Department of Health
Central Luzon Center for Health Development
MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
P. Monroe Street, Poblacion, Mariveles, Bataan, Philippines, 2105
Mobile: 0968-8525-604: Office of the Medical Center Chief: 0968-852-6726 mail@mmwgh.gov.ph mmwgh.com

NOTICE FOR NEGOTIATED PROCUREMENT
(53.1. Two Failed Biddings)

Name of Contract: DESIGN AND BUILD FOR THE CONSTRUCTION OF ADMISSION AND CRISIS INTERVENTION UNIT (ACIU) BUILDING
Location: Mariveles Mental Wellness and General Hospital
For the Contract (ABC): 55,000,000.00
Contract Duration: 300 Calendar Days
Cost of Bid Documents: N/A
PCAB License: Category B for Medium A

1. Invitation to quote/participate for the abovementioned project was sent via email to those **legally, technically, and financially** capable list of contractors with completed or on-going project from the procuring entity's list;

2. Interested Bidders are required to submit their best and final price quotations using the required bid forms which can be downloaded at PhilGEPS, www.mmwgh.gov.ph/invitation-to-bid/, or you can get them from the BAC Secretariat. You may send your offer/price quotations through manual submission at the BAC Secretariat or through email at procurement.mmwgh@gmail.com until **March 24, 2025 | 12:00 PM**

3. Checklist for Technical and Financial Documents must be complied, failure to comply will result to outright disqualification. Negotiations will be via Procurement Conference Room and/or via videoconferencing on **March 24, 2025 | 1:00 PM;**

4. **The MMWGH** reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Section 35.6 and 41 of the 2016 revised IRR of RA No. 9184 without hereby incurring any liability to the affected bidder or bidders.

5. For further information, please refer to:

MARY RODELINE M. CASUAYAN
BAC Secretariat
Procurement Unit
Mariveles Mental Wellness and General Hospital
P. Monroe Street, Poblacion, Mariveles, Bataan
Email Address: procurement.mmwgh@gmail.com
Website: www.mmwgh.com
Contact No.: +639-688545320

VINCENT A. ISIP, MPA
Bids and Awards Committee 3, Chairperson

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

☐ (b) Preliminary Conceptual Design Plans in accordance with the degree of details specified by Procuring Entity.

II. FINANCIAL COMPONENT ENVELOPE

☐ (c) Original of duly signed and accomplished Financial Bid Form; **and**

Other documentary requirements under RA No. 9184

☐ (d) Original of duly signed Bid Prices in the Bill of Quantities; **and**

☐ (e) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid in compliance with the DPWH Department Order 197 series of 2016: Revised Guidelines in the Preparation of Approved Budget for the Contract; **and**

☐ (f) Cash Flow by Quarter.

Note: Any missing document in the above-mentioned checklist is a ground for outright rejection of the bid.

Post Qualification Documents

☐ 1. BIR Form 2303 (BIR Registration Certificate)
☐ 2. Business and Income Tax Return

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DESIGN AND BUILD FOR THE CONSTRUCTION OF TWO STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING

TERMS OF REFERENCE
DESIGN & BUILD SERVICES

GENERAL PROJECT DESCRIPTION

I. INTRODUCTION

A. Background and Rationale:

Under Republic Act No. 11288, An Act Increasing the Bed Capacity of the Mariveles Mental Hospital in Mariveles, Bataan, from Five Hundred (500) Beds to Seven Hundred (700) Beds, Upgrading its Services, to Include the Operation of a Level 1 General Ward with One Hundred (100)-Bed Capacity, to be known as the Mariveles Mental Wellness and General Hospital and Appropriating Funds Therefore, signed into law on April 12, 2019, by President Rodrigo R. Duterte, this hospital has the mandate to increase its 500 authorized bed capacity for psychiatry cases to 700.

Our current inpatient facilities for mental health are not compliant with the 7.43 square meter space requirement per bed. Thus, there is also a need to expand and upgrade existing facilities for psychiatry inpatients to cover the increasing bed capacity.

This year, the Health Facility Enhancement Program (HFEP) of the Department of Health allotted the amount of One-Hundred Million Pesos (Php100,000,00.00) to continue the construction of the General Hospital. However, the Department of Public Works and Highways and the contractor encountered delays during implementation of the project. Anent to this, we consulted the HFEP on how we can utilize the 100M sub-allotment. Upon discussion, the HFEP concurred with our proposal to use portion of the budget for upgrading and construction of Two storey Admission Crisis Intervention (ACIU) building.

B. Objectives

The Mariveles Mental Wellness and General Hospital has the mandate to increase its 500 authorized bed capacity for psychiatry cases to 700 which intended to improve the delivery of specialized health services through the rationalization and critical upgrading of health facilities.

The 2024 Infrastructure Project of Mariveles Mental Wellness and General Hospital will achieve the following major objectives:

1. To increase the bed capacity from 500 to 540 psychiatric beds in compliance to RA 11288.
2. To expand psychiatric inpatient services of MMWGH to fulfill its role as Mental Health Advanced Center.

II. PROJECT REQUIREMENTS

A. Preliminary Information/Studies for Design.

III. PROJECT COMPONENTS

Site and space planning were governed by the standards, rules and regulations on the design of hospital as prescribed by the Department of Health and other concerned agencies. Building design shall conform to the provisions of the National Building Code of the Philippines (PD 1096), Accessibility Law (BP 344), National Structural Code of the Philippines, Electrical Engineering Law (RA 7920), Mechanical Engineering Law (RA 5336), Plumbing Code (RA 1378, 1993-1994 Revisions), Fire Code (RA 9514), Code on Sanitation PD 856, Philippine Green Building Code, and other laws and regulations covering environmental concerns and local ordinances and regulations.

DOH-ADMINISTRATIVE ORDER 2020-0011

Guidelines in the Implementation of the Unified Color, Signage Features, and Design of Identified Interior Spaces for Health Facilities Enhancement Program (HFEP)-funded and coordinated Health Facilities and Medical Transport Vehicles.

All health facilities, regardless of the scope of work, funded by and coordinated through HFEP, shall strictly follow the Unified Colors, Signage Features, and Design of Identified Interior Spaces prescribed in this Order.

A. Pre-Detailed Design

1. Engineering Surveys and Investigations
   - 1.1 Surveys and investigations of the site includes boundaries of the property, elevations and contours (at 0.5m interval), location, dimension, floor elevations and other pertinent data on existing buildings and improvements (roads, parking areas, mature trees) and existing utility lines (e.g. water, power, telephone).
   - 1.2 Soil tests have been conducted.
   - 1.3 Topographic survey
2. Design Development Drawings
   - 2.1 Preparation of the following drawings for design development based on the approved schematic plans prepared by the DOH/ MMWGH
     - 2.1.1.1 Perspective View
     - 2.1.1.2 Floor plans, two (2) sections and four (4) elevations, including complete space allocation.

B. Detailed Design Preparation of the following Detailed Design Drawings (see DOH Checklist of Drawings Requirements) based on the Design Development Drawings and Design Parameters including any revisions and refinements as approved and required by the DOH/ MMWGH.

a. Detailed Architectural Plans (refer to Checklist of Drawings Requirements and Design Parameters).
b. Detailed Structural Plans (refer to Checklist of Drawings Requirements and Design Parameters).
c. Detailed Electrical Plans (refer to Checklist of Drawings Requirements and Design Parameters).
d. Detailed Electronic and Communication plans (refer to Checklist of Drawings Requirements and Design Parameters)
e. Detailed Storm Drain, Sanitary and Plumbing Plans (refer to Checklist of Drawings Requirements and Design Parameters).
f. Detailed Mechanical Plans (refer to Checklist of Drawings Requirements and Design Parameters).
g. Structural Computations, including Soil Boring Test Results and Seismic Analysis and Electrical Design Computations.
h. General Notes and Technical Specifications describing type and quality of materials and equipment to be used, manner of construction and the general conditions under which the project is to be constructed.
i. Detailed Bill of Quantities, Cost Estimates including a summary sheet indicating the unit prices of construction materials, labor rates and equipment rentals.

C. Construction Work

- As a rule, contract implementation guidelines for procurement of infrastructure projects shall comply with Annex "E" and guidelines for the implementation of contracts for DESIGN AND BUILD infrastructure projects shall comply with Annex "G" of IRR, RA 9184. The following provisions shall supplement these procedures:

1. No works shall commence unless the contractor has submitted the prescribed documentary requirements and the DOH/MMWGH has given written approval. Work execution shall be in accordance with reviewed and approved documents.
2. The contractor shall be responsible for obtaining all necessary information as to risks, contingencies and other circumstances which may affect the works and shall prepare and submit all necessary documents specified by the concerned Building Officials to meet all regulatory approvals as specified in the contract documents.
3. The contractor shall submit a detailed program of works within fourteen (14) calendar days after the issuance of the Notice to Commence for approval by the procuring entity that shall include, among others:
    a. The order in which it intends to carry out the work including anticipated timing for each stage of design/detailed engineering and construction;
    b. Periods for review of specific outputs and any other submissions and approvals;
    c. Sequence of timing for inspection and tests;
    d. General description of the design and construction methods to be adopted;
    e. Number and names of personnel to be assigned for each stage of the work;
    f. List of equipment required on site for each stage of the work; and
    g. Description of the quality control system to be utilized for the project.
4. Any errors, omissions, inconsistencies, inadequacies or failure submitted by the contractor that do not comply with the requirements shall be rectified, resubmitted and reviewed at the contractor's cost. If the contractor wishes to modify the design or document which has been previously submitted, reviewed and approved, the contractor shall notify the DOH/MMWGH within a reasonable period of time and shall shoulder the cost of such changes.
5. As a rule, changes in design and construction requirements shall be limited only to those that have not been anticipated in the contract documents prior to contract signing and approval. The following guidelines shall govern approval for change or variation orders:
    a. Change Orders resulting from design errors, omissions or non-conformance with the performance specifications and parameters and the contract documents by the contractor shall be implemented by the contractor at no additional cost to the DOH/MMWGH.
    b. Provided that the contractor suffers delay and/or incurs costs due to changes or errors in the DOH/MMWGH performance specifications and parameters, the contractor shall be entitled to either one of the following:
        1. An extension of time for any such delays under Section 10 of Annex "E" of IRR (RA 9184); or
        2. Payment for such costs as specified in the contract documents, provided, that the cumulative amount of the variation order does not exceed ten percent (10%) of the original project cost.
    c. The contract documents shall include the manner and schedule of payment specifying the estimated contract amount and installments in which the contract will be paid.

d. The contractor shall be entitled to advance payment subject to the provisions of Section 4 of Annex "E", IRR (RA 9184).
e. The DOH/MMWGH shall define the quality control procedures for the design and construction in accordance with the DOH guidelines and shall issue the proper certificates of acceptance for sections of the works or whole of the works as provided for in the contract documents.
f. The contractor shall provide all necessary equipment, personnel, instruments, documents and others to carry out specified tests.
g. This design and build projects shall have a minimum Defects Liability Period of one (1) year after contract completion or as provided for in the contract documents. This is without prejudice to the liabilities imposed upon the engineer/architect who drew up the plans and specification for building sanctioned under Section 1723 of the New Civil Code of the Philippines.
h. The contractor shall be held liable for design and structural defects and/or failure of the completed project within the warranty period of 15 years for permanent structures/buildings as specified in Section 62.2.3.2 of the IRR (RA 9184).

- The assigned project engineer or the assigned representative of the contractor must attend the weekly coordination meeting to present Project status reports, including the following item and in standard format:

    a. Page one content:
        i. Name of facility
        ii. Project description
        iii. Location
        iv. Contract Amount
        v. Contractor
        vi. Date of presentation
        vii. Presentation number
    b. Page two content:
        i. Date of issuance of permits and other related documents.
        ii. Progress S-curve and Construction schedule (planned and actual schedule)
        iii. Two weeks look ahead to schedule catch-up plans with drawing
        iv. Site photos with description and remarks.
    c. Page three content (tabular format):
        i. 1st column – description of the problem encountered on site
        ii. 2nd column – remarks of the contractor
        iii. 3rd column – action taken/ proposal

- Any errors, omissions, inconsistencies, inadequacies, or failures submitted by the contractor that does not comply with the requirements shall be rectified, resubmitted, and reviewed at the contractor's cost.
- If the contractor wishes to modify the design or document which has been previously submitted, reviewed and approved, the contractor shall submit a formal letter to the Office of the Medical Center Chief of DOH/MMWGH through the Chief Administrative Officer and Hospital Engineer of MMWGH.

IV. IMPLEMENTATION ARRANGEMENT

- Reporting Protocol

Contact Persons:

Dennis Dayao L. Ordoña, MD
Medical Center Chief II

Vincent A. Isip, MPA
Chief Administrative Officer

Melvin Jan A. Yabut, CE, MPA
Engineer IV

DETAILED PROJECT REFERENCE

V. ELIGIBILITY REQUIREMENTS:

A. Basic

1. The eligibility requirements for Design Scheme shall comply with the applicable provisions of Section 12.1 (a) of the ITB and 12.1 (a) of the Bid Data Sheet (BDS) of this bidding document.
2. A modified set of requirements integrating eligibility documents and criteria for infrastructure projects and consulting services shall be adopted in accordance with Annex G - Guidelines for the Procurement and Implementation of Contracts for Design and Build Infrastructure Projects Annex "G" of IRR of RA 9184
4. The Design Build Contractor must have completed a similar project in the amount of at least fifty percent (50%) of the ABC. For this project, a similar project will be defined as at least Two (2) Storey building, which includes special requirements such as automatic fire sprinkler system, elevator system and communication system.

B. Specialized

B.1 For the Pre-Detailed Design and Detailed Design portion of the contract, the Bidder is required to have required to enter into a joint venture agreement with an architectural firm that will design the project with the minimum number of professionals as shown below:

1. Design/Principal Architect (1)
   a. Licensed Architect
   b. At least 10 years of experience managing hospital projects, including designing and optimizing specialty rooms like psychiatric wards, ensuring safety, regulatory compliance, and enhancing patient care environments.
2. Junior Architect (2)
   a. Licensed Architect
   b. At least 5 years of experience
   c. Proficient in AutoCAD Software
3. Structural/ Civil Engineer (1)
   a. Licensed Structural/ Civil Engineer
   b. At least 10 years of experience in structural design of medium-rise structures, typically 4 to 10 floors, serve residential and commercial

uses, enabling denser urban development with elevators becoming standard.

c. Proficient in AutoCAD Software

4. Professional Electrical Engineer (1)
   a. Licensed Professional Electrical Engineer (PEE)
   b. At least 10years experience
   c. Proficient in AutoCAD Software
5. Professional Mechanical Engineer (1)
   a. Licensed Professional Mechanical Engineer (PME)
   b. At least 10years experience
   c. Proficient in AutoCAD Software
6. Sanitary Engineer (1)
   a. Licensed Professional Sanitary Engineer (PSSE)
   b. At least 10years experience
   c. Proficient in AutoCAD Software
7. Professional Electronics Engineer (1)
   a. Licensed Professional Electronics Engineer (PECE)
   b. At least 10years experience
   c. Proficient in AutoCAD Software
8. CADD Operator (4) (one for Architecture and one for each engineering specialty)
   a. At least 5 years in experience
   b. Has a Bachelor's Degree in Architecture or Engineering
   c. Proficient in AutoCAD Software
9. Others as required for the project
   a. The bidder is required to prioritize the hiring of locally-based architects, engineers, and draftsmen especially if such have had experience and training in health facilities projects and design.

B.2. For the construction portion of the contract, the Bidder must assign to the project professionals as shown below:

1. Project Manager (1)
   a. Licensed Engineer or Architect
   b. At least 10 years of construction management experience, overseeing project planning, coordination, budget control, and timely execution.

2. Project Engineer (2)
   a. Licensed Civil Engineer
   b. At least 5 years of construction management experience, overseeing project planning, coordination, budget control, and timely execution.

3. Project Architect (1)
   a. Licensed Architect
   b. At least 5 years of construction management experience, overseeing project planning, coordination, budget control, and timely execution.

4. Materials Engineer (1)
   a. Licensed Engineer
   b. DPWH Accredited

5. Construction Safety Officer (1)
   a. Licensed Engineer/Architect
   b. DOLE accredited/trained

c. Must execute an undertaking that safety officer/s shall be present during the construction phase

6. Quality Assurance/ Quality Control Officer (1)
   a. Licensed Architect/Engineer
   b. DPWH accredited/trained

7. Electrical Engineer (1)
   a. Licensed Electrical Engineer
   b. At least 5 years of experience

8. Sanitary Engineer (1)
   a. Licensed Sanitary Engineer
   b. At least 5 years of experience

10. Mechanical Engineer (1)
    a. Licensed Mechanical Engineer
    b. At least 5 years of experience

11. Electronics Engineer (1)
    a. Licensed Electronics Engineer
    b. At least 5 years of experience

APPROVED BUDGET COST

The total approved budget cost for the Project is **Fifty-Five Million Pesos (Php 55,000,000.00).**

LEVEL	AREA	AMOUNT
Ground Floor	1,119.73	28,000,000.00
Second Floor	1,085.94	27,000,000.00
	Project Cost	**55,000,000.00**

VI. TIME FRAME

The Design Firm/ Contractor is required to complete the project within an indicative period as shown below, to start within 7 days upon the contractor's receipt and signing of Notice to Proceed. The time frame to be followed for the project is as follows.

ACTIVITY	DAYS											
	30	60	90	120	150	180	210	240	270	300	330	360
Pre-Detailed Design and Detailed Design	→	→										
Construction including Application and Issuance of Building Permit and Acceptance and Turnover			→	→	→	→	→	→	→	→		

VII. SCOPE OF WORKS:

1. Pre- Detailed Design
    a. Geodetic Survey of lot and structures
    b. Topographic Survey

2. Detailed Design Works
    a. Detailed Architecture and Engineering Design
        i. Rehabilitation/ Upgrading/ Retrofitting of Old CCU Building into 2-Storey Admission and Crisis Intervention Unit (ACIU) Building.
        ii. 8 sets of building plans signed and sealed by respective registered and licensed Professional:
            1. Paper size: 20" X 30"
            2. Copy Furnished of Building Plans (signed copy):
                a. 2 sets – MMWGH
                b. 5 sets – Office of the Building Official/ BFP
                c. 1 set – Site copy
    b. Technical Specifications
        i. 8 sets, signed and sealed by licensed Professional:
            1. Paper size: Legal Size Bond paper
            2. Copy Furnished of Building Plans (signed copy):
                a. 2 sets – MMWGH
                b. 5 sets – Office of the Building Official/ BFP
                c. 1 set – Site copy
    c. Bill of Quantities and Detailed Cost Estimates
        i. 8 sets, signed and sealed by licensed Professional:
            1. Paper size: Legal Size Bond paper
            2. Copy Furnished of Building Plans (signed copy):
                a. 2 sets – MMWGH
                b. 5 sets – Office of the Building Official/ BFP
                c. 1 set – Site copy
    d. Engineering Computations including Structural Analysis
        i. 8 sets, signed and sealed by licensed Professional:
            1. Paper size: Legal Size Bond paper
            2. Copy Furnished of Building Plans (signed copy):
                a. 2 sets – MMWGH
                b. 5 sets – Office of the Building Official/ BFP
                c. 1 set – Site copy
    e. Detailed Summary of Works
        i. 8 sets, signed and sealed by licensed Professional:
            1. Paper size: Legal Size Bond paper
            2. Copy Furnished of Building Plans (signed copy):
                a. 2 sets – MMWGH
                b. 5 sets – Office of the Building Official/ BFP
                c. 1 set – Site copy

3. Construction Works (inclusive of Building Permits, Demolition Permit, and other licenses required.)

    General Scope: Rehabilitation/ Upgrading/ Retrofitting of Old CCU Building into Two Storey Admission and Crisis Intervention Unit (ACIU) building with complete architectural and engineering works breakdown of which is but not limited to the following:

a. Site Preparation Works
    i. Mobilization
    ii. Temporary Facilities
    iii. Temporary Utilities
    iv. Excavation Works
    v. Backfill Works
    vi. Soil Poisoning
    vii. Clearing and Grubbing, Removal of obstructions on site
    viii. Tree Cutting (must secure certificates from DENR)
    ix. Demolition of Cadaver Holding Building (Must secure demolition permit and other relevant permits from government agencies)

b. Structural and Civil Works including ramp and walkways.
    i. Foundation, beams, columns/posts, slabs, shear wall, floor and roof framing,
    ii. Interior and exterior walls
    iii. Floor framing
    iv. Roof framing
    v. Path walks
    vi. Power and Pump Room
    vii. Protection of existing Structures, utility systems during construction

c. Complete Architectural Works
    i. Architectural metal works
    ii. Thermal Protection, insulation, waterproofing, damp proofing and roofing
    iii. Wall, ceiling, counter finishes and accessories
    iv. Finishes for wall, ceiling, wall, counter finishes, and accessories
    v. Doors and windows and fenestration (including window grills)
    vi. Painting Works
    vii. Landscaping

d. Complete Sanitary/Plumbing Works
    i. Fixtures, fittings and accessories
    ii. Sewer line and Vent system
    iii. Wastewater line and vent system
    iv. Cold Waterline system
    v. Storm Drainage system
    vi. Septic Tank and Lift station
    vii. Cistern and rain water collection tank
    viii. Pressure tank with pump

e. Complete Electrical Works
    i. Power system including fixtures, fittings, devices, wires, and cables
    ii. Lighting system including fixtures, fittings, devices, wires, and cables
    iii. Distribution System and Standby/Emergency system
    iv. Panel Board and Circuit breakers
    v. Electrical Equipment
    vi. Lightning Protection System
    vii. All electrical System to be tapped to existing connections.

f. Complete Communications Works
    i. Communications system including telephone system, LAN system, and Public Address Paging System.

ii. Fire Detection and Alarm System
iii. Tapping/ connectivity to the existing system of the hospital
iv. Security system including CCTV

CCTV Specifications:

1. **Dome Camera**
    a. 4MP Fixed Dome Network Camera (Full color capability on night)
    b. High quality imaging with 4 MP resolution
    c. 24/7 colorful imaging
    d. Excellent low-light performance
    e. Water and dust resistant (IP67)
    f. Efficient H.265+ compression technology
    g. 1/3" Progressive Scan CMOS
    h. Wide Dynamic Range 120 dB
    i. Pan: 0° to 360°, tilt: 0° to 75°, rotate: 0° to 360°
    j. Lens 2.8 mm, horizontal FOV 96.5°, vertical FOV 50.8°, diagonal FOV 113.9°
    k. DORI 2.8 mm lens, D: 64.0 m, O: 25.4 m, R: 12.8 m, I: 6.4 m
    l. Max. Resolution: 2560 × 1440
    m. PoE Capable

2. **Fisheye Camera**
    a. 5 MP Network Fisheye Camera
    b. Max. Resolution 2560 × 1920
    c. Image Sensor 1/2.5" Progressive Scan CMOS
    d. Min. Illumination Color: 0.01Lux @ (F1.2, Automatic Gain Control ON), 0.034Lux @ (F2.2, Automatic Gain Control ON), 0 Lux with IR on
    e. Shutter Speed 1/3 s to 1/100,000 s
    f. Lens 1.05 mm @ F2.2, horizontal field of view: 180°, vertical field of view: 180°
    g. Lens Mount M12
    h. Day & Night IR cut filter with auto switch
    i. Wide Dynamic Range 120 dB
    j. PoE Capable

3. **Uninterruptible Power Supply**
    a. Ratings: 1200VA / 650W
    b. Battery: 1 x 12V / 9Ah capacity
    c. Interface: 4x Universal Socket LED Indicators
    d. EU RoHS compliant
    e. EN62040-1 / CE / IEC-62040-1 / IEC-62040-2
    - Main Input Voltage: 230 V AC 1 phase
    - Main Output Voltage: 230 V AC 1 phase
    - Rated power in W: 650 W
    - Rated power in VA: 1200 VA

- Max runtime: 120 min
- Network frequency: 50/60 Hz +/- 5 Hz auto-sensing
- Input voltage limits: 140...300 V 230 V AC
- Maximum configurable power in W: 650 W
- Output frequency: 50/60 Hz +/- 1 Hz sync to mains
- UPS type: Line interactive
- Wave type: Stepped approximation to a sinewave
- Full load runtime: 00:01:00 650 W
- Half load runtime: 00:05:00 300 W
- Maximum configurable power in VA: 1200 VA
- Transfer time: 6 ms typical: 10 ms maximum

4. **Data Cabinet**
    a. Size 9U
    b. Width 600mm
    c. Depth 500+100mm
    d. Height 500mm
    e. Tough steel can hold 60kg static load
    f. Cable entry top and bottom
    g. Equipped with 2 cooling fans
    h. Comply with ANSI/EIA RS-310-D, IEC297-2, DIN41491.Part1, Part7, DIN4144

5. **Gigabit PoE Network Switch 20ports**
    a. 12 × gigabit PoE ports, 4 × gigabit Hi-PoE ports, 2 × gigabit RJ45 ports, and 2 × gigabit fiber optical ports.
    b. IEEE 802.3at/af/bt standard for Hi-PoE ports (Max. 90 W PoE output).
    c. IEEE 802.3at/af standard for PoE ports (Max. 30 W PoE output).
    d. IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ab, and IEEE 802.3z standard.
    e. 6 KV surge protection for PoE ports.
    f. Up to 300 m long-range transmission.
    g. PoE watchdog to auto detect and restart the cameras that do not respond.
    h. Port isolation to improve network security.
    i. Gigabit network access design.
    j. Wire-speed forwarding.
    k. Store-and-forward switching.
    l. Solid high-strength metal shell.

6. **Network Cable**

Cat6 UTP Cable

Inner Conductor thickness	: 0.56mm Pure Copper
Conductor size	: 23AWG
Conductor Material	: BC

No. of Conductor	: 4Pairs
Insulator Material	: High Density Polyethylene
Jacket	: RoHS PVC
Shield	: Unshielded twisted pairs
Filler	: PE CROSS
Insulation Thickness	: 0.2mm
Stretching Resistance	: (max) 400N
Working Capacitance	: 5.4nf/100m
Insulation Resistance	: 72%

7. **Fiber Optic Cable (Drop Flat Cable) 2-core**
    a. Two parallel FRP strength members protect the optical fibers
    b. The cable is completed with an LSOH jacket
    c. Compliant with: ITU-T G652D/G657A1/G657A2/G651; ANSI/TIA 568-C.3; IEC-60332; RoHS

8. **CCTV Signages (1 pc)**
    a. 22cm x 33cm Acrylic Signage in Yellow and Black Color
    b. Logo: CCTV Camera
    c. Text: 24/7 CCTV OPERATIONS

Note: Quantity of the said equipment varies on the design of the infrastructure per floor.

g. Complete Mechanical Works
    i. Automatic Fire Sprinkler System
    ii. Air-Conditioning, Exhaust, Filtration and ducting systems
    iii. Elevator System
    iv. Water Reservoir and pumps

4. All mechanical systems will connect to hospital infrastructure, including additional systems required for the psychiatric facility.

5. Construction Supervision
   The contractor shall execute all the item of works stipulated in the contract strictly in accordance with standard engineering methodology and procedures and shall be responsible for maintaining cleanliness and orderliness, health and safety of workers and general public in the project area throughout the duration of the contract. Exercise of extraordinary diligence is required for the safety of MMWGH employees and the hospital's clientele.

6. Utilities
   The contractor shall install functional and in good condition sub-meters (water, electricity, etc.) and pay monthly for all the utilities to be use for the project.

7. Quality Control
   The contractor shall adhere to the submitted and approved minimum material testing plan.

8. Construction Safety and Health program
   a. Safety Program
   b. Health Program

9. As-built Plans
   The contractor shall prepare and submit as-built plans duly signed and scaled by respective engineers in the same sheet size and scale as the original drawings in two (2) reproducible copies. Electronic copies shall also be submitted in CAD and PDF format.

10. Project Acceptance and Turn-over
    a. A construction monitoring team or infrastructure inspection team created under Inspection and Acceptance Committee of MMWGH to ensure to complete the work is:
       i. In accordance with the approved construction contract documents and plans and specifications
       ii. Able to perform as expected and was constructed in a way to allow successful testing, commissioning, and certification.
    b. Should the construction monitoring team members notice defects after completing the punch list, new items may be added to the list which the contractor shall correct prior to final acceptance.
    c. Upon final acceptance of the project, the retention money for the project shall be released accordingly, upon the request and posting of the required one (1) year guarantee bond for the contract.

VIII. DESIGN PARAMETERS

ARCHITECTURAL DESIGN PARAMETERS

I. Codes and Standards

The Architectural Works shall be in accordance with the following Laws, Codes and Standards.

- Laws and Codes:
  - National Building Code of the Philippines and its Latest and Amended IRR
  - RA 9266 or Architecture Law and its Latest and Amended IRR
  - RA 4226 or Hospital Licensing Act and its Latest and Amended IRR
  - BP 344 or Accessibility Law and its Latest and Amended IRR
  - AO 35, s. 1994 or AO Pertaining to the Control of Radiation Hazards
  - RA 9514 Fire Code of the Philippines
  - Existing Local Codes and Ordinances.
  - And other Laws that applies to the projects
- Standards:
  - Bureau of Product Standards (BPS)
  - Underwriters Laboratory (UL)
  - DOH Technical Guidelines for Hospital & Health Facilities Planning and Design

I. General Drawing Guidelines

- All drawings shall be computer-drafted. Drawings shall be submitted both in printed and electronic copies.
- Keep the same orientation for all plans. The north orientation shall be indicated in all architectural floor plans. The orientation of the architectural plans shall be consistent with all the engineering plans.
- Existing buildings and new works shall be clearly indicated and labeled in the site plans.
- Detailed plans shall have a scale not smaller than 1: 50 meters.
- Spot detailed plans, elevations, and sections shall have a scale not smaller than 1: 10 meters.
- Avoid notes such as 'see architectural detail' or 'see structural'. Always refer with a callout to the specific detail drawing and sheet number.

1. *Perspective*
   - In the most appreciable scale, show the entire structure's façade or prominent feature/s; include appropriate elements to scale the structure's volume (e.g. human figures, vehicles, trees and vegetation, adjacent structures

3. *Site Development Plan*
   - The site development plan shall have a scale not smaller than 1:400 meters and shall show the structures in relation to each other and its natural or built surroundings.
   - Site Development Plan shall include the following:
     a. Contour and survey of the lot, including bearing and distance of the property line
     b. Road network and curbs and sidewalks
     c. Parking spaces
     d. Reference location of existing trees
     e. Reference location and footprint of existing buildings, with the corresponding building names and dimensions, including distances between adjacent buildings, and distances between buildings and the nearest property line
     f. Reference location of utilities, e.g. water reservoirs, septic tank, wastewater treatment plant, powerhouse, transformers, waste storage area, security outposts and waiting sheds
     g. Site furniture and other site features
        - Identify building/structure name and its corresponding number of storeys/levels

- Reflect modules and total dimension of structures
- Indicate dimensions of all other site elements.

There shall be a separate road network and entry/exit for the public and the service vehicles, e.g. ambulance, waste collection vans, delivery trucks.

4. *Vicinity Map/ Location Plan*
   - Locate the project site in a vicinity map (at least 2 kilometer radius) showing districts/political subdivision, major landmarks, institutions, major thoroughfares
   - Locate the project site in a location map (at most 2 kilometer radius) showing major and minor road networks, establishments, markers, etc.

5. *Floor Plans*
   - All plans shall be 1: 100 meters. The same scale shall be used for the rest of the architectural, structural, sanitary, plumbing, electrical and mechanical plans, except for each trade's site plan, detailed plans and spot details.
   - For renovation/modification works involving the existing structure, indicate architectural and structural elements to be retained, demolished/removed, blocked off, constructed or relocated.
   - Unless areas are indicated for blow-up details, indicate dimensions for all floor plan elements.
   - Elevation callouts shall be indicated on the floor plans and shall be consistent with the elevation drawing.
   - Section line callouts on the floor plans shall be consistent with the section drawing.
   - Detail callouts shall be consistent with the blow-up/spot detail drawings.
   - Other callouts may be used for toilets, stairs, cabinets, etc.
   - Floor elevations shall be indicated in the floor plans. This shall be in reference to the natural grade line or the established finished floor lines of the adjoining existing buildings.
   - Door callouts shall be circles with the proper numbering, e.g. D-01.
   - Window callouts shall be hexagons with the proper numbering, e.g. W-01.

6. *Elevations*
   - Provide at least four elevations. However, if structure is clustered (polygonal or with interior openings), provide elevations for all exterior walls.
   - Indicate measurements for finish floor levels and notable building heights (eg roof/s, parapet/s, canopies, spires, towers and other projections) where applicable
   - Indicate measurements for other surface features/elements
   - Finish floor lines and top of truss/roof deck lines shall be consistent to all the elevations, sections and structural plans and details.
   - The height from finish ground line to finish ground floor line shall be higher than the recorded flood level of the area for the past five (5) years
   - Indicate all wall finishes, detail callouts for spot details.

7. *Sections*
   - Provide at least two sections. However, if structure is clustered (polygonal or with interior openings), provide additional sections to show notable features.
   - Indicate measurements for finish floor levels, ceiling heights, wall heights and other notable dimensions
   - Indicate interior wall finishes, detail callouts.

8. *Roof Plan*
   - Indicate roof finish/es, slope and slope direction.
   - Indicate gutter finish, if applicable.

- ☐ Indicate exterior building wall line (hidden line).
- ☐ Indicate downspouts, if applicable
- ☐ Provide details for gutters, downspouts

9. *Reflected Ceiling Plans*
   - ☐ Indicate on plan ceiling finishes, lighting and other ceiling fixtures and accessories.
   - ☐ Ceiling height relative and in reference to the finish floor line shall be indicated in the reflected ceiling plan in each room with boxed dimensions. This is to ensure that the ceiling heights of all rooms are established whether or not reflected in the sections.
   - ☐ The description and location of the fixtures, e.g. lighting, smoke detectors, air-condition vents, exhaust fans, in the reflected ceiling plan shall be consistent with the electrical and mechanical plans.
   - ☐ Provide details for ceiling features, where necessary.

10. *Stairs, Fire Escape Exit, Ramps*
   - ☐ Present blow-up plan including detail section/ elevation and spot details for all stairs, fire exits, ramps on a scale of not smaller than 1:50m. Indicate dimensions and finishes.

11. *Toilets, Baths, Washing area/room*
   - ☐ Present blow-up plan including detail section/elevations (to show all sides of the room) and spot details on a scale of not smaller than 1:50m. Indicate dimensions, elevations, clearances, center lines, slopes, fixture type, finishes and accessories.
   - ☐ Provide fixture detail and accessories including mounting heights from finish floor levels.

12. *Specialized Design*
   - ☐ Provide detailed/shop drawings for built-up or pre-assembled partitions, cabinets, closets, counters, lockers, etc.

13. *Bay Section*
   - ☐ Provide bay section/s of scale not smaller than 1:50m for exterior walls showing in detail, systems, connections for the entire vertical length from basement/ground to topmost elements (roof, parapet, deck)

14. *Doors and Windows*
   - ☐ Provide Door and Window schedules indicating the type of door or window, the number of sets, the location/s of the door or window, the materials and accessories and other special specifications, e.g. color or finish, operation system and the detailed elevation and plan (where necessary).

15. *Schedule of Materials*
   - ☐ In matrix form, identify floor, wall, ceiling, counter and other accessories/ornaments finish for all rooms/areas on plan.

16. *Details*
   - ☐ Provide a minimum of one (1) bay section of a scale not smaller than 1: 50 meters for each major building preferably cut along the area with special construction design.
   - ☐ Provide spot detail plans, elevations and sections of a scale not smaller than 1:10 meters for special designs with aesthetic treatment and ornamentation.
   - ☐ Provide detail plans of a scale not smaller than 1: 50 for all areas needing tile pattern, e.g. lobby, corridor, entrance walk, showing the position and pattern of tiles.
   - ☐ Centerline location of plumbing fixtures shall be indicated in detail plans with lines of reference and its corresponding dimensions. This is to indicate the exact locations of the plumbing/sanitary roughing-in

III. Building Architectural Works

1. Floor Plans

- The structural, sanitary, plumbing, electrical and mechanical designs are required to refer to the architectural plans and specifications in case of discrepancies. If an engineering design will have any possible conflict or interference on the architectural design, the latter may be adjusted provided that the aesthetic value will not be compromised.
- The architectural and engineering plans shall be consistent all throughout in terms of dimensions and locations of columns, beams, walls, roof line, conduits, ducts, pipes, and fixtures, among others. Column and beam grid lines shall also be consistent in all the architectural and engineering plans.
- Verify and coordinate floor plans with the mechanical, electrical and sanitary design with regard to the requirements for mechanical rooms, AHU rooms, electrical rooms, pipe chase, and other engineering requirements.
- Public toilets shall have provisions and fixtures for persons with disability as required by BP 344. If enough space allows, toilets specially made and designated for persons with disability is preferable.

2. Walls

- Exterior walls shall be 200mm. thick, while interior walls shall be 150mm. thick. This is indicative of the finished wall thickness including the plastering and tile works.
- Toilet wall tiles shall be 300mm x 300mm for Rooms, Offices and Clinics and 600mm x 600mm for common public CRs.
- Layout and work on wall and floor tiles must be aligned, plumb, level, and square.
- All edges, corners and intersections of toilet tiles, including the top-most tile not reaching the ceiling shall be provided with polyvinyl chloride tile trims
- Tile color and design shall be approved first before installation
- Where applicable, walls shall be protected against abuse using bump guards and rails, corner guards, baseboards, wainscot especially in heavy traffic and public areas
- Psychiatric ward or Psychiatric Isolation room wall should not have a sharp end corner on the walls.
- Psychiatric ward or Psychiatric Isolation room wall must have a padding with a full grain leather upholstery fabric around their rooms. Provide datasheet for the specifications.

3. Floors

- If floor tiles in two adjacent rooms with different material, color or design meet at the door opening, the cut shall be located middle of the door thickness when in a closed position. Provide details in the floor pattern design.
- Floors at the openings of toilets for persons with disability shall be sloping. Indicate in the plans and sections.
- Toilet floor tiles shall be 300mm x 300mm for Rooms, Offices and Clinics and 600mm x 600mm for common public CRs. Indicate the tile pattern.
- The size of the floor tiles of the offices and wards shall be 600mm. X 600mm, or bigger depending on the proportion to the size of the room. Indicate the tile pattern.
- The size of the floor tiles of the lobby and corridor shall not be less than 600mm. X 600mm. The tile size of 600mm. X 600mm. is recommended for bigger areas. Indicate the tile pattern.
- Layout and work on wall and floor tiles must be aligned, plumb, level, and square.
- All edges, corners and intersections of toilet tiles, shall be provided with polyvinyl chloride tile trims.
- Tile color and design shall be approved first before installation.

- All floor tiles in the toilet and bath must be rustic matte or textured tiles except in the Psychiatric Isolation toilet and bath room
- All Psychiatric Isolation room floor finish must have a padding with a full grain leather upholstery fabric around the Toilet and bath floor.
- Psychiatric Isolation ward floor finish must be a 2.0mm homogenous Vinyl roll (slip resistant).

4. Ceiling Works

- Ceiling finishes shall be of type appropriate to the location

where it is applied. Ceiling material shall be of premium grade and quality performance; easily replaced and maintained. Ceiling materials must at least have flame-spread rating

- Ceiling height for areas with special aesthetic treatment, e.g. lobby, major conference room, auditorium, executive office, shall be proportional to the area or room or as required by the designer. However, this shall not be lower than 3000mm. Provide details.
    - The Psychiatric ward or Psychiatric Isolation room ceiling should not have ceiling fan or any ligature object that can be reach by the patients.
    - The Psychiatric ward or Psychiatric Isolation room finish ceiling height must have a minimum ceiling height of 4.00 meters from the finish floor line.
    - The ceiling material must be Fire resistant.
- If acoustic boards on aluminum T-runners would be used for the ceiling, layout should be on center and avoiding cut pieces. If the remaining perimeter of the ceiling is less than 600mm. wide, it shall be designed complimentary with fiber cement boards on light gauge metal furring. Likewise, with acoustic boards in big areas, e.g. offices, and wards, shall be designed in a way to break the redundancy. Provide details.
- For board ceiling (gypsum, fiber cement, particle, etc, of size 1200mm x 2400mm) construct in maximum cut size of 600mm x 600mm (maximum) to avoid injury or damage in case of falls.
- For strip ceilings (g.i., aluminum, vinyl, composite), layout shall eliminate as possible connections. Should connections be inevitable; provide intervals such as false beams, bands, strips to conceal ends.
- Ceiling at eaves or at other open/exposed areas shall be designed with wind load considerations.
- Provide manholes for maintenance work, where applicable.
- Soffit of exterior beams and slabs shall have drip moulds to prevent damage due to water sipping into the eaves or ceiling. Section details shall be required to show the drip mould.

5. Architectural Metals

- Railings must be 304 stainless steel
    - All railings must be anti-ligature in all interior part of the building.
    - The material should be a UPVC material
- Exposed Aluminum composite panels shall be at less 4mm thick PVDF.
- Aluminum composite panels used for indoors should at least be 3mm polyester.
- Other metals for decorative purposes

6. Doors and Windows

- Major rooms that require security shall have sturdy doors e.g. wood panel, and metal.
- Minor rooms that do not require security shall at least have wood flush doors.
- Toilets and other wet areas shall have marine plywood flush doors painted with epoxy paint.
- Heavy-use doors, e.g. main entrance, should be provided with stainless steel kick or push plates and door closers.
- Fire escape doors, should be provided with panic hardware and door closers, and shall conform with the requirements of the Fire Code of the Philippines.

- Aluminum frames of glass doors shall be powder-coated.
- Door finish and color shall be approved first before application.
- All glass panels for doors and windows on exterior walls shall at least be 6mm thick and tempered.
- Window sills shall be slightly sloped outwards to prevent damage to windows and paint due to water seepage. Section details shall be required to show this slope.
- All doors of a high-occupancy room shall swing outwards and as required by the Fire Code of the Philippines
- Door jambs with no moulding/casing installed on concrete walls shall have construction grooves all around. Provide details.
- All doors and windows shall have reinforced concrete lintel beams. Provide details.
- All glass panels for doors and windows on exterior walls shall at least be 10mm thick and tempered.
- All doors that is dedicated for psychiatric wards and isolation rooms must be Ligature resistant mechanisms, Ligature resistant locksets and has a high human impact resistant glass material.
- All bath room doors that is dedicated for psychiatric wards and isolation rooms must be Light weight, Foam Ligature resistant, and water proof.
- Glass material testing must be conducted to test the capacity of glass in resisting the high human impact force.

7. Stairs and Corridors
   - Regular stairs shall have risers at 150mm. high and treads at 300mm. wide. Fire stairs could have a maximum riser at 200mm. and tread at 250mm. Handrails shall be 1100mm. high. Clearances shall conform with the requirements of the Fire Code of the Philippines.
   - Corridors shall have a minimum unobstructed width of 2450mm. This shall be measured clear from the surface of the finished wall and not on-center of the rough CHB wall.
   - Corridors shall not be areas for temporary or permanent storage of stretchers, wheelchairs, trolleys, food carts, oxygen tanks or other movable hospital equipment. Storage or parking spaces shall be provided for these.
   - Corridors and exit doors shall conform with the requirements of the Fire Code of the Philippines.
   - All staircases must have a low-level lighting.
   - All corridors must be surrounded with ligature resistant handrails

8. Fixtures and Accessories
   - Three-way electrical light switches shall be provided at the foot and the top of the stairs per floor. Likewise, at both ends of a long corridor.
   - Electrical light switches shall be located by the knob side of the door.
   - Electrical switches and outlets shall be installed plumb and level.
   - Public toilets shall always be provided with heavy-duty soap dispensers and electric hand dryers.
   - Public toilets shall always be provided with stainless steel handrails in conformity to the requirements of BP 344.
   - A drainage line shall be provided for window-type air-conditioners. Likewise, split-type air-conditioners located in the interior part of the building shall be so located adjacent to areas with drainage lines, e.g. toilets, downspouts, balconies.
   - LIGHTING FIXTURES (Psychiatric Ward & Isolation room):
     - The lighting at the psych ward and isolation rooms must be adjustable in tri color to adjust and helps the mood of the patients.
     - Use pin light for the psychiatric wards and psychiatric isolation room.
     - All staircases must have a low-level lighting.

- All electrical switches and convenience outlet must be place outside the psychiatric wards and isolation rooms.

- BATHROOM FIXTURES (Psychiatric Ward & Isolation room):
  - The bathroom fixtures that will be use for the psychiatric wards and isolation rooms must be anti-ligature faucet, anti-ligature lavatory, anti-ligature shower head, anti-ligature single towel head, anti-ligature floor drain, and back to wall toilet bowl with push button on the wall.
  - All mirrors in the bathroom of psychiatric wards and isolation rooms must be a plastic mirror. • No sharp edges shall be place at the bathroom

9. Roofing Works

- The section of the roof gutters shall be designed, in case of a clogged downspout, so that the overflow of water will be directed outside of the building and not towards the eaves or interior ceiling to prevent any damage. Provide details.
  - Avoid valley or inside gutters in roof design. But in cases required in aesthetic design, valley or inside gutters shall be in stainless steel or concrete gutters with membrane-type waterproofing, and the section shall be designed with a capacity for big volume to prevent any damage due to overflow. Provide details.
  - Parapets, designed as a roof protection from the winds, must be designed to satisfy the preceding parameters. Provide details.
  - The slope of the roof shall not be less than 30 degrees.

10. Painting

- Painted ceiling shall be in at least latex finish, while cornices and mouldings shall be in gloss enamel finish.
- Painted interior wall shall be at least in semi-gloss latex finish for ordinary rooms, e.g. offices, unless specified to a higher type of paint.
- Patient-related rooms, e.g. wards and isolation rooms, shall be in anti-bacterial and odor-absorbent paint finish.
- Painted exterior wall shall be at least in moisture-resistant/water-repellant solvent-based paint finish, textured or smooth, unless otherwise specified.
- All painting works shall be full-putty.
- Paint color and shade shall be approved first before application.
- The color scheme of the proposed project shall follow the ADMINISTRATIVE ORDER 2020-0011 Guidelines in the Implementation of the Unified Color, Signage Features, and Design of Identified Interior Spaces for Health Facilities Enhancement Program (HFEP) funded and coordinated Health Facilities and Medical Transport Vehicles (All health facilities, regardless of the scope of work, funded by and coordinated through HFEP, shall strictly follow the Unified Colors, Signage Features, and Design of Identified Interior Spaces prescribed in this Order.)

11. Special Features and Furnishing

- Modular counters and cabinets for Nurse stations, receiving/ reception.
- Modular Nurse Station work benches
- Modular treatment room sink counters
- Curtain and track system
- Freestanding 304 stainless steel Utility sink and counters
- Built-up 304 stainless steel slop sinks
- All modular cabinets panels must use a medium density fiber board material.
- All cabinet panels must have a stainless steel 304 soft closing hydraulic concealed hinges.

1.2. Specific Requirements

- Provide spot detail plans and sections of the following:
  1. Gutter and eaves.
  2. Ceiling – cove light, special connections and design, mouldings, valances
  3. Stairs - handrail, and baluster design
  4. Ramps - handrail design and floor pattern
  5. Doors, windows and gates - grille works,
  6. Special Architectural Treatment and Design, e.g. façade design, special window and door, counter/nurse station
  7. Special Carpentry Works, e.g. partitions, cabinetry.
  8. Other details as may be required
- Test result for the High human impact resistant glass that will be used for doors and windows in psychiatric wards and psychiatric isolation rooms.
- Provide Anti-ligature fixture details

V. Summary of Materials

- Materials to be used shall be fire-resistant, non-toxic, moisture-resistant and termite-resistant, e.g. fiber cement board, light-gauge steel frame, polyvinyl chloride ceiling panels.
- Wet areas, e.g. toilets, and kitchen shall use non-skid/non-slip vitrified ceramic floor tiles.
- Heavy traffic areas, e.g. lobby, and corridor shall use heavy-duty seamless granite floor tiles or a higher type of floor material.
- Ramps and stairs shall use non-skid/non-slip floor tiles, materials as specified.
- Aluminum T-runners shall be powder coated.
- Metal rod hangers with adjustable clips, and not galvanized iron wires, shall be used to support and suspend the aluminum T-runners and light gauge metal furring.
- Roofing sheets shall be Ga.# 24(0.5mm) aluminum-coated, pre-painted, and pre-formed.

DESIGN PARAMETERS (STRUCTURAL/CIVIL WORKS)

I. Codes and Standards

The Civil/Structural Design shall be in accordance with the following Codes and Standards

Codes

- National Structural Code of the Philippines (NSCP) 2015
- National Building Code of the Philippines and its revised IRR
- Accessibility Law
- Local Codes and

Ordinances Standards

- Bureau of Product Standards (BPS)
- Philippine National Standards (PNS)
- DPWH Blue Book
- American Concrete Institute (ACI)
- American Society for Testing Materials (ASTM)
- American Welding Society (AWS)

II. Site Works

Based on Master Site Development Plan of the Hospital, provide where applicable complete design and details of hospital road (concrete with curb and gutter, including drainage) network, walkways parking areas and fencing.

1. The main hospital road shall have a minimum thickness of 150mm (8 inches). Concrete strength should be at least 3000psi. Interior road (leading to support facilities) shall be so designed to accommodate delivery vehicles, and fire trucks in case of emergency.
2. Walkway should be at least 100mm thick with concrete strength of 2500psi. Ramps should be provided, instead of steps, for any change in elevations.
3. Parking area slabs should be at least 150mm thick with concrete strength of 3000psi.
4. Fences should be see through in front of the hospital while the three (3) other sides should be concrete hollow blocks with minimum height of 2 meters and to be provided with perimeter lighting. See-through fence design will be made of 32mm square bars spaced at 100mm on center and provided with three (3) concrete hollow blocks (45mm high) zoccalo wall.

III. Buildings

1. The hospital buildings should be designed using seismic importance factor of 1.25 for immediate occupancy category. Buildings should be designed in accordance with NSCP Requirements up to Magnitude 7.5 for those near seismic source Type A. Seismic gaps between buildings (old and new) should be properly observed.
2. The hospital buildings should be designed also using wind importance factor of 1.15 (especially for design of trusses/roofing system). Concrete gutters and parapet walls should be provided as additional protection to the roofing system during strong typhoons.
3. The structural designer should verify with Philippine Volcanology and Seismology (PHIVOLCS) the distance of the proposed hospital to nearest active fault lines and with the DENR for geo-hazard mapping.
4. Soil investigation (at least three bore holes) should be conducted to determine soil bearing capacity and recommended foundation design (applicable even for one storey structure).
5. The structural designer is encouraged to use fire-resistive and non-toxic materials.

IV. Details – the following shall be provided:

1. Connection details of beams and columns following the requirements of NSCP on confined areas.
2. Connection of trusses to beams and columns
3. Splicing details of reinforcing bars on columns and beams and the required bar cut-off points.

V. Summary of Materials

1. Concrete shall be Portland cement and conforming to ASTM Specification C150, Type I to Type II
2. Coarse Aggregates shall consist of washed gravel, crushed stone or rock or a combination thereof conforming to ASTM C33
3. Concrete Hollow Blocks shall be a standard product of recognized manufacturer conforming to PNS 16 with at least 350psi strength.
4. Reinforcing Bars shall conform to PNS Grade 60 for 16mm dia. and above and PNS Grade 40 for 12mm dia. and below.
5. Structural steel shall conform with ASTM A36/A6M
6. Bolts and Studs shall conform with ASTM A 325
7. Welding electrodes shall be E60 or E 70 and conform with AWS
8. Ready Mixed Concrete, with min strength of 3000psi @ 28CD in all structural Members.

SANITARY/PLUMBING DESIGN PARAMETERS

I. Codes and Standards

The Sanitary/Plumbing Design shall be in accordance with the following Codes and Standards.

Codes:

- National Building Code of the Philippines and Its New IRR
- Fire Code of the Philippines
- National Plumbing Code of the Philippines (NPCP)
- Sanitation Code of the Philippines
- Existing Local Codes and Ordinances.

Standards:

- Bureau of Product Standards (BPS)
- Philippine National Standards for Drinking-Water
- Underwriters Laboratory (UL)
- DOH National \ Laboratory (NRL)
- DOH Health Care Waste Management Manual
- National Water Resources Board (NWRB)
- National Plumbers Association of the Philippines (NAMPAP)
- Philippine Society of Sanitary Engineers, Inc. (PSSE)

II. Site Works

Based on the Master Site Development of the Hospital, the Site Works shall provide complete layout of the following:

1. Storm Drainage Network, indicating Drainage Manholes and Pipe Culvert;
2. Sewerage Pipe Network, indicating Sewage Manholes, Sewage pipes and the location of the proposed Sewage Treatment Plant; and
3. Water Supply Network, indicating the location of Water Service entrance, Cisterns, Elevated Water Tank and proposed Pump House and Main Water lines.

The Storm Drainage Network shall accommodate the magnitude of peak rates of surface run-off including drainage coming from the buildings. The system shall be capable of handling the design flows routing to the designated outfall;

For sizing of drainage pipes, refer to Chapter II, National Plumbing Code of the Philippines and current rainfall record from PAGASA.

The Sewerage Pipe Network design shall accommodate all sewage coming from all the facilities, conveyed by gravitational flow leading to the proposed Sewage Treatment Plant;

Per capita wastewater demand: 150-250 gal/capita/day per bed

The Water Supply Network shall include the provision of Fire Hydrants and blow-off valve, accessible faucet that will serve as testing point for safe and potable water supply and shall include all necessary protection to protect the main water supply source;

Provide stainless steel Elevated Water Tank for each building with a capacity of 11,000 liters including pumps, fittings and accessories.
Per capita water demand: 190-315 gal/capita/day per bed

III. Building Facilities Sanitary/Plumbing System

1. Sewer line and Vent System

Provide complete Sewer line and Vent System from all (Domestic) plumbing fixtures and floor drains, laid by gravity flow/pumping from lift/transfer station leading to the Sewage Treatment Plant (STP);

For Drainage Fixture Units; refer to Chapter 7, Table 7-2, NPCP

2. Wastewater line and Vent System

For all Areas dealing with Laboratory activities and generating infectious wastes, provide separate Wasteline and Vent System routing into a proposed Neutralization Tank prior to discharge to the Sewage Treatment Plant;

For all Wash Areas dealing and generating with oil/grease at the Dietary, provide separate Wasteline and Vent System and solely tap to the proposed Grease Trap and then connect its effluent to the Sewage Treatment Plant.

For Drainage Fixture Units; refer to Chapter 7, Table 7-2, NPCP

3. Waterline System

Provide complete cold water supply pipes to all plumbing fixtures. From the main water source to the cistern, the water shall be pumped to the Elevated Water Tank (EWT) and conveyed to the fixtures by gravity system and or distributed to fixtures by transfer pumped with constant pressure through a Pneumatic Storage Tank for all water closet using direct flush valve.

Provide complete Hot water system with portable water heaters for selected Areas as required and or specified by the Owner.

4. Storm Drainage System

Complete Storm Drainage System shall be provided for all roofs, canopies, concrete ledges and balconies including condensate drains laid for gravity flow connected to a leader/pipe line leading to the natural ground level storm drainage network.

5. Septic Tank and lift station

The wastewater discharges from the Septic Tank has to be connected to the lift station that would throw wastes to the existing sewerage treatment plant through pumps.

IV. Specific Requirements

Provide details of the following:

1. Grease Trap (for Dietary and Motorpool) (if applicable)
2. Neutralization tank (if applicable)
3. Cistern Tanks and Elevated Water Tanks (if applicable)

V. Summary of Materials

- Sewer and Vent pipes; Un-plasticized Polyvinyl Chloride (uPVC) extra series 1000 (Conforming to ISO 4435 ASTM D2729 including Trims and Fittings)
- Storm Drainage pipes; Downspouts, Un-plasticized Polyvinyl Chloride (uPVC) extra series 1000 (Conforming to ISO 4435 ASTM D2729 including Trims and Fittings, BPS Certified)
- Drainage Pipes; 250mm dia. and below, Non-Reinforced Concrete Pipe (NRCDP)
- 300mm dia. and above, Reinforced Concrete Pipe (RCDP)
- Drainage Manholes; Street Inlet, Curb Inlet, Traffic Type Reinforced Concrete Area drain/Catch Basin, Reinforced Load Bearing CHB

- Sewage Manholes; Traffic Type Reinforced Concrete with Cast Iron Cover, seated type.
- Wastewater pipeline; Wash areas /Dietary (same as sewer & vent) for Laboratory- HDPE pipes and fittings, PN16
- Cleanouts; HQ Stainless/ Brass with counter sunk plug (BPS Certified)
- Floor Drains/Deck Drains; HQ Stainless/ Brass (BPS Certified)
- Gutter Drains; Cast Iron Dome Type Brass (BPS Certified)
- Cold Waterline pipes; for buildings, Polypropylene Pn16 Fusion Weld Pipes including Trims and Fittings (BPS Certified) PN20
- Hot Waterline System; for buildings, Polypropylene Pn20 Fusion Weld Pipes including Trims and Fittings (BPS Certified)
- Trench Grating; Galvanized/Stainless Steel Iron grates
- Plumbing Fixtures including Trims, Fittings and accessories; (BPS Certified)
  a) Water Closet-Direct flush valve
  b) Lavatory- (Semi-Pedestal/Counter Type) with C-spout spray faucet
  c) Kitchen Sink-Ga#16 Stainless Steel seamless bowl with gooseneck faucet
  d) Urinal-Wall hung Flush Valve type
- Plumbing Fixtures at Sterile Areas:
  (a) Scrub up sink Ga#16 Stainless Steel (single/double bowl) compartment with foot operated and or censor controlled spray faucet
  (b) Surgical soap dispenser –Ga#16 Stainless Steel foot operated
  (c) Laboratory Sink – Ga#16 Stainless Steel deep seated seamless bowl compartment with C-sprout spray faucet

MECHANICAL WORKS DESIGN PARAMETERS

I. Codes and Standards

The Mechanical Design shall be in accordance with the following Codes and Standards.

Codes:

- National Building Code of the Philippines and Its New IRR
- New Fire Code of the Philippines
- Mechanical Engineering Code of the Philippines (ME Code)
- Existing Local Government Codes and Ordinances.

Standards:

- Bureau of Product Standards (BPS)
- Philippine National Standards (PNS)
- Underwriters Laboratory (UL) and Factory Mutual (FM)
- International Electro-Technical Commission (IEC) 1988
- National Fire Protection Association (NFPA)
- National Fire Protection Association (NFPA) 99 Standard for Health Care Facilities.
- American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE).
- Center for Disease Control and Prevention (CDC) Manual.

II. Automatic Fire Sprinkler System

The automatic fire sprinkler system shall be composed of complete plans and drawings of the following:

1. Site Development Plan and Vicinity Map, indicating the location of the buildings, firewater reserve tank, firewater line, yard loop and private fire hydrant.
2. General Notes, Legends and Symbols including Schematic Diagram of the Fire Sprinkler System and Schematic Diagram of Alarm Monitoring System.
3. Floor Layout and Isometric Layout of the Automatic Fire Sprinkler System indicating pipe sizes and the location of the pipes, valves, sprinkler heads, riser nipples, fire hose cabinets, sprinkler main riser, drain pipes, cross mains, branch lines, inspector's test connections, hangers and sway braces.
4. Equipment Schedule, Detail drawings, fire pump and jockey pump layout.
5. Architectural, Structural, Electrical and Plumbing drawings of the Firewater tank and Pump house.

- An automatic fire sprinkler system must be installed in all areas of the hospital building
- Hazard Classification shall be Light Hazard Occupancy.
- Area of coverage shall be 146 square meters and water density shall be 4.07 lbs/sq. m.
- Protection area per sprinkler head shall be 20 square meters at 2.2-meter minimum distance between sprinklers and 3.0-meter maximum
- All floor control valves shall be equipped with supervisory switch, water flow detector and drain system.
- Water supply shall be horizontal split case centrifugal fire pump with diesel engine or AC motor and a vertical in-line jockey pump with controller.

- Firewater reserve tank shall be ground level monolithic concrete tank sized for a minimum of 30 minutes.
- Hydraulic calculations report shall be based on NPFA-13 format.

III. Ventilation and Air-conditioning System

The ventilation and air conditioning system shall be composed of complete plans and drawings of the following:

1. General Notes, Legends and Symbols including Schematic Diagram of the Ventilation and Air Conditioning System.

2. Floor Layout of the Ventilation and Air Conditioning System indicating the capacity and location of the air conditioners and fans.
3. Duct layout indicating duct sizes, route and location of the dampers, diffusers, return air register, hangers and sway braces.
4. Refrigerant piping layout indicating pipe sizes, location of valves, hangers and sway braces.
5. Equipment Schedule and Details drawings of Air Conditioners and Ventilating System.

- Air conditioning system shall be provided in all patients' private rooms, radiologic and imaging area, operating rooms, delivery rooms, laboratories, critical care areas, offices and other areas where conditioned air is necessary.
- Cooling Load calculations report shall be manual or computer generated, hourly analysis program which includes heat transmission coefficients, solar heat gains factors and corrected cooling load temperature difference calculations.
- Window type air conditioners shall be used in areas with exterior wall exposure.
- Design of all critical areas shall be laminar or positive pressure, wherein the supply air is 10% more than exhaust air.
- All infectious isolation rooms, such as Covid19, TB and SARS, shall be negative pressure, wherein the exhaust air is more than 10% of the supply air.
- Maintain an air change rate greater than or equal to 12 air changes per hour or 145 liters per second per patient.
- Ceiling cassette type exhaust fans with integral air diffuser shall be provided in all toilets.
- Ceiling fans, orbit type with 360° oscillation or wall fans shall be provided in all non-air conditioned rooms, such as patient wards, work areas, nurse station, etc.

IV. Elevator System

The elevator system shall be composed of complete plans and drawings of the following:

A. General Notes, Legends and Symbols including Schematic Diagram.
B. Floor Layout, Elevator Shaft Plan and Machine Room Plan (If applicable).
C. Equipment Schedule, Detail drawings and Equipment layout.
D. Architectural, Structural, Electrical and Plumbing drawings of the Elevator System.
    - Hospital bed type elevator shall be provided in all multi-storey hospital buildings.
    - The minimum car size shall be 1,500mm wide and 2,150mm long.
    - The car door opening shall be not less than 1,100mm and 2,100mm high.

V. Specific Requirements

Provide details of the following:

1. Cistern Tanks and Elevated Water Tanks

VI. Summary of Materials

1. Automatic Fire Sprinkler System

a. The fire pump shall be UL Listed/FM Approved, diesel engine or electric motor driven, designed specifically intended for an automatic water sprinkler protection system (not included).

b. The jockey pump shall be UL Listed/FM Approved, electric motor driven, 220V, 3-phase, 60 hertz, and electric power connection (not included).

c. Sprinkler head shall be UL Listed/FM Approved, pendant, upright or sidewall unit, 83 LPM flow capacity per head and temperature fusing at 57.5° C to 74°C.

d. The alarm assembly shall be UL Listed/FM Approved, constructed and installed that any flow of water from the sprinkler system equal to or greater than that from the

single automatic head shall result in an audible and visual signed in the vicinity of the building.

e. Alarm and supervision system of the automatic water sprinkler shall include the monitoring water flow switch at each floor of the building, fire pump and jockey pump running condition and power supplies, level of water in the reservoir and control valves.

f. Pipes shall be B.I. Schedule 40. Screw fittings shall be used for inside piping.

2. Ventilation and Air-conditioning System

a. Refrigerant pipes shall be copper tubing, type L or K black steel pipe, Schedule 40 for size of 100mm diameter and smaller. Pipe over 100mm shall be black steel pipe Schedule 40.

b. Black steel pipes shall be standard seamless, lap-welded, or electric resistant welded for size of 50mm diameter and larger, screw type for size 38mm diameter and smaller, fittings for copper tubing shall be cast bronze fitting designed expressly for brazing.

c. Pipe insulation shall be performed fiberglass or its equivalent. The insulating materials shall be covered with 100mm x. 13mm thick polyethylene film, which shall be overlapped not less than 50mm.

d. Ducts shall be galvanized sheet steel of standard gauges.

e. Ductwork insulation materials shall be rigid board made of styropor or equivalent 25mm thick for ground and top floor, 13mm thick for intermediate floor.

3. Elevator System

a. The hospital elevator shall machine room less, or traction type only.

b. The elevator system shall be UL Listed/FM Approved.

ELECTRICAL AND COMMUNICATION SYSTEM DESIGN PARAMETERS

I. Codes and Standards

The Electrical System Design Parameters shall be in accordance with the following Codes and Standards.

Codes:

- Philippine Electrical Code
- National Electrical Code
- Fire Code of the Philippines
- National Building Code of the Philippines and Its New IRR
- Existing Local Codes and Ordinances

Standards:

- Bureau of Product Standards (BPS)
- Underwriters Laboratory (UL)
- National Fire Protection Association \
- International Electrotechnical Commission (IEC)
- Illumination Engineering Society (IES)
- National Electrical Manufacturer's Association (NEMA)
- DOH Manual on Technical Guidelines for Hospital and Health Facilities Planning and Design

II. Site Works

Based on the Master Site Development of the Hospital, the Site Works shall provide complete Electrical layout of the following:

1. Substation/Power House to the new proposed structures.
2. KVA rating and other specifications of Transformer.
3. Switchgear requirements
4. Panel board Layout
5. Electrical Metering Devices
6. Service Conductors and Conduit Layout
7. Grounding System
8. Emergency Standby Generators
9. Street and Perimeter Lighting System
10. Solar Panel

III. Building Facilities Electrical System

1. Lighting System
   - Provide and install adequate normal branch circuits for Lighting System to all areas using the standard Lighting Design Analysis. Utilize the standard Illumination requirements per area of concern using the preferred particular type of luminaires.
2. Power System
   - Provide and install adequate normal branch circuits for the Power System.

3. Standby/Emergency System
   - Provide and install adequate equipment life safety and critical emergency branch circuits for lighting and utilization equipment connected to the alternate power source.
4. Auxiliary System
   - Provide and install the following Auxiliary System:
     a) Communication System
        - Telephone System
        - Local Area Network System
        - Public Address Paging System
        - Private Branch Exchange (PABX)

- Nurse Call System

b) Fire Alarm System

c) Security System.

5. Lightning Protection System

- The building lightning protection system shall include roof-mounted air terminals grounding conductors, ground rods, conduits, clamps, and auxiliary equipment as required for a complete and operational lightning protection system.

IV. Provide Details of the following:

- Lighting Fixtures/ Luminaries
- Panel board and Circuit Breakers
- Switchgear and other Metering Devices
- Electrical and Hospital Equipment

V. Installation and Termination of Auxiliary and other Special Devices and Equipment

VI. Power and Telephone Hand holes (as may be required)

VII. Pedestal and Service Entrance to Bldg.

VIII. Grounding System Layout

IX. Substation/Power House and Electrical Room

XI. Others as may be required.

1.1. Summary of Materials

1. General Lighting Luminaries: Fixtures type shall be as indicated on the Lighting Layout Plan.
   - LED Lamp shall be Linear, circular or self-ballasted compact LED lamps.
   - LED lamps shall be cool or warm white and lamp holders shall be made of thermosetting plastic.
   - LED Ballast Electronic type with high power factor or high frequency energy saving type.
   - LED Fixture housing shall be steel sheet with high reflectance powder coat paint finish.
   - Downlights and Pin lights shall be of heavy gauge spun aluminum equipped with lamp as indicated on the drawings.
   - Other Special Lighting requirements shall be as approved by the implementing agency

2. Wiring Devices: Wiring devices shall be non-automatic control devices, the contact is guaranteed by the pressure of the special spiral springs.
   - Switches shall be of 15A, 250V or 300V except as otherwise noted and approved. Terminals shall be screw-type or quick-connected type.
   - General use receptacle shall be 15A, 240V grounding type unless otherwise indicated on the drawings.
   - Special purpose receptacles shall be as called for on the drawings. Matching plugs shall be supplied.

3. Panel boards and Circuit Breakers: The Panel board and Circuit Breakers shall be equipped with molded-case circuit breakers and shall be the type as indicated in the panel board schedule and details.
   - Provide molded-case circuit breakers of frame, trip rating and interrupting capacity as shown on the drawings. The circuit breakers shall be quick-make, quick break, thermal-magnetic, trip-indicating and shall have common trip on all multiple breakers with internal trip mechanism.
   - All current-carrying parts of the panel boards shall be plated. Provide solid neutral (S/N) assembly when required. The assembly shall be isolated from the enclosure.

4. Electrical Conduits, Boxes and Fittings: All conduits, boxes and fittings shall be standard rigid steel, zinc coated or galvanized.
   - Rigid Steel Conduits (RSC)
   - Rigid Metal Conduits (RMC)
   - Intermediate Metal Conduits (IMC)
   - Electrical Metallic Tubing (EMT)
   - Un-plasticized Polyvinyl Chloride (uPVC) if required shall be schedule 40.

5. Conductors: Wires and cables shall be of the approved type and unless specified or indicated otherwise, all power and lighting conductors shall be insulated for 600 volts.
   - The conductors used in the wiring system shall be of soft-annealed copper having a conductivity of not less than 98% of that of pure copper and insulated for 60 □C Temperatures.
   - All conduits of convenience outlets and wire ways for lighting branch circuit homeruns shall be wired with a minimum of 3.5 mm square in size.

6. Nurse Call System:
   - The Nurse Call System shall have the following control panel, bed head panel, ancillary call and annunciating equipment.
   - Wiring shall consist of data cable and 24V supply to each bed head unit.
   - Two levels of call will be provided by the system:

a) Patient to Nurse. A patient to Nurse shall be actuated by means of the wall-mounted or handset mounted call push button of bed head panel.

b) Nurse to Nurse. Call of nurse to nurse shall be considered, as emergency call and shall be instigated by operation of the Emergency Pull/Push Switch mounted on call units of bed head panel.

c) Bedhead panel shall be of different type depending on the patient bedroom class and as may be required. Multiplexed bedhead panel shall be available to operate sound distribution system.

d) Bathroom shall be provided with pull cord unit and reset unit

e) Room indicator lamp shall be installed above the door of each patient's bedroom along the corridor.

f) Nurse stations shall be equipped with indicator unit to provide indication (audible and visual) of the zone and type of call.

g) Emergency indication shall be included in some acute areas but arranged "for staff use only" in the event of urgent assistance being required.

h) The system shall be of solid state switching with all items connected to internal printed circuit boards readily interchangeable for maintenance purpose.

8. Structured Cabling & Telephone System:
   - A minimum provision for estimated 500 mixed PABX extension and direct telephone lines shall be required for tertiary hospitals.

- Final details of the system shall follow specific requirements, quantity and type of service.

9. Fire Detection and Alarm System:
   - The Fire Detection and Alarm System shall be of multiplex, microprocessor-controlled addressable or zonal conventional fire detection, alarm and communication system.
   - The system shall consist of full integration automatic fire detection, voice alarm communication and fire fighters telephone system.
   - The system shall consist of control station, mimic panel initiating and indicating devices, control modules and system of wirings.
   - Actuation of the protective signaling system shall occur by manual pull station, automatic smoke or heat detector, sprinkler flow switch and tamper switch.
   - The system shall be able to monitors the status of flow switches and supervisory switches installed at the Sprinkler System risers. These monitoring points are also addressable or the conventional zonal in the same way as the detectors are making them easily recognizable at the control panel.
   - Occupant notification shall be accomplished automatically. Notification will be general, audible alarm type complying with appropriate section of NFPA.
   - The system shall be installed with provisions for future connection to the nearest fire services station in the locality.

10. Security System:
    - The Security system shall include intrusion detection and alarm, CCTV, access control or as may be required.

LOCAL AREA NETWORK (LAN) DESIGN PARAMETERS

I. Codes and Standards

The Local Area Network (LAN) Design shall be in accordance with the following Standards.

- Standards:

1. IEEE 802
   - IEEE 802.1 Bridging (networking) and Network Management
   - IEEE 802.2 Logical link control (upper part of data link layer)
   - IEEE 802.3 Ethernet (CSMA/CD)
   - IEEE 802.4 Token bus (disbanded)
   - IEEE 802.5 Defines the MAC layer for a Token Ring (inactive)
   - IEEE 802.6 Metropolitan Area Networks (disbanded)
   - IEEE 802.7 Broadband LAN using Coaxial Cable (disbanded)
   - IEEE 802.8 Fiber Optic TAG (disbanded)
   - IEEE 802.9 Integrated Services LAN (disbanded)
   - IEEE 802.10 Interoperable LAN Security (disbanded)
   - IEEE 802.11 Wireless LAN & Mesh (Wi-Fi certification)
   - IEEE 802.12 demand priority (disbanded)
   - IEEE 802.13 Not Used
   - IEEE 802.14 Cable modems (disbanded)
   - IEEE 802.15 Wireless PAN
   - IEEE 802.15.1 (Bluetooth certification)
   - IEEE 802.15.4 (ZigBee certification)
   - IEEE 802.16 Broadband Wireless Access (WiMAX certification)
   - IEEE 802.16e (Mobile) Broadband Wireless Access
   - IEEE 802.17 Resilient packet ring
   - IEEE 802.18 Radio Regulatory TAG
   - IEEE 802.19 Coexistence TAG
   - IEEE 802.20 Mobile Broadband Wireless Access
   - IEEE 802.21 Media Independent Handoff
   - IEEE 802.22 Wireless Regional Area Network
2. ANSI/TIA/EIA-568
3. TR-49 (a new TIA Engineering Committee for Healthcare Communications Technology)

II. Site Works

Based on Master Site Development Plan of the Hospital, provide where applicable complete design and details of hospital local area network for voice and data connectivity.

III. Information and Communication Technology (ICT) Component

a. Installation of structured cabling system for Data and Voice Connectivity and wireless network (LAN)

- 1000 data nodes distributed to Hospital's office area
- 1000 voice nodes distributed to Hospital's office area
- Cabling for CCTV security system
- Packaged technical implementation and training services
- LAN main distribution should be fiber optic technology

b. Structured Cabling System for Data and Voice Connectivity and Data Connectivity

- 1000 data nodes distributed to the Offices
- Category 6, 4-pair UTP cable shall be 23 AWG, 100-Ohm, 4-pair UTP
- Category 6 Patch Panel
- Shall be 1RU and provide 24 modular jack ports, with universal wiring that maybe terminated to T568A or T568B

- Shall terminate the building cabling on 100-style insulation displacement connectors
- Category 6 Information Outlet/Modular Jack shall be terminated using a 100-style pc board connector, color-coded for both T568A and T568B wiring.
- Category 6 Patch Cord:
- Equipment patch cable assemblies, 4 ft in length, must be factory-manufactured with stranded CMR UTP cable and color-matched snag less rubber boots.
- Work area patch cord shall be 5 ft in length
- One patch cord per user outlet and equipment connectivity must be provided. One patch cord per user outlet and equipment connectivity must be provided
- For Category 6 Cabling installation – It shall all pass the following end-to-end Testing Parameters using Level III Cable Tester:
  - Attenuation
  - Attenuation to Crosstalk Ratio (ACR)
  - Power Sum Attenuation to Crosstalk Ratio (PSACR)
  - Near End Crosstalk (NEXT)
  - Power Sum Near-End Crosstalk (PSNEXT)
  - Equal Level Far-End Crosstalk (ELFEXT)
  - Power Sum Equal Level Far-End Crosstalk (PSELFEXT)
  - Return Loss
  - Propagation Delay
  - Delay Skew
  - Transfer Impedance

Voice Connectivity

- Voice backbone and horizontal cabling shall be Category 6, 4-pair UTP which are 24 AWG, 100-Ohm, and shall meet or exceed the performance requirements of ANSI/TIA/EIA-568-B.2
- Category 6 Information Outlet/Modular Jack
- Telecommunication Terminal Cabinet shall be wall-mounted and has sufficient space or dimension to accommodate required wiring components
- Wiring blocks shall be 100-Pair count, wall mountable, with legs and shall fit traditional cross-connect backboard spacing and layout.

c. Cabling for CCTV Security System

d. Other Requirement/s

- Supply of Communication cabinets (Intermediate Distribution Frame) for each floor of the building

ANNEXES

Annex 1: **VICINITY PLAN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.
Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF TWO-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING
Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
I	ARCHITECTURAL DRAWINGS (as applicable)	
1-A	Perspective, Site Development Plan, Vicinity Map/ Location Plan (2.00 kms Radius), Table of Contents	
1-B	Floor Plans (scale 1:100m minimum) including furniture layout when necessary	
1-C	Four (4) Elevations (scale 1:100m minimum)	
1-D	Two (2) Sections (scale 1:100m minimum) including spot details when necessary	
1-E	Roof Plan/s showing downspouts (scale 1:100m minimum) including detail of gutter, downspout, etc.	
1-F	Reflected Ceiling Plan/s (scale 1:100m minimum) including details	
1-G	Details of stairs, fire escapes/ exits, accessible ramps, etc. (scale 1:50m), including details of railing, treads, risers, etc. in the form of plans, elevation/ section	
1-H	Details of Toilets (1:50m) including accessible toilets in the form of plans, elevation/ section	
1-I	Details of specialized design features (1:50m) such as exterior glass curtain walls, partitions, cabinets, etc. and accessible design features	
1-J	Detailed plan and section of conference seating layout and stage (scale 1:50m)	
1-K	Detailed plan and section of covered bridge (1:50m)	
1-L	Detail of typical bay section from ground floor to roof deck (1:50m)	
1-M	Schedule of doors, gates, emergency exits, etc. (scale 1:50m), including specifications for materials and hardware	
1-N	Schedule of windows (scale 1:50m) including specifications for materials and hardware	
1-O	Schedule of Finishes for interior and exterior floor, walls, ceilings	
	Architectural Technical Specifications	
	Architectural Scope of Works	
	Architectural Bill of Quantities	

Annex 2: **CHECKLIST REQUIREMENTS – DETAILED ARCHITECTURAL INTERIOR DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.
Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING
Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
2-A	Floor plans showing layout of floor finishes (scale 1:100m minimum)	
2-B	Interior Elevations and Sections showing wall patterns, ceiling sections, etc. (scale 1:100 minimum)	
2-C	Schedule of Finishes and Details	
2-D	Details of Partitions, Ceiling and other Interior Design Features (scale 1:100 minimum)	
2-E	Paint Color Swatch Combinations	
2-F	Architectural Interior Perspective/s	
	Architectural Interior Design Technical Specifications	
	Architectural Interior Design Scope of Works	
	Architectural Interior Design Bill of Quantities	

Annex 3: **CHECKLIST REQUIREMENTS – DETAILED LANDSCAPE ARCHITECTURE DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.
Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING
Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
	LANDSCAPE ARCHITECTURAL DRAWINGS (as applicable)	
3-A	Exterior Lighting Plan and Details	
3-B	Exterior Building Lighting Plan and Details	
3-C	Schedule of Landscape Exterior Finishes and Details	
3-D	Landscape Architectural Perspective/s	
3-E	Planting Schedule and Plant Identification	
3-F	Utilities for connection to the building	
	Landscape Architecture Design Technical Specifications	
	Landscape Architecture Design Scope of Works	
	Landscape Architecture Design Bill of Quantities	

Annex 4: **CHECKLIST REQUIREMENTS – STRUCTURAL DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.
Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING
Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
	STRUCTURAL DRAWINGS (as applicable)	
4-A	General Notes and Construction Standards	
4-B	Site Development Plan	
4-C	Foundation Plan/s (scale 1:100m minimum)	
4-D	Floor Framing Plan/s (scale 1:100m minimum)	
4-E	Roof Framing Plan/s (scale 1:100m minimum)	
4-F	Schedule and Detail of Footings, Columns, and Shear Walls	
4-G	Schedule and Detail of FTB, Girders, Beams, and Floor Slabs	
4-H	Details of Trusses	
4-I	Details of stairs, ramps, fire exits	
4-J	Other spot details	
	Structural Analysis and Design	
	Boring and Land Test Results	
	Seismic Analysis	
	Structural Technical Specifications	
	Structural Scope of works	
	Structural Bill of Quantities	

Annex 5: **CHECKLIST REQUIREMENTS –SANITARY/ PLUMBING DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.

Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING

Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
	PLUMBING/ SANITARY DRAWINGS (as applicable)	
5-A	General Notes and Legends	
5-B	Location and Site Plan	
5-C	Storm Water Drainage Layout (scale 1:100m minimum) including actual length of tapping line to Main Drainage Line	
5-D	Water Line Layout (scale 1:100m minimum) including actual length of tapping line to Main source when applicable	
5-E	Sewer line and Vent line Layout (scale 1:100m minimum) including actual length of tapping line to Septic Tank, Lift station and STP	
5-F	Isometric Layout, showing waterline, sewer line, and drainage line	
5-G	Detail of connections, catch basins, downspout, etc.	
5-H	Detail of Cistern, Rain Water Collection, Schedule of Pumps	
5-I	Details of Septic Tanks/ Lift Station	
5-J	Detail of Water Tank (scale 1:50m)	
	Design Analysis	
	Sanitary Technical Specifications	
	Sanitary Scope of works	
	Sanitary Bill of Quantities	

Annex 6: **CHECKLIST REQUIREMENTS –ELECTRICAL DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.

Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING

Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
	ELECTRICAL DRAWINGS (as applicable)	
6-A	General Notes and specifications/ Legends or Symbols	
6-B	Location and Site Plan	
6-C	Lighting and Receptacle Outlets Layout (scale 1:100m minimum) and details including schedule of lighting fixtures and control devices	
6-D	Power Layout (scale 1:100m minimum) and details including Schedule of panels	
6-E	Fire Detection and Alarm Circuits Layout (scale 1;100m minimum) and details including Schedule of Equipment	
6-F	Emergency alarm, Lighting layout for exits and hallways (scale 1:100m minimum) and details including Schedule of Emergency Lighting Fixtures and Signages	
6-G	Schedule , Detail breakdown of Loads	
6-H	One Line Diagrams	
6-I	Other Details including and not restricted to wiring penetrations through fire-rated walls, section details of devices and wall plates located in exterior areas, containment areas, and office areas.	
	Electrical Computations/ calculations	
	Design Analysis	
	Electrical Scope of works	
	Electrical Bill of Quantities	

Annex 7: **CHECKLIST REQUIREMENTS –ELECTRICAL AUXILIARIES DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.

Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING

Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
	ELECTRICAL AUXILIARIES DRAWINGS (as applicable)	
7-A	General Notes and specifications/ Legends or Symbols	
7-B	Location and Site Plan	
7-C	CCTV Layout, Telephone, Data and Wi-Fi systems Layout, One Line Diagram (scale 1:100m minimum) and details including schedule of equipment	
7-D	Mass Notification System Layout, One Line Diagram (scale 1:100m minimum) and details including Schedule of Equipment	
7-E	Cable TV, Master Antenna TV and One Line Diagram (scale 1:100m minimum) and details including Schedule of Equipment	
7-F	Building Section details showing cable tray and wiring in pathways relation to the work of other trades.	
7-G	Other Details including and not restricted to wiring penetrations through fire-rated walls, section details of devices and wall plates located in exterior areas, containment areas, and office areas.	
	Electrical Auxiliaries Scope of works	
	Electrical Auxiliaries Bill of Quantities	

Annex 8: **CHECKLIST REQUIREMENTS –MECHANICAL DESIGN**

Checklist of drawing requirements in the preparation/ evaluation/approval of Detailed Architectural and Engineering Plans and other documents for the construction project Implementation.
Reference: Revised Implementing Rules and Regulations of the National Building Code of the Philippines (PD 1096)

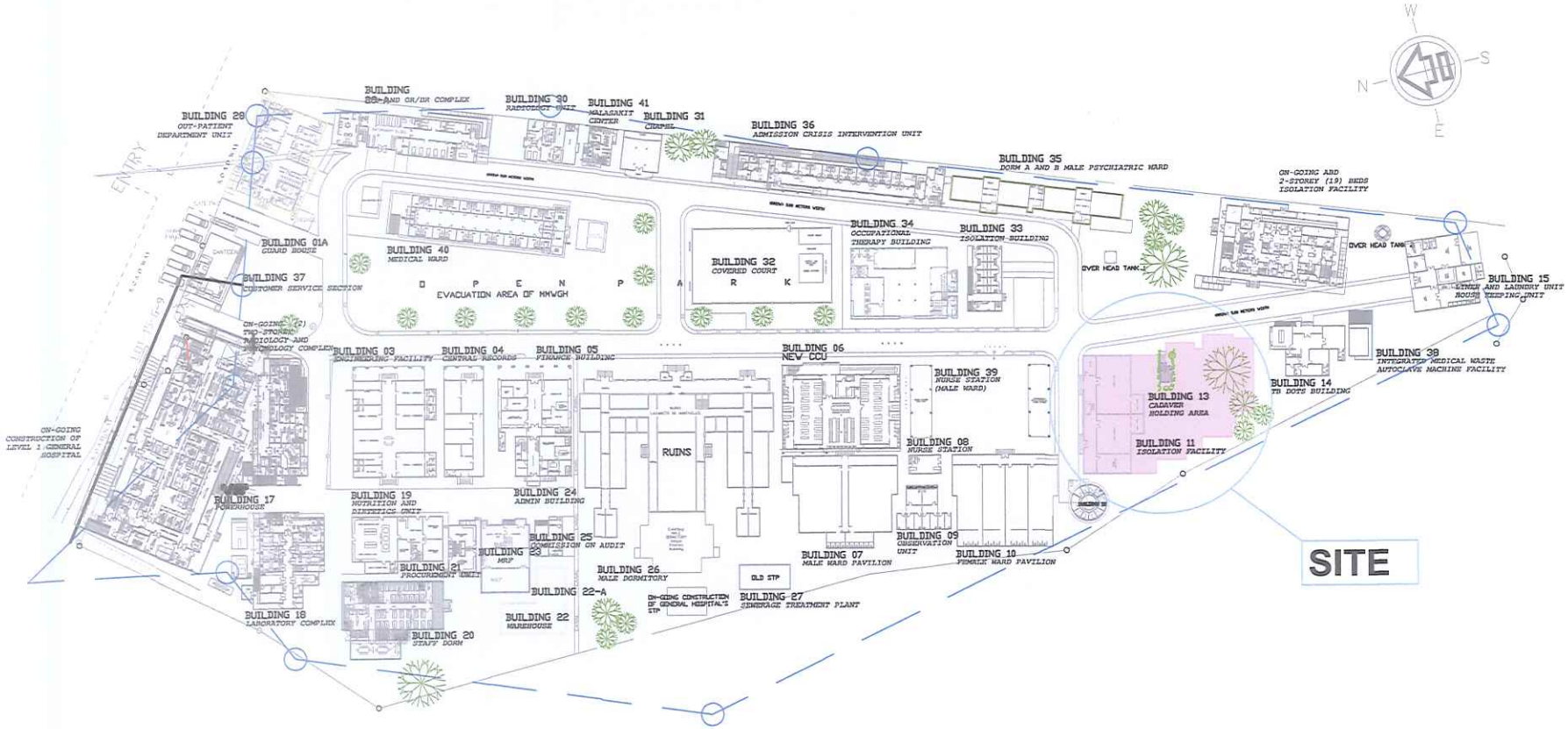
Project : CONSTRUCTION OF 2-STOREY ADMISSION CRISIS INTERVENTION (ACIU) BUILDING
Location : Mariveles, Bataan

SHT. NO.	SHEET CONTENTS	REMARKS
	MECHANICAL DRAWINGS (as applicable)	
8-A	General Notes and specifications/ Legends or Symbols	
8-B	Location and Site Plan	
8-C	Floor Plans/ Isometric Drawings (scale 1:100m minimum) showing Fire Suppression Systems including sprinkler system, and other installations	
8-D	Detail of other Machinery/ Equipment (scale 1:50m)	
8-E	Longitudinal and Transverse section of Building (scale 1:100m) showing manner of support of machines/ equipment	
8-F	Other Details including and not restricted to wiring penetrations through fire-rated walls, section details of devices and wall plates located in exterior areas, containment areas, and office areas.	
8-G	Schedule including valves, air handling units, air-conditioning units	
8-H	Schedule exhaust system including the negative pressure layout	
	Mechanical Technical Specifications	
	Mechanical Scope of works	
	Mechanical Bill of Quantities	

NOTE TO THE END USER:
Please review the plan before signing as approval.

END USER:

SGD.
JOEFFREY D. CRUZADA, MD, FPPA
MEDICAL SPECIALIST IV



MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL

SITE DEVELOPMENT PLAN

1 / A 1 SCALE NTS

MMWGH LOT BOUNDARIES

LEGEND:	
	OLD LOT LAYOUT **34454.54 SQ. M**
	NEW LOT LAYOUT PER RELOCATION SURVEY OF OCT No. 038-2017 000006 CONDUCTED IN JUNE 22, 2022 **34892.56 SQ. M**
	LOT-15-G-9 PER RELOCATION OF TCT NO. 2449 **1022.89 SQ. M**

NOTE:
Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job. The designer must be notified immediately of any varations from the dimensions and conditions shown by these drawings.

RA 9266 SECTION 33
Drawings and specifications and other contract documents duly signed, stamped or sealed, as instruments of service, are the intellectual property and documents of the architect, whether the object for which they are made is executed or not. It shall be unlawful for any person to duplicate or make copies of said documents for use in the repetition of and for other projects or buildings, whether executed partly or in whole, without the written consent of the architect or author of said documents.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF HEALTH
MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
P.MONROE ST., POBLACION, MARIVELES, BATAAN

PROJECT TITLE
PROPOSED (2) TWO–STOREY (ACIU) ADMISSION AND CRISIS INTERVENTION BUILDING
LOCATION:
MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
P. MONROE ST., POBLACION, MARIVELES BATAAN

DESIGNED & DRAWN BY:
SGD.
AR. AVELINO V. DE LEON
ADMIN. OFFICER I

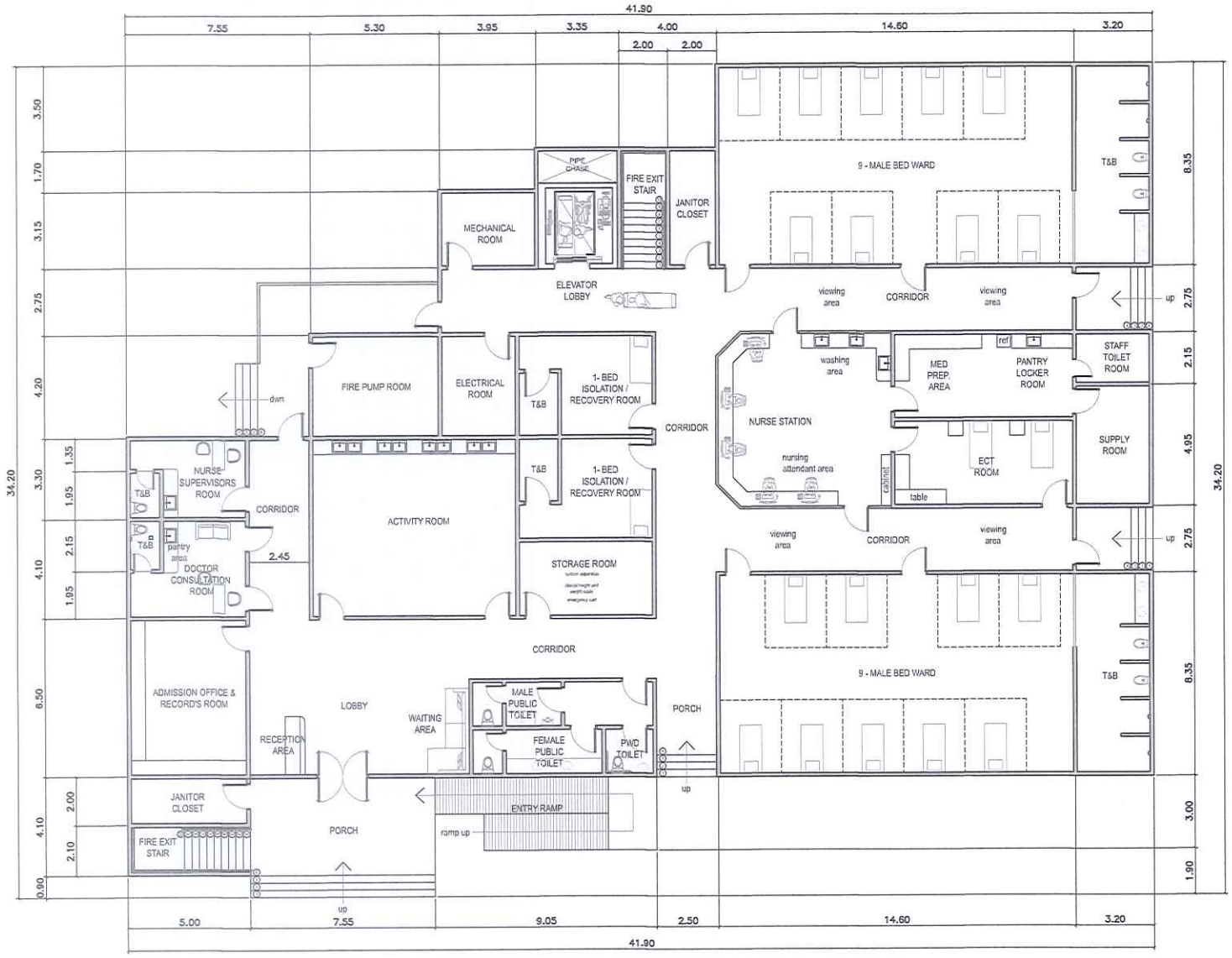
PREPARED BY:
SGD.
AR. JAIZEND MAE D. DELA ROSA, UAP
ADMINISTRATIVE ASSISTANT II
PRC REG. No. : 40401 Validity : DEC 22, 2024
PTR No. : 1250402 Date : 01/01/2024
Place : MARIVELES, BATAAN TIN : 240-000-307-000

CHECKED BY:
SGD.
ENGR. MELVIN JAN A. YABUT, MPA
ENGINEER IV

RECOMMENDING APPROVAL:
SGD.
VINCENT A. ISIP, MPA
CHIEF ADMINISTRATIVE OFFICER

APPROVED BY:
SGD.
DENNIS DAYAO L. ORDOÑA, MD
MEDICAL CENTER CHIEF II

SHEET CONTENTS: **AS SHOWN**
REVISION NO.: 00
SHEET NO.: 1 OF A3
DATE PUBLISHED: AUGUST 12, 2024



1 / A 2 **GROUND FLOOR PLAN**

SCALE 1:100 MTS

NOTE TO THE END USER:

Please review the plan before signing as approval.

END USER:

SGD.
JOEFFREY D. CRUZADA, MD, FPPA
MEDICAL SPECIALIST IV

NOTE:

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MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
P.MONROE ST., POBLACION, MARIVELES, BATAAN

PROJECT TITLE
PROPOSED (2) TWO–STOREY (ACIU) ADMISSION AND CRISIS INTERVENTION BUILDING
LOCATION:
MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
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DESIGNED & DRAWN BY:
SGD.
AR. AVELINO V. DE LEON
ADMIN. OFFICER I

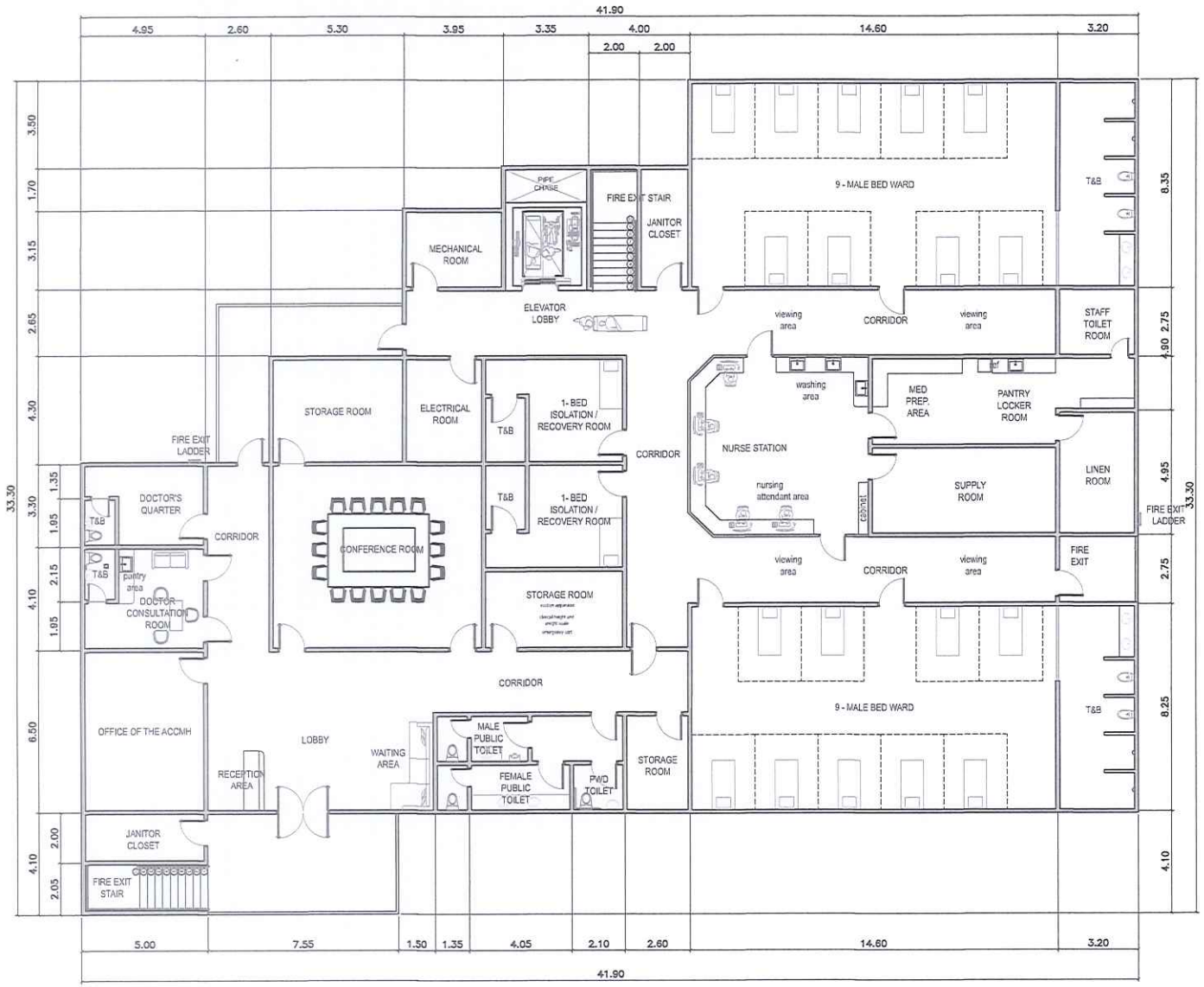
PREPARED BY:
SGD.
AR. JAIZEND MAE D. DELA ROSA, UAP
ADMINISTRATIVE ASSISTANT II
PRC REG. No. : 40401 Validity : DEC 22, 2024
PTR No. : 1289402 Date : 01/01/2024
Place : MARIVELES, BATAAN TIN : 745-000-207-000

CHECKED BY:
SGD.
ENGR. MELVIN JAN A. YABUT, MPA
ENGINEER IV

RECOMMENDING APPROVAL:
SGD.
VINCENT A. ISIP, MPA
CHIEF ADMINISTRATIVE OFFICER

APPROVED BY:
SGD.
DENNIS DAYAO L. ORDOÑA, MD
MEDICAL CENTER CHIEF II

SHEET CONTENTS: AS SHOWN
REVISION NO. 00
SHEET NO. 2 OF A3
DATE PUBLISHED: AUGUST 12, 2024



1 / A 3 **SECOND FLOOR PLAN**

SCALE 1:100 MTS

NOTE TO THE END USER:

Please review the plan before signing as approval.

END USER:

SGD.
JOEFFREY D. CRUZADA, MD, FPPA
MEDICAL SPECIALIST IV

NOTE:

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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF HEALTH
MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
P.MONROE ST., POBLACION, MARIVELES, BATAAN

PROJECT TITLE	PROPOSED (2) TWO–STOREY (ACIU) ADMISSION AND CRISIS INTERVENTION BUILDING
LOCATION:	MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL P. MONROE ST., POBLACION, MARIVELES BATAAN
DESIGNED & DRAWN BY:	SGD. AR. AVELINO V. DE LEON, ADMIN. OFFICER I
PREPARED BY:	SGD. AR. JAIZEND MAE D. DELA ROSA, UAP, ADMINISTRATIVE ASSISTANT II
PRC REG. No. : 40401	Validity : DEC 22, 2024
PTR No. : 1280482	Date : 01/01/2024
Place : MARIVELES, BATAAN	TIN : 740-668-307-000
CHECKED BY:	SGD. ENGR. MELVIN JAN A. YABUT, MPA, ENGINEER IV
RECOMMENDING APPROVAL:	SGD. VINCENT A. ISIP, MPA, CHIEF ADMINISTRATIVE OFFICER
APPROVED BY:	SGD. DENNIS DAYAO L. ORDOÑA, MD, MEDICAL CENTER CHIEF II
SHEET CONTENTS	AS SHOWN
REVISION NO.	00
SHEET NO.	3 OF A3
DATE PUBLISHED:	AUGUST 12, 2024

Department of Health
Central Luzon Center for Health Development
MARIVELES MENTAL WELLNESS AND GENERAL HOSPITAL
P. Monroe Street, Poblacion, Mariveles, Bataan, Philippines, 2105
Mobile: 0968-8525-604; Office of the COH: 0968-852-6726 mail@mmwgh.gov.ph mmwgh.gov.ph

Project Name: Design and Build for the Construction of Two-Storey Admission Crisis Intervention (ACIU) Building
Location of the Project: MMWGH Compound, Mariveles, Bataan

BILL OF QUANTITIES

Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
(1)	(2)	(3)	(4)	(5)	(6)
SPL	**GENERAL REQUIREMENTS** a. Design Cost b. Permits	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____
I	**EARTHWORKS** a. Clearing and Grubbing b. Removal of structures and obstructions c. Excavation d. Structure Excavation e. Embankment	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __

Project Name: Design and Build for the Construction of Two-Storey Admission Crisis Intervention (ACIU) Building
Location of the Project: MMWGH Compound, Mariveles, Bataan

II	**PLAIN AND REINFORCED CONCRETE WORKS** a. Reinforced Concrete b. Portland Cement c. Metal Reinforcement d. Masonry Works e. Formworks and Scaffolding	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __

Project Name: Design and Build for the Construction of Two-Storey Admission Crisis Intervention (ACIU) Building
Location of the Project: MMWGH Compound, Mariveles, Bataan

III	**FINISHING** a. Termite Control work b. Storm drainage and Sewerage system c. Plumbing (use of anti-ligature fixtures) d. Carpentry and Joinery works e. Hardware f. Steel Windows g. Steel Doors and Frames h. Aluminum Glass Doors i. Aluminum Glass Windows j. Wooden Doors and Windows k. Rolling Up Doors l. Glass and Glazing m. Pre-painted Metal Sheets n. Waterproofing o. Roof Drains with strainers p. Floor and wall finishes q. Painting, Varnishing and other related works	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __
IV	**ELECTRICAL** a. Conduits, Boxes and Fittings b. Wires and Wiring Devices c. Power Load Center, Switchgear and Panel Boards d. Transformer and Generator Sets	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____

Project Name: Design and Build for the Construction of Two-Storey Admission Crisis Intervention (ACIU) Building
Location of the Project: MMWGH Compound, Mariveles, Bataan

V	**MECHANICAL** a. Air-conditioning and Refrigeration System b. Water Pumping System c. Automatic Water Sprinkler System d. Electric Elevator e. Ventilating System (Duction with provision for HEPA Filter)	1.0	l.s.	In words: Pesos _____ _____ _____ In figures: Php _____ _____ _____	In words: Pesos _____ _____ _____ In figures: Php _____ _____ _____
VI	**PROTECTIVE WORKS AND ACCESSORIES**	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __
VII	**WATER SUPPLY** a. Excavation b. Backfill and Fill c. Installation of Pipeline d. Installation of Valves	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __

Project Name: Design and Build for the Construction of Two-Storey Admission Crisis Intervention (ACIU) Building
Location of the Project: MMWGH Compound, Mariveles, Bataan

VIII	**DRAINAGE WORKS** a. Pipe Culverts and Storm Drains b. Underdrains c. Manholes, Inlets and Catch Basins d. Cleaning and Reconditioning Existing Drainage Structures	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __

Project Name: Design and Build for the Construction of Two-Storey Admission Crisis Intervention (ACIU) Building
Location of the Project: MMWGH Compound, Mariveles, Bataan

IX	**MAJOR EQUIPMENT/ DEVICES/ ACCESSORIES**	1.0	l.s.	In words: Pesos _____ _____ _____ _____ In figures: Php _____ _____ _____ _____	In words: Pesos _____ _____ _____ __ In figures: Php _____ _____ _____ __

Total Bid Amount in Figures: _____

Total Bid Amount in Words: _____
_____

_____
CONTRACTOR/BIDDER

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers],* the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract];*

b. We offer to execute the Works for this Contract in accordance with the PBDs;

c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;

d. The discounts offered and the methodology for their application are: *[insert information]*;

e. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties],* which are itemized herein and reflected in the detailed estimates,

f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;

g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines[1] for this purpose;

h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;

i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.

k. We likewise certify/confirm that the undersigned, is the duly authorized

[1] currently based on GPPB Resolution No. 09-2020

representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the [Name of Project] of the [Name of the Procuring Entity*].*

l. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: _____

Legal Capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Date: _____