the implementation of the project shall be the Contractors liability.

16130 Raceway and Boxes

Boxes and Pull boxes

- All conduit boxes and fittings shall be standard manufactured by reputable electrical manufacturers. All conduit boxes not over 100 cubic inches in size, if constructed of sheet metal, the metal shall not be less than No.14 US gauge and shall be set flush with the surface of the structure in which they are installed and where conduit runs are concealed. Care shall be exercised to line up all outlet boxes, 4" octagon type and 1-½" depth. When more than two conduits enter the outlet box, the 2-1/8" depth type box shall be removed. All outlet boxes indicated to be used for lighting fixtures shall be provided with standard flat metal covers.
- Horizontal or vertical gang boxes shall be installed as indicated or when required. All conduit boxes, junction boxes, and blank outlet boxes shall be fitted with standard flat metal conduit box covers.

16140 Wiring Devices

- All wiring devices to be used hereunder shall be new and of approved type. All wall switches shall be top-action quiet-matic type, wide series, bases to be fire-resistant and non-absorptive material. When more than one switches is indicated in the same location, they shall be mounted in gang under a common plate.
- Suitable single pole and heavy-duty switches shall be installed where indicated on the plans. Sample of wiring devices shall be presented for approval. Minor relocations and re-circuiting shall be the liability of the Contractor.

LOW VOLTAGE ELECTRICAL DISTRIBUTION

- Supply, installation, termination and commissioning of low voltage electrical distribution conductors and cables, conduits, connectors, fittings, enclosed circuit breakers including termination accessories and all necessary items to complete the works in accordance with the drawings and specifications.

ELECTRICAL POWER

- Lightning Protection and Grounding System Supply, delivery and installation of lightning protection and grounding system including equipment, devices, wiring, roughing ins and necessary items to complete installation as shown in drawings and as described in technical specifications.

- Concrete Pedestal/ (Inclusive of Cast in Place Concrete, Reinforcement bars, Forms and accessories, Rigid Steel Conduits, Ground Rod and other necessary accessories for complete construction based on design requirements).

Electrical Power Requirements:

- Ground Rod Copper Clad Steel 20mm dia X 3000 mm long
- 100 mm2 BCW
- 32 mm Dia PVC Pipe
- Exothermic Weld Connector
- Solder less Connector
- Pre-Drilled Grounding Bus bar (Inclusive of Wall Mounting Bracket with Poly-Insulator)

Facility Electrical Power Generating and Storing Equipment

- 34.5 kV/230V, 1.25 MVA Padmounted Transformer

First Private Pole and accessories

- First Private Pole (Inclusive: Concrete Slab, Pipe, Entrance Cap, Reinforcement Bars, Rigid Steel Conduits, and other necessary accessories for complete construction based on design requirements)
- Surge Arrester
- Cut-Out Fuse
- Cable Tray
- Electrical Manhole
- Concrete Encasement
- Demolition and Restoration of CHB wall
- Testing and Commisioning

16410 Enclosed switches and Circuit Breakers

Circuit breakers, Panel Boards and Accessories

- Panel: LVSG in NEMA 1 - Free Standing
  Main: 1-4000AT, 4000AF, 3P, 230V, 65KAIC, ACB
  Branches: 2-1600AT,2000AF,3P,230V,65KAIC, MCCB
  1-600AT,600AF,3P,230V,65KAIC, MCCB
  2-200AT,225AF,3P,230V,65KAIC, MCCB
  1-125AT,225AF,3P,230V,65KAIC, MCCB
  2-500AT,600AF,3P,230V,65KAIC, MCCB

- 600KVAR, Capacitor Bank
  Main:1-2000AT, 2000AF, 3P, MCCB
  Branches:12-100AT,100AF,3P, MCCB

12 Steps x 50 KVAR Capacitor
Pull Box

- The enclosure shall be galvanized steel of code thickness, powdered coated enamel finish and shall be installed plumb and symmetrical with the surrounding devices.
- 2" x 4", 4" x 4" utility and junction boxes.
- Pull box with cover enamel coated finished with ½ and ¾ knock outs.
- Electrical tapes, rubber tapes, pull wires, mica tubes and assorted screw.
- 110 mm Ø PVC Conduit & 80 mm Ø IMC Conduit.

Low Voltage Circuit Protective Devices

- VCB, 630A, 3P

NOTE

The foregoing list of item of works does not in any way limit the responsibility of the Contractor to perform all other works necessary for the completion of the project, **PROPOSED SERCIVE ENTRANCE.**

GUARANTEE

The Contractor shall guarantee all works under this contract to be free from any technical, mechanical and electrical 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 **one hundred sixty (160) calendar days** to execute the renovation 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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4/10/2020