



PROJECT TITLE : PROPOSED PROCUREMENT OFFICE
Floor, UPM Main Building
University of the Philippines Manila

SUBJECT : SCOPE OF WORK AND TECHNICAL SPECIFICATIONS

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 comply with the approved 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 but not limited to 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 and shall be surrendered to the CPDMO at the end of the project.
5. Identification Card of construction workers and engineers/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. The contractor shall submit at least three (3) options per item for approval. 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.

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 A3 sheet for checking and approval of Project Architect/Engineer. Final "As built plans" shall be submitted in 20" x 30" tracing sheets, 3 blue prints with signature of project engineer, and an electronic Autocad drawing file. A copy of the technical documents and warranties of the items shall also be submitted in 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. The turn-over document shall be attached to the contractor's final billing.

01300 Submittals

Shop Drawings, Product Data and Samples

- Submit to the CPDMO of shop drawings, product data and /or samples of all materials for review. Submit at least three (3) options per material for approval.
- The CPDMO's review shall be limited to quality and design intent. It shall be the Contractor's responsibility to verify quantities and sizes, and make corrections observed and noted by CPDMO on any returned submissions.
- No work requiring submissions or samples shall be commenced until submission has been reviewed by the End User and or CPDMO.
- Final Acceptance of colors and finishes will be made from samples applied on the job based on the signed and approved sample materials.
- All submittals shall be charneled from General Contractor to CPDMO, Planning and Development Department, and back to the General Contractor. This procedure applies to original submittals as well as required resubmittals. Each organization shall keep its required number of copies and/or make necessary copies. The Contractor will make all corrections noted on check sets, if necessary, and return for review as required by CPDMO.
- No submittal shall be received by the CPDMO without transmittal letter.
- Samples must have Manufacturer's Data Sheet/Specification and must come together with a transmittal sheet with a section for approval/disapproval and recommendation of CPDMO and/or END USER.

01500 Temporary Facilities

- Provide Temporary GI sheets or Board enclosures 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 restoration or replacement of any damaged 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 systems and protection of 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.

02500 Utility Services

- 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 4 – MASONRY

Scope of Work

- The work covered by this Item shall consist of furnishing all masonry work requirements in accordance with Plan and/or standard detail and as herein specified.

Material Requirements

- Use Portland cement which conforms to the requirements of ASTM C-150 Type for normal Portland cement.
- Use fine aggregates which shall be free from injurious amount of clay loam and deleterious materials and shall conform to ASTM C-33 or C-330.
- Concrete hollow blocks, 4" and 6", shall be standard manufacture, machine vibrated, and shall have fine and even texture, and well-defined edges. Mortar, filler and plastering shall be Class "A" mixture.
- Deformed steel bars shall conform to ASTM A-305. It shall be clean and free from loose, rust, scales and any coatings that will reduce bond.
- #16 tie wire shall be used for reinforcing bars connections.

Construction Requirements

- Provide CHB wall with 10 mm dia. deformed round bars at 0.60 m on centers of vertical bar and every 3 layers of horizontal bar. Verify actual location.
- All cells shall be solidly filled with grout.
- Concrete mixture shall be class "A".
- Provide the plastering at 16 mm thick using class "A" mixture.
- Follow plan for details.

DIVISION 6 – WOOD AND PLASTICS

Section 06100 Rough Carpentry

Scaffoldings

- Provide sample for approval. Appropriate scaffoldings and related framing system shall be the contractor's account.

Section 06200 Finish Carpentry

Description

- Work of this Section, as shown or specified, shall be provided by the Contractor and shall be in accordance with the requirements of the Contract Documents and in accordance with the General Conditions of this Document.
- Works include coordination, Fabrication, and Installation of all Interior Exposed wood members shown on drawings and specified herein, including but not necessarily limited to the following:
 - Wood Shelving
 - Fabricated Cabinets
 - Claddings
 - Miscellaneous Items
- See approved plans for detail.

Material Requirements

- Hanging Cabinet (Director's room)
19 mm thick plywood on duco paint finish shelves with sliding door panel complete with support and accessories.
- Cabinet (Director's room)
19 mm thick plywood door panel and shelves on duco paint finish complete with pull handle and concealed hinges.
- Shelves (Director's room)
19 mm thick plywood on duco paint finish open shelves
- Shelves (Staff Room B)
19 mm thick plywood on duco paint finish shelves complete with support and accessories
- File Cabinet (Staff Room A)
19 mm thick plywood on duco paint finish shelves and cabinet combination complete with grab handles, concealed hinges, support and accessories
Dimensions: 1.20 m (L) x 2.60 m (H) x 0.40 m (D)

Submittals

- All Submittals shall be made according to Section 1300 and as described herein.
- Submit all the following for each item of Finish Carpentry:
 - Shop Drawings, indicating fabrication and installation methods, to include plans and elevations at not less than (1:20) scale and details at not less than 1'-0" (1:5) scale. Indicate required anchorage and blocking, accessory items, field dimensions,

materials and finishes. Indicate compliance with specification requirements. Indicate weight of any materials or systems to be suspended or which require support from structure.

- Manufacturer's Product Data for all specialty items not manufactured by the carpentry fabricator.
- Where required by the End user or Consultant the contractor shall provide full size mock-up of panel or wood assembly
- Contractor shall submit to the Consultant three samples 20' (500m) minimum length of all mouldings or moulding assemblies to be used for the Project. These shall be full size and finished as specified in the Contract Documents.

Quality Assurance

- All work of this Section shall be performed by skilled mechanics of the trade and shall be of the highest quality. Comply with applicable Industry Standards for all work and materials as specified. Such Industry Standards are to include but not be limited to the applicable provisions or standards of the following:
 - American Society for Testing and Materials (ASTM)
 - PNS 196:2000
- The Contractor shall be responsible for obtaining and complying with all code and regulatory agency requirements for materials and methods.
- The Interior Contractor shall be responsible for accurately obtaining all field dimensions related to his work prior to fabrication. Where discrepancies are found, he shall notify the Consultant immediately in writing.
- All Finish Carpentry materials shall be stored in a dry ventilated place, protected from the weather and complying with the temperature and humidity.
- Protect sanded and finished surfaces from soiling and damages during handling and installation.

Products

- All woodwork materials shall be new and conform to premium grade requirements
- All solid wood elements shall be clear, straight-grain lumber of the best grade of specified species. Lumber shall be free of any defects which might impair serviceability, aesthetics, and/or finish. Solid wood elements shall also be according to the following, unless indicated otherwise on drawings and/or specifications.

Hardware and Accessories

- All required hardware and accessories shall be furnished and installed by Interior Contractor and shall be as indicated on drawings and specifications. Where specific products are not specified in the Contract Documents the Interior Contractor shall recommend hardware to provide the function or condition indicated in the Contract Documents. Hinges, screws, clips and other mounting, attachments or fasteners to be concealed unless otherwise noted on drawings.
- Contractor shall submit samples of each hardware item/type and accessory item/type to CPDMO for approval according to Section 01300.
- All Finish Carpentry hardware and accessories shall be installed in accordance with manufacturer's recommendations.

Other Materials

- Interior Contractor shall be responsible for providing and installing all items and materials as indicated on drawings and specifications comprising all or part of the Finish Carpentry shown. Such items and materials shall be fabricated and/or installed according to manufacturer's recommendations and comply with applicable AWI Quality Standards and industry Standards.
- All paint and other finish material shall be pure, unadulterated and best quality from specified manufacturer as indicated on the drawings and specifications.

- All finish materials shall be flame retardant or treated with flame-retardant process where required by local-code. Should flame-retardant process cause change in color and effect on finish material, the contractor shall notify the CPDMO.
- All transparent finishes shall be alcohol, water and burn resistant.

Execution

- The Contractor shall be responsible for examination of the substrate and the conditions under which the work under this section is to be performed, and notify CPDMO in writing of unsatisfactory conditions. Do not proceed with the work under this section until unsatisfactory conditions have been corrected.

Fabrication

- All the work be performed in such manner as to fulfill the intent of the drawings and specifications.
- Where necessary to fit at site provide ample allowance for cutting and fitting. Sufficient additional material shall be allowed to permit accurate scribing to walls, floors and related work; and due allowance made wherever possible for such shrinkage as may develop after installation. All single and sectional units shall be provided with adequate cleating, blocking, crating and other forms of protection as required to preclude damages thereto during shipping and handling and installation.
- Plastic Laminate edges or metal edges shall be square, self-edged, or post formed as indicated on drawings. Edges shall be neatly beveled; joints shall be minimized in quantity and be made to a smooth hairline and puttied. Appearance of unsightly or excessive joints will be cause for rejection.

Installation

- Installation at the Project shall be by skilled mechanics supervised by the Interior Contractor in accordance with accepted standards.
- Install all Finish Carpentry straight, plumb, level and in true alignment except where otherwise indicated. Fit all joints closely and fasten all pieces rigidly in place. Nails shall be finish or casing nails. Countersink nail heads and leave ready for putty. Joints shall be neatly matched and mitered. Fill exposed joints prior to jointing.
 - Finished size shall be indicated on the drawings
 - Surfaces shall be left free from hammer marks, free from warp, twist, open or other defects and shall be cleaned, scraped and sanded ready for finishing.

Cleaning and Protection

- Clean shop finished work, touch-up finish as required and remove and refinish damaged or soiled areas of finish.
- Protect installed Finish Carpentry from damage by work of others trades until End-user's acceptance of the work.

DIVISION 8 – DOORS AND WINDOWS

08000 Doors and Windows / Glass Structure

Doors

Scope of Work

- The work covered by this Item shall consists of supply and installation of all fabricated door and jambs, equipped with fixing accessories and locking devices including restoration of opening for fitting in accordance with Bill of Quantity, Plan and/or shop drawings and as herein specified.

Material Requirement

- D-1 Existing single panel flush door and door jamb to be repaired, removed /replace with threshold with door bottom sweep seal and accessories.
- D-2 Single Frame Panel Glass Swing Type Door
10mm thick tempered clear glass with 8 mil security film on aluminum powder coated frame, 3M diffuser film and 3M sticker UPM logo to match pantone, stainless steel door handles, lockset and accessories, threshold with door bottom sweep/seal
Dimensions: 0.80m (L) x 2.10m (H)

Windows

Scope of Work

- The work covered by this Item shall consists of supply and installation of all fabricated windows, including materials, labor, tools, restoration of openings for fitting and equipment required in undertaking the proper installation as shown on the Plans and in accordance with this Specifications.

Material Requirement

- (W-1) Sliding Glass Wall
6mm thk. tempered clear glass w/ 8 mil security film on 2"x 4" aluminum powder coated frame, 3M diffuser film to match pantone, complete with accessories and installation.
Dimension: 1.60m (L) x 2.10m (H)
- (W-2) Glass Wall
6mm thk. tempered clear glass w/ 8 mil security film on 2"x 4" aluminum powder coated frame, 3M diffuser film to match pantone, complete with accessories and installation.
Dimension: 0.70m (L) x 2.10m (H)
- (W-3) 6mm thk. tempered clear glass w/ 8 mil security film on 2"x 4" aluminum powder coated frame, 3M diffuser film to match pantone, complete with accessories and installation.
Dimension: 0.70m (L) x 0.90m (H)
- (W-4) 6mm thk. tempered clear glass w/ 8 mil security film, frameless, 3M diffuser film to match pantone, complete with accessories and installation.
Dimension: 1.50m /1.05m (L) x 1.00m (H)
- (W-5) Transaction Sliding/Fix Type Window
6mm thick tempered clear glass w/ 8 mil security film, 50mm x 100mm powdered coated white aluminum frame tube, heavy duty aluminum window w/ flush handle & lock
Dimensions: 3.00m (L) x 1.00m(H)
- (W-6) Transaction Sliding/Fix Type Window
6mm thick tempered clear glass w/ 8 mil security film, 50mm x 100mm powdered coated white aluminum frame tube, heavy duty aluminum window w/ flush handle & lock
Dimensions: 1.20m (L) x 1.00m(H)

DIVISION 9 – FINISHES

09500 Ceiling

Scope of Work

- The work covered by this Item shall consists of furnishing all ceiling finishes, equipped with fixing accessories including materials, labor, tools equipment and in accordance with Plan and/or shop drawings and as herein specified.

Material Requirement

- (CF-01) 4.5 mm thick fiber cement board on metal furring, complete with hanger and support, painted finish.
- (CF-02) 0.60m x 0.60m x 4.5mm thick fiber cement board on T-Runner, complete with hanger and support, painted finish.
- (CF-03) 4.5 mm thick fiber cement board on metal furring, complete with hanger and support, duco paint finish.

Construction Requirements

- Provide all the necessary preparation of ceiling.
- Hanger rod with adjustable clip shall be at 1.00 m maximum interval both ways but provide additional hanger and support on critical areas.
- Provide all the necessary accessories and framing for proper installation.
- Ensure adequate hanger and support to all the utilities on the area.
- Restore all affected areas.

09600 Flooring**Scope of Work**

- The work covered by this Item shall consists of furnishing all floor finishes, including all necessary surface preparations, floor leveling, materials, labor, tools equipment and in accordance with Plan and/or shop drawings and as herein specified.

Material Requirement

- (FF-01) 150mm x 900mm x 3mm thick vinyl planks including floor trim on every floor finish transition.
- (FF-02) 500mm x 500mm x 3mm thick carpet vinyl tiles including floor trim on every floor finish transition.
- 600mm x 600mm Porcelain Tiles (Non-skid) including tile grout, tile adhesive, cement, sand, etc.
- Submit sample and layout of tiles for approval of CPDMO Project Architect/Engineer and End-users.

09700 Wall Finishes**Scope of Works**

- The work to be done under this item consist of furnishing all required materials, fabricated woodwork, tools, equipment and labor and performing all operations necessary for the satisfactory completion of all carpentry and joinery works in strict accord with applicable drawings, details and these Specifications.

Materials Requirements

- (6mm thick fiber cement board on L.G. steel framing 0.40 m x 0.60 m spacing, painted finish.
- 18 mm thick plywood on duco paint finish and metal stud frame.
- 100mm thick wood baseboard on all perimeter of interior wall (as specified on plan), and column and cabinet treatments.
- Submit sample and shop drawing for approval of CPDMO Project Architect/Engineer and End-users.

Construction Requirements

- Provide all the necessary accessories for proper installation.
- Follow plan for the design and layout of the partitions.
- Materials shall be subjected to the approval of the supervising CPDMO's Project Architect / Engineers / Inspectors.

09910 Paints and Coatings

Scope of Works

- This Item shall consist of furnishing all paints, enamels, varnishes 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

- Semi-gloss anti-bacterial Paint (puttied and sanded)
- 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 ensure 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

Surface Preparation as Applied to Various Substrate

- **Wood**

- New Surface:

- Surface to be painted should be clean and dry, free from oil, grease, dust, dirt, contaminants and all loose girt or mortar; sand rough edges remaining, countersink nail heads for putty applications.
 - Dust off surfaces completely then wipe with a clean rag.

- **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.

- **Concrete:**

- New Surface:

- Surface to be painted should be clean and dry, free from oil, grease, dust, dirt, contaminants and all loose girt or mortar.
 - Treat with masonry neutralizer. Mix (1) liter of B-44 with (16) liters of water. Apply liberally by brush and let dry overnight.
 - Rinse with water to remove white crystals that form on the surface. Let dry.

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.

DIVISION 10 – SPECIALTIES

10600 Partitions

Scope of Works

- The work to be done under this item consist of furnishing all wall partitions including all required materials, woodwork (if any), tools, equipment and labor and performing all operations necessary for the satisfactory completion of installation of partitions in strict accord with applicable drawings, details and these Specifications.

Material Requirement

- 6mm thick fiber cement board on L.G. steel framing 0.40 m x 0.60 m spacing, painted finish for both face
- 6 mm thick fiber cement board with honey comb insulation on L.G. steel framing 0.40m x 0.60m spacing, painted finish for both face
- 4" thick reinforced CHB wall w/ 10mm diameter reinforcement vertical bars 0.60 m O.C. & 10mm diameter reinforcement horizontal @ every 3 layers, plastered and painted finished

DIVISION 12 – FURNISHING & ACCESSORIES

12400 Furnishing & Accessories

Scope of Work

- This item shall consist of fabrication & installation of all acrylic blinds, roller stair nosing, countertop, and all other required furnishings with accessories 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.

12500 Furniture

Scope of Work

- All loose and fixed furniture shall be of modern design and constructed and/or supplied in accordance with the best practices of the furniture industry. Items shall include all necessary fittings, furnishings, and accessories to completely supply the requirements. The contractor shall submit color swatches and sample finishes subject to approval of the CPDMO Project Architect prior to installation. Refer to approved plans for details.

Material Requirement

- Director's Table
36mm thick worktop HPL with base cabinet (front and rear), all edgings are in HPL, base cabinet/modesty panel are full HPL, worktop and swing door in MDF core, steel mild legs.
- Director's Chair

Height adjustable tilting headrest, Height adjustable seat, adjustable arm and lumbar support, crown base in chrome finish, single lock, synchronize, fix seat, backrest in black mesh and seat in leather black finish.

- L-shape Staff Table 1
25mm thick Melamine Faced Chipboard (MFC) in High Pressure Laminate (HPL) wood grain finish complete with 2mm thick PVC matching edging, 35mm thick wood grain with 6mm thick tempered clear glass and aluminum powder coated electrical track cover & base board, PVC grommet and keyboard tray.
- L-shape Staff Table 2
25mm thick Melamine Faced Chipboard (MFC) in High Pressure Laminate (HPL) wood grain finish complete with 2mm thick PVC matching edging, 35mm thick wood grain with 6mm thick tempered clear glass and aluminum powder coated electrical track cover & base board, PVC grommet and keyboard tray.
- L-shape Staff Table 3
25mm thick Melamine Faced Chipboard (MFC) in High Pressure Laminate (HPL) wood grain finish complete with 2mm thick PVC matching edging, 35mm thick wood grain with 6mm thick tempered clear glass and aluminum powder coated electrical track cover & base board, PVC grommet and keyboard tray.
- L-shape Staff Table 4
25mm thick Melamine Faced Chipboard (MFC) in High Pressure Laminate (HPL) wood grain finish complete with 2mm thick PVC matching edging, 35mm thick wood grain with 6mm thick tempered clear glass and aluminum powder coated electrical track cover & base board, PVC grommet and keyboard tray.
- Staff Chairs
Height adjustable arm, Nylon base with castor in black, single lock, synchronize, fix seat, backrest in black mesh and seat in black PVC finish.

DIVISION 15 – MECHANICAL

15400 Plumbing System

Scope of Work

- This item shall consist of supply of all plumbing system with accessories including labor, tools, equipment, testing, and the satisfactory performance in undertaking the proper installation of the system as shown on the Plans and in accordance with this Specifications

Construction Notes

- All plumbing works included herein shall be executed in accordance to the provision of the Revised National Plumbing Code of the Philippines, 1999 Edition, The National Plumbing Code and Local Rules and Regulations of the Municipality.
- Coordinate the drawings with other related drawings and specifications. The Engineer and/or Architect shall be notified immediately of any discrepancy found herein.
- All pipes shall be installed as indicated, any relocation required for proper execution of the plumbing work shall be with prior approval of the Engineer and/or Architect.
- Proposed sanitary utilities shall conform to the actual location, depth and invert elevations of all existing pipes and structures as verified by the Contractor.
- All slopes for horizontal drainage shall maintain two percent (0.02) and one percent (0.01) minimum unless otherwise specified.
- Water supply pipe to fixture shall be sized in accordance with the manufacturer's recommendations and/or plumbing code.
- All branches of fixture or group of fixtures shall be provided with air chamber made of capped vertical extension pipe of 300mm min. to 450mm maximum.

- All water lines shall be hydrostatically tested at 100psi for a period of two (2) hours before buried or covered. Galvanized iron (G.I.) pipes directly in contact with soil shall be provided with two coats of coal tar and wrapped with jute sack and painted with coal tar.
- The Contractor shall verify all existing utilities at site and coordinate the work with the sewer and waterline service connecting/tapping point.
- All pipe sizes and other dimensions are in millimeter (mm) unless otherwise specified and are indicative of inside diameter.

Material Requirements

Waterline / Water Distribution

- Use Polypropylene (PPR) type system for cold and hot (as needed) waterline pipes and fittings jointing by socket fusion, conforming to ASTM F1335
- Confer to Project Architect the brand and approved equivalent.
- Provide sample for approval.

Sanitary Lines / Sanitary Sewerage

- Use Polyvinyl Chloride (PVC) Series 1000 pipes and fittings for sanitary lines (sewer, vent and waste pipes), conforming to ASTM 2729
- Confer to Project Architect the brand and approved equivalent
- Provide sample for approval.

Construction Requirements

- Make the necessary preparation works for the installation of water system and sanitary, on the specified area.
- Ensure proper installation of the system, tap to the nearest water distribution area, and to the nearest sewer area
- Ensure complete and proper installation of brackets and supports.
- Testing shall be done for the whole system and equipment's in the presence of the Engineer and Owner or his representative.
- All restoration and rehabilitation works shall be done on the affected areas to the same features with the existing or as per the required finish.

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 equipment, 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 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

All electrical pipes and accessories shall be using appropriate hangers and support follow existing features, **GI Wires as support is not allowed**. Exposed layout on walls and partition inside offices shall not be allowed. Chipping works required.

16080 Testing

- 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.

16120 Conductors and Cables

- Wires and cable for lights and power shall be type THHN/THW 600 volts insulation approved type building wire. No. 3.5 mm THHN shall be used from the panel board to the last outlet, and shall be the smallest wire that should be used, unless otherwise No. 8.0mm wires THNN and larger shall be stranded and be connected to the panel boards and equipment by solder less connectors sufficiently large to enclose all strands of the conductor and be securely fastened. They shall not get loose under vibration and normal strain. Wire splices shall be mechanically and electrically secured and soldered. Joints taps and splices in wires larger than No. 10 AWG shall be made with the use of solder less connectors. They shall be tapped with electrical tape to the thickness of the wire insulation.
- Wires and cables shall be continued from outlet, or outlet to pull boxes without splices. Conductors shall not be drawn in conduits until plaster is dry and the conduits are cleaned and free of moisture. Conductors of other systems shall not occupy the same conduit and boxes used for light and power.

Scope of Works

- Complete supply and installation of wires and cable shall be included in this scope of works.
- Tagging of all switches corresponding to the branch circuit number as indicated on the respective panel boards directory using tagging machine.
- Provide Directory in all Electrical Panels

- Balancing of loads
- Wires must be color coded using the standard color coding
- Use existing feeder line for the Distribution Panel
- Dismantling of Existing Wires, Electrical Panel and Cabinet
- Fabrication of Electrical panel cabinet with louver door (refer to architectural plans for details)

16130 Raceway and 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 1-1/2" 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 are indicated in the same location, they shall be mounted in gang under a common plate.
- Convenience outlet shall be duplex-type, universal & flush-type with fire-resistant non-absorptive bases, minimum rating of 16 amperes at 250 volts wide series.
- 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.
- Following features shall be followed: one gang, one-way switch, 2 gang, one-way switch, 3 gang, one-way switch, one gang three-way switch, two gang three-way switch, three gang three-way switch, duplex flush type convenience outlet universal grounding type.
- All the exhaust ventilation switch location shall be coordinate to the CPDMO.
- Supply and installation of Push Button Magnetic Switch, 220V, 3 phase with overload relay for 3.0hp fresh air motor at mezzanine
- Supply and installation of Floor mounted pop-up outlet universal grounding type (refer to plans for the details)
- Supply and installation of Duplex Universal Grounding type, Ground Fault Circuit Interrupter (GFCI)

16580 Lighting Fixtures (Submit sample materials for approval)

- 48W, SURFACE MOUNTED THIN PANEL LED LIGHT 300X1200X10mm
- 18W, RECESSED ROUND DAY LIGHT LED PANEL
- 20W, RECESSED DAY LIGHT LED PANEL, 600x600mm
- EMERGENCY LIGHT 2-1.5WATTS LED (22HRS)
- LED STRIP LIGHT
- SINGLE LIGHTING SWITCH W/ PLATE COVER 16A WIDE SERIES
- 2 GANG LIGHTING SWITCH W/ PLATE COVER 16A WIDE SERIES
- 3 GANG LIGHTING SWITCH W/ PLATE COVER 16A WIDE SERIES

16410 Panel Boards, Enclosed switches and Circuit Breakers

- PP-PO Main @ 60AT, 3 pole, 22KAIC with 17 branch circuits @ 15-20AT 2 pole, & 2-30AT 2 pole bolt-on type with grounding bus.

- DP Main @ 125AT, 3 pole, 22KAIC with 2 branch circuits @ 1-60AT 3 pole & 1-75AT 3 pole, bolt-on type with grounding bus.
- The enclosure shall be galvanized steel of code thickness, powdered coated enamel finish and shall be installed plumb and symmetrical with the surrounding devices.
- 20mmØPVC, 40mmØPVC, 50mmØPVC & 80mmØIMC with fittings and complete accessories
- 2" x 4", 4" x 4" PVC 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 screws.

DIVISION 28 - ELECTRONIC

Section 280130 Fire Detection & Alarm System (FDAS)

- Supply and Installation of brand-new Intelligent Photo Electronic Smoke Detector, Intelligent Optical Detector with emote indicator output (Certified by LPCB) without base.
- Supply and Installation of brand-new Common Detector Base for Addressable Detector and for conventional detector using EOLR (refer to detailed drawings)

Technical Specifications of Smoke Detector:

1. Operating Voltage
 - Loop 24V (16V – 28V)
 - Standby Current: $\leq 0.8\text{mA}$
 - Alarm Current: $\leq 1.8\text{mA}$ (without remote indicator)
 $\leq 3.8\text{mA}$ (with remote indicator)
 - Code Range: 1 – 242
2. Dimensions
 - Diameter: 100mm
 - Height: 54.5mm (with base)
- Supply and Installation of brand new Digital Manual Call point flush mount resettable (non-breaking glass), Supplied with surface mount back box and special reset key.

Technical Specifications of Digital Manual Call Point:

1. Operating Voltage
 - Loop 24V (16V – 28V)
 - Standby Current: $\leq 0.6\text{mA}$
 - Alarm Current: $\leq 1.8\text{mA}$ (without remote indicator)
 - Address Range: One address within 1 – 242
2. Dimensions (LxWxH):
 - 87.1mm x 87.1mm x 58.5mm (with back box)
 - 87.1mm x 87.1mm x 23.5mm (without back box)
- Supply and Installation of brand new Addressable Combined Sounder and strobe 24VDC required.

Technical Specifications of Addressable Sounder Beacon:

1. Sound Level Output: 84dBA at 3 meters
2. Beacon frequency: 20 – 180 times
3. Operating Current:
 - Loop: Standby – 0.8mA; Alarm-6mA
 - PSU: Standby – 10mA; Alarm-160mA

4. Operating Voltage:
 - Loop 24V (16V ~ 28V)
 - PSU: 24VDC (20VDC ~ 28VDC)
5. Dimensions:
 - 144mm x 90mm x 57mm
 - Supply and Installation of brand new #18AWG TF wire, 3.5mm² THHN wire, 1/2Ø EMT conduit pipes, flexible metallic conduit and consumables
 - Programming, Testing and commissioning

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.
- Restoration works of affected areas as result of the project implementation
- All additional smoke detector will be tapped to existing FACP located at lobby (refer to electrical plans)
- Provide Hanger and Supports

Hangers and Support

- All conduit 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.

Communications

Structured Cabling System

- Category6 UTP, 4 pairs, unshielded twisted pairs, polyethylene insulated hyper
- grade non-plenum LAN cable is the general requirements for this structured cabling system, the height of the data outlets is 90cm above finish floor line.
- Supply and installation of complete wiring devices, 2 meters' patch cords information
- data outlet 8 pin CAT6, RJ45 snap in jacks and other accessories ready for use.
- Supply and installation of Intermediate Data Frame Cabinet with two (2) exhaust fan
- and patch panel, termination and commissioning is included in this scope of work.
- Complete termination and testing of cables, tagging (using tagging machine),
- labeling of each terminal for easy identification. Submission of test results shall be required.
- Provide 2 runs of cat6 cable per devices from LAN outlet to IDF as indicated on the
- Plans.
- Intermediate Distribution Frame (IDF) up link shall be coordinated w/ CPDMO to
- Communicate with IMS team.

Conduit Pipes and Accessories

- 20mm dia. PVC pipes, couplings, PVC elbows, male adapter, coupling, locknut and
- bushing.
- 2" x 4", 4" x 4" PVC utility and junction boxes
- Pull box with cover enamel coated finished with ½ and ¾ knock outs.
- Electrical tapes Pull wires, mica tubes and assorted screws

Structured Cabling

- Supply and installation of Intermediate Distribution Frame 3' with 2-exhaust fan, 2- 24 port manageable switch coupler type, CAT6e cable, 2- meters patch cord complete

NOTE

The foregoing list of items 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 PROCUREMENT OFFICE**.

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 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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