TERMS OF REFERENCE & TECHNICAL SPECIFICATION

PROJECT NAME: **Repair and Rehabilitation of Academic Building II at Dinalupihan Campus**

LOCATION: **Bataan Peninsula State University, Dinalupihan Campus**

SECTION 1: THE PROJECT

3. **PROJECT DESCRIPTION:**

PROJECT NAME:	Repair and Rehabilitation of Academic Building II at Dinalupihan Campus
LOCATION:	Bataan Peninsula State University, Dinalupihan Campus
APPROVED BUDGET FOR CONTRACT (ABC):	Php. 30,000,000.00
TOTAL BUILDING FLOOR AREA:	2,770.00 sq.m
FLOOR AREAS:	GROUND FLOOR: 745.00 sq.m SECOND FLOOR: 675.00 sq.m THIRD FLOOR: 675.00 sq.m FOURTH FLOOR: 675.00 sq.m
PROJECT DURATION:	330 Calendar Days

GENERAL SCOPE OF WORK:

Repair and Rehabilitation of Academic Building II with the following work breakdown:

1. **General Requirements**
    a. Applying Building Permit and Occupancy Permit
    b. Putting up Temporary Facility
    c. Restoration of Affected utilities and hardscape:
        i. CCTV – Remove and Reinstall
    d. Disposal of Construction Debris

2. **Ground Floor**
    a. Architectural works
        i. Provision of glass door and grills to Multi-purpose Hall
        ii. Tilling works of all areas in ground floor including CR walls
        iii. Tilling of Stair ways and replace the existing handrail by stainless handrail
        iv. Installation of Roll up doors on both stairways
        v. Ceiling works of all areas in ground floor
        vi. Replacement of existing doors and windows
        vii. Façade improvement (see design for details)
        viii. Classroom modification in compliance to building code
            1. Provision of 2 doors (swing out) each classroom
            2. Provision of fixed white board 4'x8' with glass top and fixed corkboard
        ix. Main Stage
            1. Relocate the flag pole on side
            2. Tiling works
        x. Comfort room improvement
            1. Provision of PWD at Ground Floor

2. Provision of common CR

xi. Painting works (Exterior and Interior)
xii. Conversion of existing storage room into Electrical Room
xiii. Conversion of 4 classrooms into 2 bigger Classrooms
xiv. Room Marker and other signages

b. Electrical works
   i. New Transformer
   ii. New Panel Board and new line of electrical wires
   iii. New Electrical fixtures
c. Plumbing works
   i. New Septic Tank
   ii. New water line and sewer line
   iii. New Plumbing fixtures
   iv. Catch basin
d. Compliance to Fire code of the Philippines and BP 344
   i. Fire exit
   ii. Pump room for new cistern tank
   iii. Wet and Dry Stand Pipe System
   iv. New Ramps
   v. Automatic Fire Suppression System
   vi. Fire Detection and Suppression System

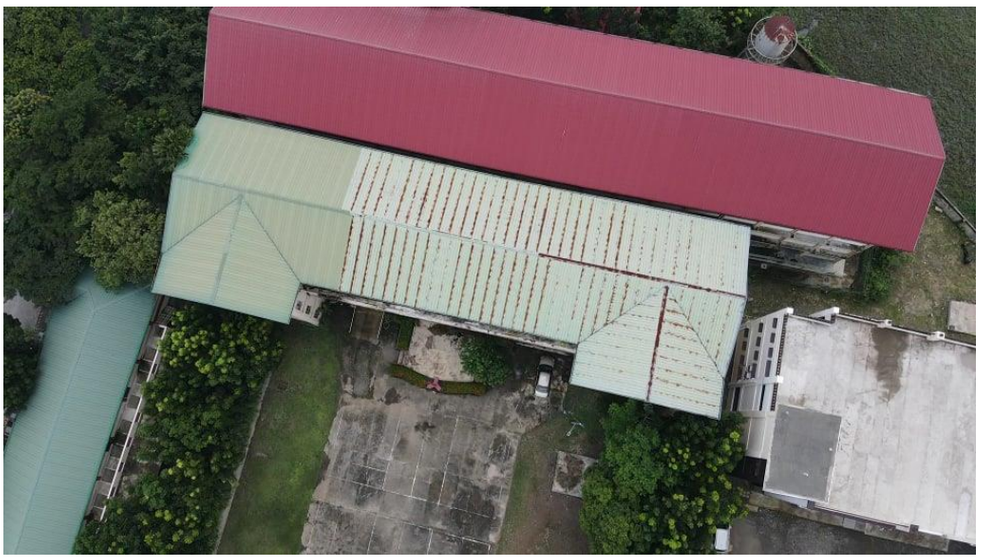
3. **Second Floor / Third Floor**
   a. Architectural works
      i. Tilling works of all areas in second floor / third floor including CR walls
      ii. Ceiling works of all areas in second floor / third floor
      iii. Replacement of existing doors and windows
      iv. Façade improvement (see design for details)
      v. Classroom modification in compliance to building code
         1. Provision of 2 doors (swing out) each classroom
         2. Provision of fixed white board 4'x8' with glass top and fixed corkboard
      vi. Comfort room improvement
      vii. Painting works (Exterior and Interior)
      viii. Room Marker and other signages
   b. Structural Works:
      i. Provision of canopy at Second Floor and enhancement of canopy at third floor
   c. Electrical works
      i. New Panel Board and new line of electrical wires
      ii. New Electrical fixtures
   d. Plumbing works
      i. New water line and sewer line
      ii. New Plumbing fixtures
   e. Compliance to Fire code of the Philippines
      i. Fire exit
      ii. Automatic Fire Suppression System
      iii. Fire Detection and Suppression System
   f. CCTV line for Second and Third Floor Hallway

4. **Fourth Floor**
   a. Architectural works
      i. Tilling works of all areas in fourth floor including CR walls

ii. Ceiling works of all areas in fourth floor
iii. Replacement of existing doors and windows
iv. Façade improvement
v. Classroom modification in compliance to building code
    1. Provision of 2 doors (swing out) each classroom
    2. Provision of fixed white board 4'x8' with glass top and fixed corkboard
vi. Comfort room improvement
vii. Conversion of existing CR into Water Tank Room
viii. Room Marker and other signages

b. Structural works
    i. Dismantling of existing roofing and trusses
    ii. Application of carbon fiber reinforced polymer to slab of water tank storage room.
    iii. Supply and Installation of new Roofing with trusses
    iv. New column for Fire exit support (from ground to fourth floor)
    v. Enhancement of canopy at fourth floor
c. Electrical works
    i. New Panel Board and new line of electrical wires
    ii. New Electrical fixtures
d. Plumbing works
    i. New water line and sewer line
    ii. New Plumbing fixtures
    iii. Supply and Installation of Water tank
e. Compliance to Fire code of the Philippines
    i. Fire exit
    ii. Automatic Fire Suppression System
    iii. Fire Detection and Suppression System
f. CCTV line for Fourth Floor Hallway

EXISTING BUILDING:



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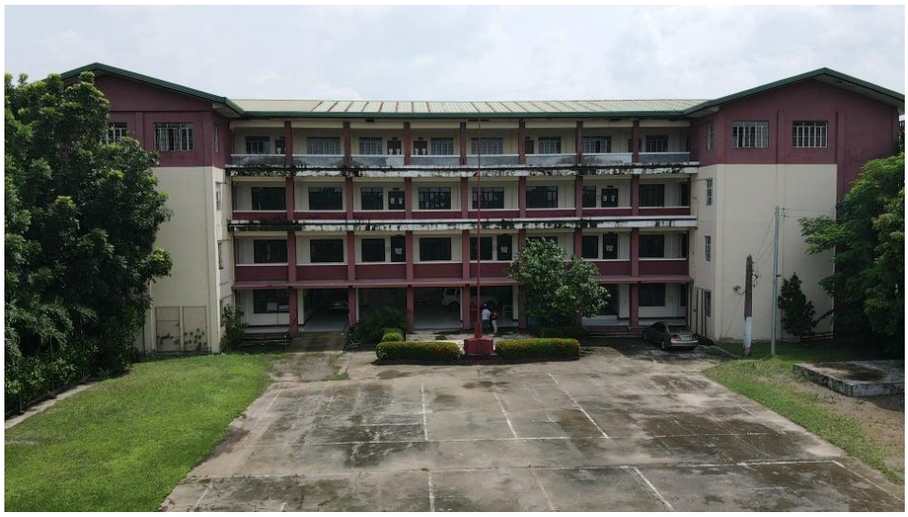

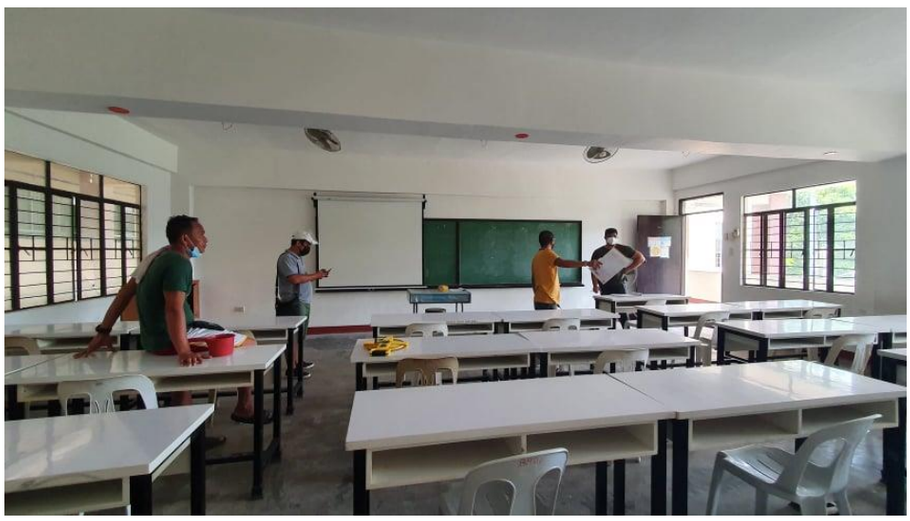

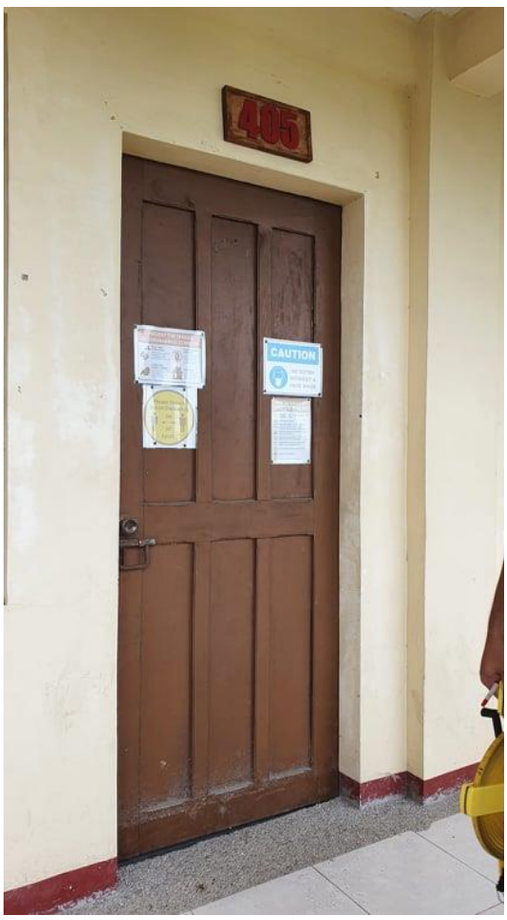

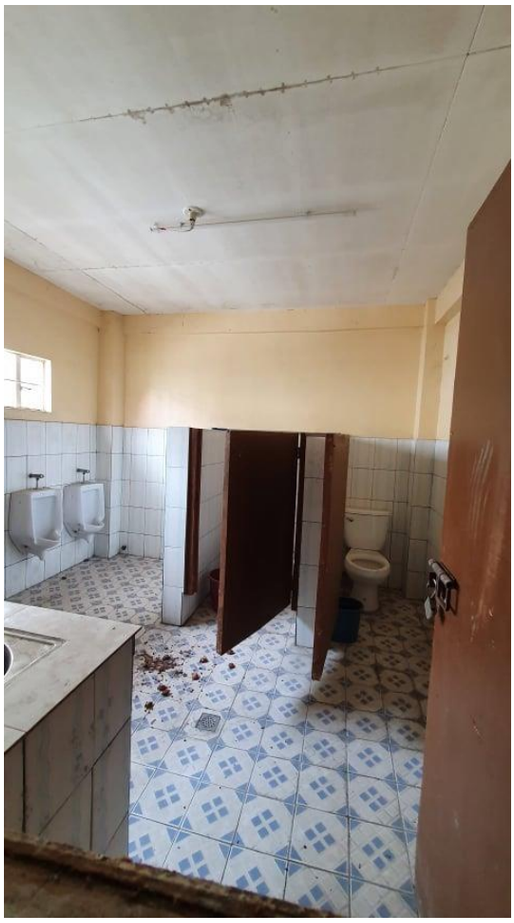

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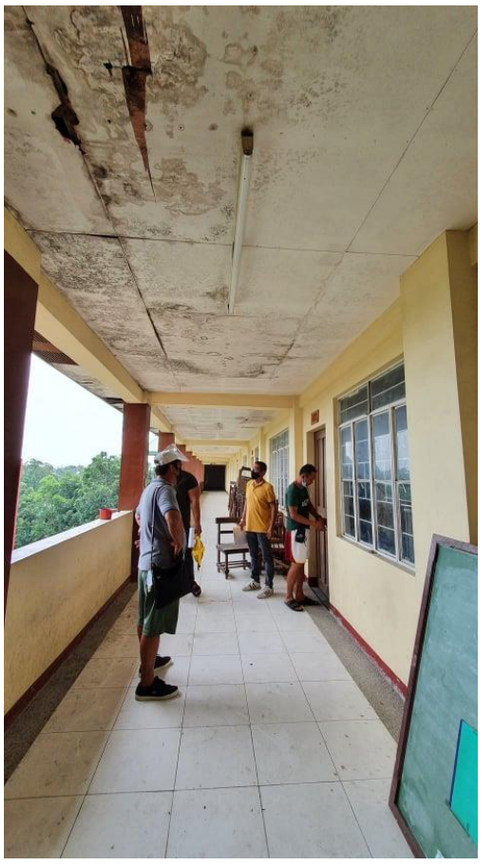
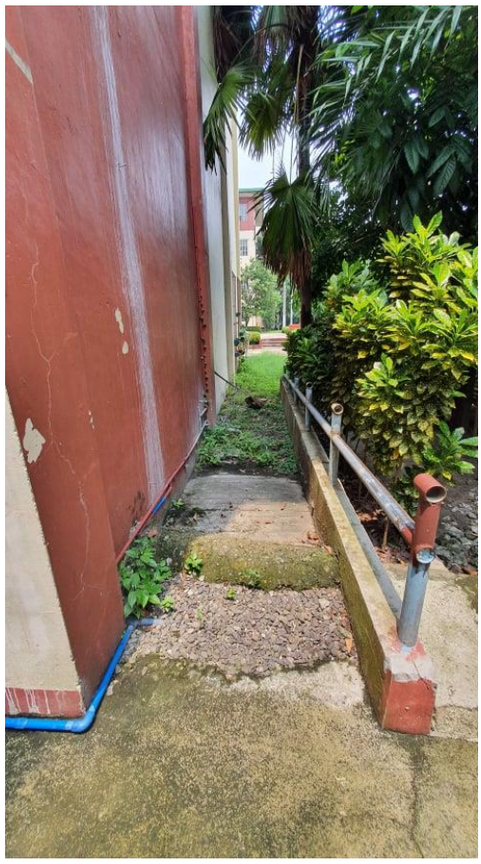
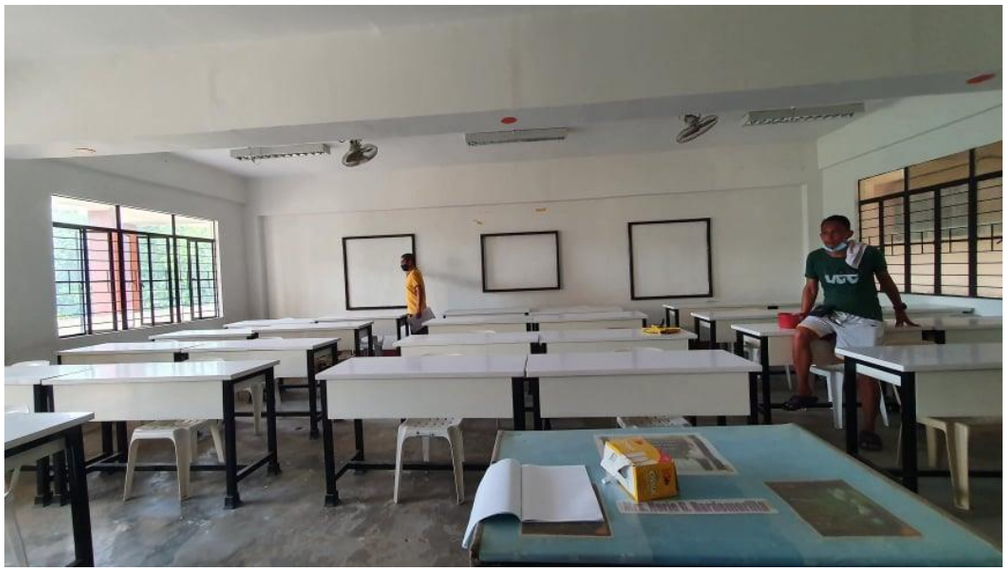
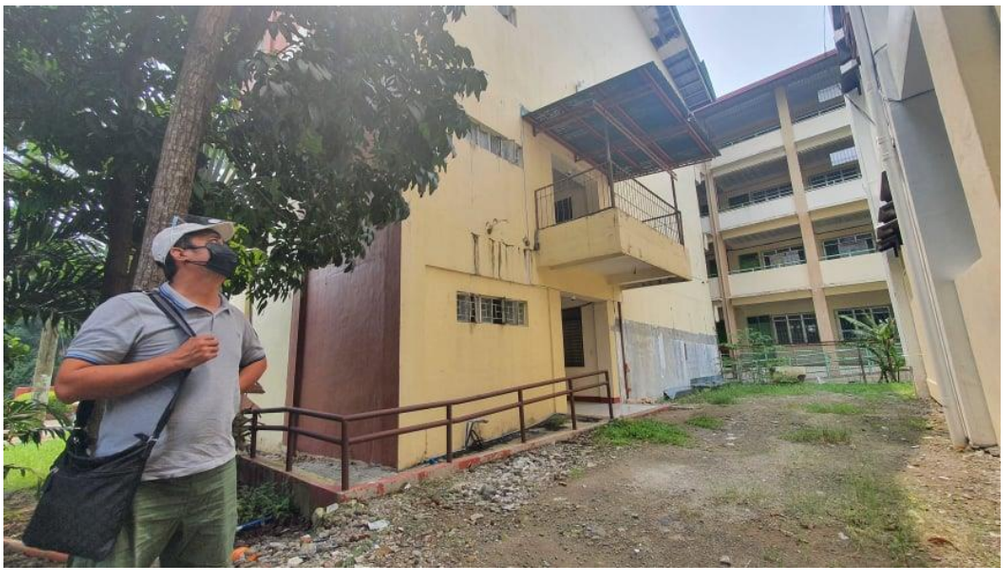
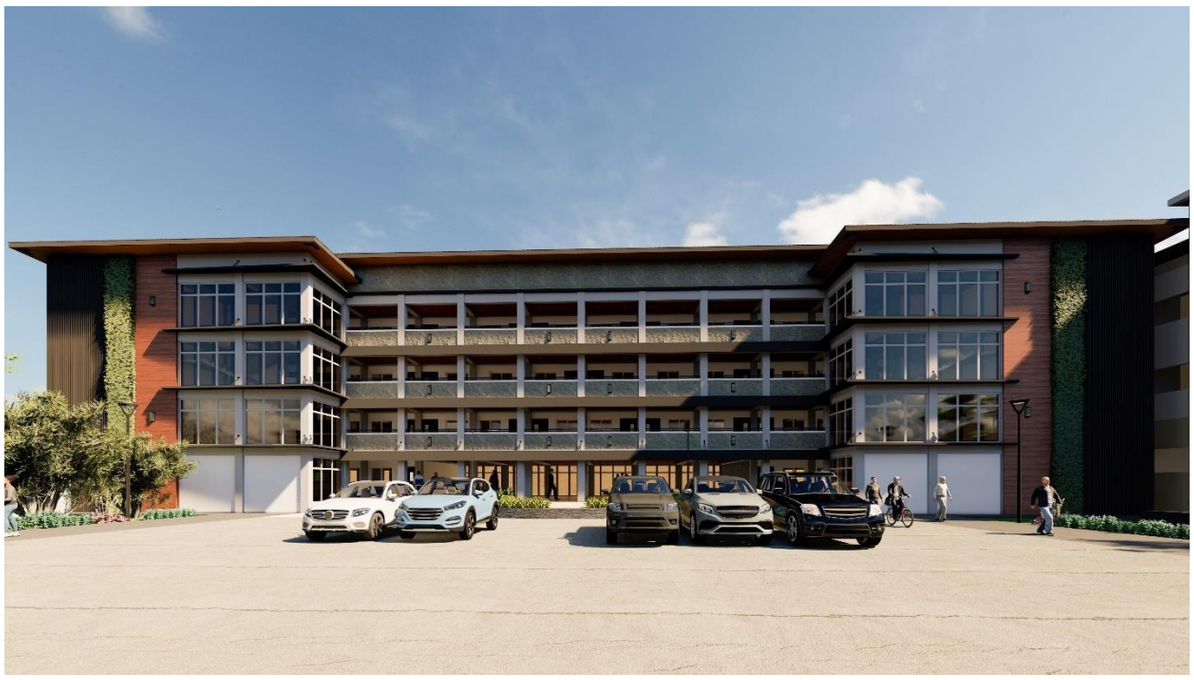








PROPOSED BUILDING:



II. OBJECTIVES:

1. To provide a background information regarding the proposed project which should be handled in the shortest possible time, at an acceptable quality and performance to the contractor.
2. To outline the "Scope of work" that has to be performed under the terms of its contract.
3. To create a Safe, Functional and Energy Efficient Building considering all specification given and space requirements and ready to use building.

- END OF SECTION -

SECTION 2: TECHNICAL SPECIFICATIONS

DIVISION 01: GENERAL REQUIREMENTS

1. The work covered under this Contract consists of the furnishing all materials, labor, equipment, transportation, incidentals, facilities, and superintendence necessary to complete the project.

2. The Contractor is expected and **required** to attend the important phases of the bidding process of the said project. All concerns and questions shall be discussed on the Pre-Bid Phase.

3. The Contractor shall be responsible for carefully examining, comparing and verifying the data furnished by the Plans and specifications, the Contractor shall submit the matter to the Architect or his authorized representative for the proper explanation or necessary correction, before any adjustment shall be made. Any adjustment by the Contractor without such determination shall be at his risk and expense.

4. Omitted or wrongly described details of work, which are manifestly necessary to carry out the true intent of the drawings and specifications, shall be performed as if fully and correctly set forth and described in the drawings and specifications.

5. The procuring entity may, from time to time, make changes in the specifications and construction drawings. However, if the cost to the Contractor shall be materially increased by such change, the Procuring Entity shall pay the Contractor for the reasonable cost in accordance with the changes.

6. The contractor shall comply with the laws, City or Municipal Ordinances and all government specifications and regulations in so far as they are binding upon or affecting the portion the work hereto. The Contractor or those engaged thereon shall obtain all necessary licenses and permits and pay all taxes or fees, which may due to the local and/or National Government in connection with the prosecution of the work. He shall also be responsible for all damages to persons or property that may occur.

7. Unless otherwise specified, all materials shall be new and free from defects and imperfection. The quality of materials shall be of the best grade of their respective kinds for the purpose. The work shall be performed in the best and acceptable manner in strict accordance with the requirements of the Plans and Specifications. Preference will be given to articles or materials that are locally manufactured, conditions of quality and price being equal.

8. When called for by the Architect / Engineer, the Contractor shall furnish, for approval, full information and satisfactory evidence as to the kind and quality of materials or articles he will incorporate in the work. The contractor shall furnish, for Architect's approval, all samples when so directed.

9. The work shall be in accordance with approved samples. Materials and articles installed or used without such approval shall be at the risk of subsequent rejection. Any failure on the part of the Contractor to conform use materials that are not specified herein shall be under subsequent rejection, unless subject for approval.

10. Any alteration or revision of material usage without approval from the Architect / Engineer shall make the Contractor responsible and liable in terms of guarantee, workmanship and defects.

11. Workmanship shall be in accordance with the best standard practices and all operations required under any and all parts of the Specification shall be undertaken in a neat, workman-like manner. Only skilled personnel with sufficient experience in similar operations shall be allowed to undertake the same.

12. Any alteration or revision on the execution of drawings without approval from the Architect / Engineer shall be under subsequent rejection and shall make the Contractor responsible and liable for any workmanship and execution defects.

13. Defective workmanship shall be remedied by the Contractor, at his expense. He shall not be entitled to any payment hereunder until defective workmanship has been remedied.

14. The Contractor shall provide and maintain adequate weather-tight facilities with water, light, and toilet facilities. He shall keep such places clean and free from flies. He shall remove all connections and appliances connected there with prior to the completion of the Contract and leave the premises perfectly clean.

15. The Contractor shall furnish all temporary water, lights and power and shall pay all expenses in connection therewith. Furthermore, the Contractor shall provide and pay for all water expenses for building purposes that are required by all trades.

16. The Contractor shall put up safety measures and continuously maintain adequate protection of all his work from damage and shall protect the Procuring Entity's property, as well as all materials furnished and delivered to him by the Entity. He shall make good any such damage, injury or loss, except such as may be caused by agents or employees of the Procuring Entity, or due to causes considered as an Act of God.

17. The Contractor shall enclose the site he possessed by a security fence with gate. See-through security fence shall not be allowed.

18. With respect to the construction of the buildings and other structures, the design and specifications shall conform to the standards set by:

a. Department of Public Works and Highways (DPWH)
    i. DO_39_S2020
b. National Building Code of the Philippines (NBCP) National Structural Code of the Philippines, 2010
c. Philippines Electrical Code (PEC)
d. Sanitary Code of the Philippines
e. National Plumbing Code of the Philippines
f. Philippine Mechanical Engineering Code (PMC)
g. Accessibility Law (BP344)
h. Fire Code of the Philippines (RA 9514)
i. Philippine Environmental Code (P.D. 1152)

DIVISION 02: SITE CONSTRUCTION

SEC. 02100 **SITE PREPARATION:**
SCOPE

Furnish equipment and perform labor required to complete demolition of the existing structures, removal of salvaged materials, and disposal of resulting trash, waste, and other vegetation. See drawings for area coverage of work involved.

EXAMINATION OF SITE

Visit the site of the work and examine the premises to fully understand all existing conditions relative to the work. No increase in cost or extension of performance time will be considered from failure to verify and know actual site conditions.

PERMITS

Secure and pay for all necessary permits needed for the work.

PROTECTION

Protect adjacent properties, persons, shrubs, trees, lawns, structures, and utilities against harm or damage.

DISPOSAL OF MATERIALS

1. All salvageable material shall remain the property of the Owner. Hauling and stacking of salvaged materials within a 300-meter radius to Owner's specified storage shall be at the account of the Contractor.
2. All debris and other materials resulting from the demolition work shall be immediately removed from the premises and dumped at sites provided by the Contractor in a manner approved by the Architect.

DEMOLITION

1. Demolish and remove from site existing structures and other obstructions within the building and as indicated in the plans.
2. Where existing concrete on ground is to be demolished, remove all existing concrete and other obstructions to a depth of 300 mm below grade.
3. Cap all existing utility lines. Consult Owner before commencing work.

REPAIRS

Repair damage done to property of any person or persons on or of the premises, by reason of the required work for Demolition.

VERIFICATION OF EXISTING CONDITIONS

3.) Verify and examine the site of work to familiarize with the character of materials to be encountered and all other existing conditions affecting the work.

SUBSTITUTION OF MATERIALS

Should the contractor desire to substitute any material or brand or manufacturer other than those specified material proposed, the substitution must be equal or superior in quality to the material specified in the specifications. The Contractor shall submit to the Architect or Engineer a written request signed by Material Engineer for approval for the proposed substitution and if possible, shall be accompanied by samples of the proposed substitution.

DIVISION 03– MASONRY

SEC. 03100 DELIVERY, HANDLING, STORAGE AND PROTECTION

MASONRY UNITS

Immediately upon delivery to site, concrete masonry units shall be stocked on platforms or stored in such manner as to protect them from contact with soil or weather. Care in handling masonry units shall be exercised to avoid chipping and breakage. Storage piles, stacks or bins shall be protected from unnecessary traffic construction operations or any kind of damage.

LIME AND CEMENT MATERIALS

Cement and lime shall be stored off the ground under weather-tight cover and away from sweating walls and other damp surfaces until ready for use. Damage or deteriorated materials shall be removed from the premises.

SEC. 03200 PRODUCTS/MATERIALS

CONCRETE HOLLOW BLOCK

Unless otherwise indicated or specified, concrete hollow blocks shall be in modular dimensions. Block shall be standard machine vibrated and shall have fine, even texture and well-defined edges. The load bearing concrete hollow blocks shall have a minimum compressive strength of 1000 lbs. per sq. inch computed from the average of three (3) units based on the average gross area and a minimum of 700 lbs. per sq. inch for the individual unit. For the non-load bearing, 350 lbs. per sq. inch computed from the average of five (5) units based on the average gross area, and a minimum of 300 lbs. per sq. inch for the individual unit.

CEMENT

1. Cement shall be PORTLAND CEMENT conforming to ASTM Specifications C-type I.
2. Water for mixing shall be clean, portable and free from injurious amounts of oils, soluble salts, acids, alkalis of organic matter, or other deleterious substances.
3. Sand shall be clean, hard natural sands and free from deleterious substances.
4. Lime shall be Type S; ASTM Specifications C207 for hydrated lime for masonry purpose or quick lime for structural purposes C-5.

REINFORCEMENT

1. Lintel and vertical reinforcing bars shall conform to ASTM Specifications A-15 “Specifications for Billet Steel Bars of Concrete Reinforcement”. Allowable fs = 18,000 psi.
2. Horizontal reinforcing bars shall conform to ASTM Specifications A-82.
3. Use Structural Steel for connection to existing Multi-purpose Hall Building. See plans for reference.

DIVISION 04– METALS

SEC. 04100 STRUCTURAL STEEL

1. Materials And workmanship shall be in accordance to the requirements of the American Institute of Steel Construction “Manual of Steel for Bridges & Buildings”

andAmericanSteelandIronInstitute.Allweldingmaterialsandworkmanshipshallconformto the requirements of the American Welding Society.

2. Steel required for this structure should conform to ASTM A-36 for structural grade unless otherwise noted in plans or in the specifications

SEC. 04200 SHOP PAINTING

1. Paint shall be delivered to the shop and job in original sealed containers, which shall be clearly marked with the manufacturer's name and the identifying brand number or name. The paint to be used as prepared by the manufacturers shall be without thinning or another admixture.

2. All paintings shall be done on dry surfaces, free from rust, scale, and grease. Steel shall be flame-cleaned in the shop to remove mill scale. Surfaces in contact shall be cleaned by effective means but painted, except that the contact surfaces of exposed exterior steel, such as tank supports, shall be painted.

3. All steel, except where it is to be encased in concrete shall receive one coat of shop paint. (Surfaces that are to be field welded shall not receive a shop coat.) The shop coat shall be two (2) coats of epoxy-based primer with two (2) coats of topcoat. Primer color shall be different color tone from the topcoat in order to distinguished level of application.

4. All rivets, bolts, field welds and serious abrasions to the shop coat shall be spot-painted with the material for the primer coat.

5. Steel encased in concrete shall not be painted. However, steel with only furring (plaster on exposed metal) shall be painted.

SEC. 04300 RAILINGS

STAIR RAILING MATERIAL

1. Use 316L 2" dia. Stainless Steel Pipe for Handrail and newel post
2. Use 316L 1 1/2" dia. Stainless Steel Pipe for Baluster and Horizontal pipe

DIVISION 05– THERMAL AND MOISTURE PROTECTION

SEC. 05100 WATERPROOFING

Use 2-Ply Modified Bitumen Membrane Waterproofing for use in all suspended toilets.

1. Apply water proofing to all canopies
2. Apply water proofing to all wall of toilet facility
3. Apply water proofing to all cold joints

DIVISION 06– METAL ROOFING

SEC. 06100 SCOPE OF WORK

Furnish materials, equipment and perform labor required to complete fitting and installation of metal roofing, flashing components, strap and rivet units as the

application of supplementary materials to make the roof unit water tight and leak proof.

SEC. 06200 MATERIALS

1. Metal Sheet Roofing – rib type pre-painted (white color with zinc-aluminum alloy coated steel complying with ASTM A792 GA. 24 for roofing.
2. Flashing, Trims and Mouldings – GA.24 pre-painted with zinc-aluminum alloy from plain sheets, performed with matching shape and fitting provisions as per drawings.
3. Fasteners and Fixation – Use appropriate connectors recommended by the manufacturer and approved by the Architect / Engineer. Paint same color as roof, all exposed fixation consistent, even and standard manner. Apply strip of butyl rubber-based caulking compound along all end lap joints and passing over pre-drilled fixation holes. For fixation of metal sheet to "C" purlins and when lapped over another metal sheet. For fixation of flashing, use 'tekscrews' for roof eaves area where roof frames are exposed.
4. Use stainless gutter Ga. 24 with screen
5. See structural plans for truss details

DIVISION 07– DOORS AND WINDOWS

SEC. 07100 SCOPE OF WORK

Furnish materials and equipment and perform labor required to complete:

1. Supply and Installation of metal doors and door jamb with lockset, hinges and doorknob

2. Supply and Installation of Unplasticized Polyvinyl Carbon (uPVC) Windows color white

See drawings and schedules for sizes, details and location of required work.

3. Supply and Installation of Roll-up doors

DIVISION 08– FINISHES

This Division applies to all specifications of the Finishes for the Proposed Project.

SEC. 08100 FLOORING

Furnish materials and equipment and perform labor required to complete all types of tiling work and stone works.

1. Use Ceramic Vitrified Tiles, see drawings and details for location and extent of work required.

SEC. 08200 CEILING

Furnish materials and equipment and perform labor required to complete all types of ceiling works.

1. CF-2 – Use PVC Ceiling panel wood finish

2. CF-3 – Use Spandrel wood grain finish

SEC. 08300 WALL FINISHES

1. Wall tiles of toilet facility is from floor to ceiling including 100mm CHB Wall partition. Use Ceramic Tiles.

Color: subject for Architect's Approval

2. Supply and Installation of Vanity Mirrors to Female and Male Comfort Rooms
3. Use aluminum Composite Panels, see drawings for location and extent of work required.

SEC. 08400 PAINTS AND COATINGS

1. For Interior and Exterior Masonry Wall:
a First Coat: Flat Latex, 10% Acrylic, water-based Masonry Putty

b. Second and Final coat: Semi-gloss Latex Paint

Paint colors: Subject for Architect's Approval for wall paint color and base board paint color

2. For Fiber Cement board:

a. First Coat: Flat Latex, 10% Acrylic, water-based Putty

b. Second and Final coat: Semi-gloss Latex Paint

Paint colors: Subject for Architect's Approval

3. For Metal Surface and wood surface:

a. Use Epoxy Primer Gray, finish with two (2) coats Quick Drying Enamel (QDE)

Paint colors: Subject for Architect's Approval

Note:

All exposed finish hard wares, plumbing fixtures and accessories, lighting fixtures and accessories, glasses and the like shall be adequately protected that these are not stained with paint and other painting materials prior to painting works. All other surfaces which would be endangered by stains and paint marks should be taped and covered with draft paper or equal.

Protect the work and adjacent work and materials at all times by a suitable covering or by other methods. Upon completion of the work, remove paint and varnish spots from floors, glass and finish hardware.

DIVISION 09 – FIRE FIGHTING SYSTEM

This Division applies to all specifications of Fire Fighting System for the Proposed Project.

1. Use Non-UL to all Fire Pump and Jockey Pumps

2. Use 30 hp Fire Pump

3. Use 3hp Jockey Pump

4. Use 3hp Transfer Pump

DIVISION 10– ELECTRICAL SYSTEM

This Division applies to all specifications of Electrical Works for the Proposed Project.

1. Power supply (Secondary Voltage) from the Calculated Transformer size (with adequate spare capacity) shall be 3Phase, 230V DELTA connection 60 Hz System, with equipment grounding

2. Use wide series for outlets and switch

3. Use LED Lighting fixture

DIVISION 11– PLUMBING SYSTEM

This Division applies to all specifications of Plumbing Works for the Proposed Project.

1. Use 32 mm dia. PPR PN. 20 for main water line
2. Use 20 mm dia. PPR PN. 20 for distribution water line
3. Use 2" dia PVC Series 1000 for sewer line of floor drain and sink
4. Use 3" dia PVC for sewer line of water closet
5. Use 4" dia PVC for main drain and sewer line
6. Use stainless single handle faucet and floor drain. For faucet handle use lever type.
7. Use flush valve for water closet (Subject for approval)
8. Use vessel type lavatory (Subject for approval)

Note: Conduct hydro testing to all pipe lines.

DIVISION 12– CCTV

This Division applies to all specifications of CCTV Wires for the Proposed Project

1. Supply and Installation of CCTV Wires and conduits only. Put 5 x 5 square box at the end of line. Use CAT 6, RJ 45 for the wires.

DIVISION 13– CONCRETING WORKS

This Division applies to all specification required for Concreting works

1. Use Ready-mix 3000 psi for 150 mm slab on fill with 10 mm dia. Spaced at 300mm O.C. Both ways

SECTION 3: PROJECT COST ESTIMATES

The bidders shall submit the quantities and cost of the different types of works to be carried out in accordance with DPWH Department Order No. 72 series of 2012 dated October 5, 2012. In particular, the quantities and cost of each work item shall be calculated and a bill of quantities shall be prepared. The bidders shall draw up a unit price analysis for each of the main pay work items.

The unit price of each of the main work pay items shall include:

A. Cost of the Preliminary and Detailed Architectural and Engineering Design – Should be in accordance with NEDA guidelines.

B. Construction Cost of the Project;

1. The Direct Cost are the following:

a. Cost of Materials to be used in doing the work item called for, which shall include the following:

a.1. Cost of source, including processing, crushing, stockpiling, loading, local taxes, construction and/or maintenance of haul roads, etc.
a.2. Expenses for hauling to project site.
a.3. Handling expenses
a.4. Storage
a.5. Allowance for waste and/or losses, not to exceed 5% of materials requirement.

b. Cost of Labor:
b.1. Salaries and wages as authorized by the Department of Labor and Employment

c. Equipment Expenses:

c.1. Rental of equipment which shall be based on the prevailing "Associated Construction Equipment Lessors, Inc." (ACEL) rental rates approved for use by the DPWH (Presently it is the 2009 ACEL Rates). Rental rates of equipment not indicated in the ACEL booklet shall be taken from the rental rates prepared by the DPWH Bureau of Equipment. For simplicity in computation, the operated rental rates are preferred over the bare rental rates as the former includes operator's wages, fringe benefits, fuel, oil, lubricants and equipment maintenance. The make, model and capacity of the equipment should be indicated in the detailed unit cost analysis.

c.2. Mobilization and demobilization, shall be treated as a separate pay item. It shall be computed based on the equipment requirements of the project stipulated in the proposal and contract booklet. In no case shall mobilization and demobilization exceed 1% of the Estimated Direct Cost (EDC) of the civil works items.

2. The Indirect Cost shall consist of the following:
a. Overhead Expenses – ranges from 5 – 8% of the EDC, which includes the following:

a.1. Engineering and Administrative Supervision.
a.2. Transportation allowances.
a.3. Office Expenses, e.g., for office equipment and supplies, power and water consumption, communication and maintenance.
a.4. Premium on Contractor's All Risk Insurance (CARI).

Financing Cost.

- Premium on Bid Security
- Premium on Performance Security
- Premium on Surety for Advance Payment
- Premium on Warranty Bond (one year)

b. Contingencies – ranges from 0.5 – 3% of the EDC. These include expenses for meetings, coordination with other stakeholders, billboards (excluding Project Billboard which is a pay item under the General requirements), stages during ground breaking & inauguration ceremonies and other unforeseen events

c. Miscellaneous Expenses – ranges from 0.5 – 1% of the EDC. These include laboratory tests for quality control and plan preparation.

d. Contractor's Profit Margin – shall be 8% of EDC: for projects above Php5 Million and 10% for projects Php5Million and below

e. VAT Component – shall be 7% of the sum of the EDC, OCM and Profit. The following items shall not be subjected to OCM and Profit mark-up:

e.1. Mobilization and demobilization
e.2. Provision of Service Vehicle

f. The following non-civil works items shall not be subjected to OCM mark-up:

f.1. Field/Laboratory Office & Living Quarters (Rental Basis)
f.2. Furnishing, Laboratory Equipment, Survey Equipment and Consumables
f.3. Assistance to the Engineers
f.4. Photographs
f.5. Health and Safety
f.6. Traffic Management
f.7. Environmental Compliance
f.8. Communication Equipment, etc.

SECTION 4: CONSTRUCTION PHASE CONSIDERATIONS

1. **Permits and Clearance**

The bidders shall defray and all expenses necessary and incidental for the Project be able to secure the Environmental Clearance Certificate (ECC), including the corresponding Tree Cutting Permit (if any tree needs to be cut from the concerned government agencies, if necessary). The contractor shall, upon authorization of the Municipal Government, make representations with the government agencies concerned to expedite the release of the same. Obtain and pay the corresponding fees for all necessary approvals, permits and certificates such as the following:

1. Building Permit
2. Certificate of Completion of the Building and Occupancy Permit
3. All other permits as may be required for the construction

2. **Temporary Structures & Facilities**

The contractor shall provide and maintain the following:

1. Temporary office and/or quarters for the contractor's project team personnel with water, light, telephone and toilet facilities.
2. Temporary bunkhouse/quarters for the contractor's workforce complete with toilet and bath facilities.

3. **Mobilization**

The contractor shall mobilize all the required project team personnel, equipment, tools and manpower with the required skills and insufficient number as may be necessary for his efficient undertaking of the project.

4. **Construction Proper**

The contractor shall prosecute all the works under the contract in strict accord with standard engineering methodology and procedures and shall be responsible for maintaining cleanliness and orderliness in the project area throughout the duration of the contract. The Contractor shall deploy qualified workers with necessary certification.

5. **Electrification**

The contractor shall pay to the local power utility the cost of providing the additional electrical distribution facilities for the project.

6. **Material Testing**

All material testing shall be conducted by the accredited testing laboratories.

7. **Subcontracts**

Subcontracting is allowed. The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS,** which shall not exceed fifty percent (50%) of the contracted Works. Subcontracts were not allowed in Structural, Civil and Architectural Works

8. **Key Personnel**

The key personnel must meet the required minimum years of experience set below:

Key Personnel	General Experience	Relevant Experience
1 – Project Engineer/ Manager	5 years	3 years
1 – Material Engineer	5 years	3 years
1 – Safety Officer	Completed 88 hours	n/a
1 – First Aider with latest ID and certificate issued by red cross	1 year	1 year
1 – Foreman	10 years	5 years
1 – Master Plumber	5 years	5 years
1 – Electrician	5 years	5 years
5 – Skilled	5 years	3 years
10 – Helper	1 year	1 year

9. **Equipment**

The minimum major equipment requirements are the following:

Equipment	Capacity	Number of Units
Concrete Vibrator	-	1
Mobile Crane	-	1
Dump Truck	12 cu.yd	1

SECTION 5: SUBMITTALS

I. BIDDING REQUIREMENTS:

A. Documents Comprising the Bid: Eligibility and Technical Components

4 Copies (1 original copy and 3 duplicate copies) of bid documents

a. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

b. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

c. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.

d. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

e. Construction safety and health program duly signed by the safety officer

B. Documents Comprising the Bid: Financial Component

4 Copies (1 original copy and 3 duplicate copies) of bid documents

a. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.

b. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

c. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

C. Additional Bidding Document Requirements:

C.1. Curriculum Vitae of the following:

a. PME

b. PEE

c. RMP

d. SO3 AND 1ST AIDER with Safety and Health Program

e. Materials Engineer

C.2. Signed and Sealed by PEE of Electrical Design Analysis of the following:

a. Short circuit calculation

b. Voltage drop analysis

c. Arc Flash analysis

d. Protection device coordination

e. Load flow analysis

f. Illumination Design/Computation for the building only

C.3. Safety and health program

C.4. Construction methodology and schedule

\- END OF SECTION -

Prepared by:

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Noted by:	Recommending Approval by:	Approved by:
Dr. Alfredo D. Valentos, PME	***Dr. Edmundo C. Tungol***	***Dr. Gregorio J. Rodis***
PPES Director	Vice President, Admin and Finance	University President