

“ANNEX I”- MINIMUM PERFORMANCE, TECHNICAL STANDARDS, SPECIFICATION AND PARAMETERS

A. Purpose – The purpose of the Minimum Performance Standards and Parameters (MPSP), among others, is to:

1. Establish the MPSP that the Design and Build Contractor must comply with under the Contract Agreement with the DSWD for the Design and Build of Four Storey Office Building with Roof Deck at the DSWD Central Office using the Implementing Rules and Regulations, Republic Act No. 9184 (IRR/R.A. No. 9184) especially *Annex “G” Guidelines For The Procurement And Implementation Of Contracts For Design And Build Infrastructure Projects*.
2. Ensure compliance of the Bidder in adopting Architectural, Engineering, and other Technical Guidelines and define performance standards for the Detailed Engineering Design (DED) of the Project.
3. Provide a quantifiable and verifiable basis for physical progress as a basis for Claims for Payments of the Contractor in accordance standard accounting and auditing rules and regulations of the Procuring Entity.

B. Building Requirements

PARTICULAR	REMARKS	PARTICULAR	REMARKS
Building Lot Area	988 square meter	Ground Floor	Data Room, 2 – Storage, 2 - Director’s
Building Storey	4 floors with roof deck roofing roofing		Rooms with Pantry, Toilet, Storage
Total Floor Area	4,696 square meter	Second Floor	Data Room, CCTV Room, 2 - Storage
Equipment/Amenities	2 - Unit Elevators		Rooms, Vault Room, 1 - Director’s
	1 - Unit 750 KVA Generator Set		Room with Pantry, Toilet, Storage
	1 - Set Water Pumping Station	Third Floor	Data Room, Storage Room, Conference
	Fire Protection Alarm		Room, 2 - Director’s Room with Pantry,
	All floor are equipped with		

	ACU		
	Telephone and Data Cabling		Toilet, Storage Room, 2 - Director's
	Multi-Purpose Hall at fourth floor		Rooms with Pantry and Toilet
	Road Network with Drainage System	Fourth Floor	Data Room, Storage Room, Audio
Total Office Area	1,200 square meter		Visual Room, 2 – Executive Rooms with Pantry, Toilet, Storage Room
Capacity	400 pax	Roof deck with roof canopy/roofing	Open Area

C. Design Standards and Specifications - The DBC shall adopt the conceptual design made by the DSWD and shall observe the following design standards.

C.1 Architectural Design Parameters

C.1.1. Codes and Standards - The Architectural Works shall be in accordance with the following Laws, Codes, and Standards.

a. Laws and Codes

- 1) National Building Code of the Philippines and its Latest and Amended IRR
- 2) RA 9266 or Architecture Law and its Latest and Amended IRR
- 3) RA 4226 or Hospital Licensing Act and its Latest and Amended IRR
- 4) BP 344 or Accessibility Law and its Latest and Amended IRR
- 5) RA 9514 New Fire Code of the Philippines
- 6) Existing Local Codes and Ordinances
- 7) And other Laws that applies to the projects

b. Standards

- 1) Bureau of Product Standards (BPS)

C.1.2 General Drawing Guidelines

- a. All drawings shall be computer-drafted. Drawings shall be submitted both in printed and electronic copies.
- b. 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.
- c. Detailed plans shall have a scale not smaller than 1: 50 meters.

- d. Spot detailed plans, elevations, and sections shall have a scale not smaller than 1: 50 meters.

C.1.3 Floor Plans

- a. 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.
- b. Section line callouts on the floor plans shall be consistent with the section drawing.
- c. Floor plans shall be indicated with boxed room callout numbers, including the callout for floor finishes and wall finishes.
- d. The location of mechanical equipment, e.g. air conditioning shall be indicated in the floor plans. This shall be consistent with the mechanical and electrical plans.
- e. Door callouts shall be circles with the proper numbering, e.g. D-01.
- f. Window callouts shall be hexagons with the proper numbering, e.g. W-01.

C.1.4. Elevations and Sections

- a. Finish floor lines shall be consistent in all the elevations, sections and structural plans and details.
- b. All dimensions and finishing materials shall be indicated in all elevation and section and must be consistent with the specification.

C.1.5 Reflected Ceiling Plans

- a. Reflected ceiling plans shall be indicated with boxed room callout numbers, including the callout for ceiling finishes and lighting fixtures.
- b. Ceiling height relative and in reference to the finish floor line shall be indicated in the reflected ceiling plans 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.
- c. The description and location of the fixtures, e.g. lighting, smoke detectors, fire sprinklers, air-condition vents, exhaust fans, in the reflected ceiling plans shall be consistent with the electrical and mechanical plans.

C.1.6. Doors and Windows

- a. Door and window schedules shall indicate the type of door or window, the number of sets, the location/s of the door or window, the materials and accessories included and other special specifications, e.g. color or finish

C.1.7 Details

- a. Provide a minimum of four (4) bay section for the perimeter walls and roofing of a scale not smaller than 1: 50 meters for each major building preferably cut along the area with special construction design.

- b. Provide spot detail plans, elevations and sections of a scale not smaller than 1:20 meters for special designs with aesthetic treatment and ornamentation.
- c. 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.
- d. 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-ins. color or finish.

C.2 Building Architectural Works

C.2.1 Floor Plans

- a. 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.
- b. 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.
- c. 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.
- d. 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.
- e. Provide Architectural Layout

C.2.2 Walls

- a. Dry walls shall not be embedded with wet utilities.
- a. Layout and work on wall and floor tiles must be aligned, plumb, leveled, and squared.
- b. Tile color and design shall be approved first before installation.

C.2.3 Floors

- a. Floors at the openings of toilets for persons with disability shall be sloping. Indicate in the plans and sections.
- b. Layout and work on wall and floor tiles must be aligned, plumb, leveled, and squared.
- c. Tile color, size and design shall be approved first before installation.

C.2.4 Ceiling Works – The room shall have a minimum false ceiling height: Cement board 3.5mm with metal furring frames with w-angle shadow line for ceiling with hangers.

C.2.5 Doors and Windows

- a. Major rooms that require security shall have sturdy doors e.g. wood panel, and metal with 2.5mm thick stainless push plate.
- b. Minor rooms that do not require security shall at least have wood flush doors with laminate
- c. Fire escape doors, should be provided with panic hardware and door closers, and shall conform to the requirements of the Fire Code of the Philippines.
- d. Aluminum frames of glass doors and windows shall be “analog brown” finish.
- e. Door finish and color shall be approved first before application.
- f. Window sills shall be slightly sloped outwards to prevent damage to windows and paint due to water slippage.
- g. All doors of a high-occupancy room shall be double action swing door and as required by the Fire Code of the Philippines.

C.2.6 Corridors

- a. New corridors shall have a minimum unobstructed width of at least 2450mm. This shall be measured clear from the surface of the finished wall and not on-center of the rough CHB wall.
- b. Corridors and exit doors shall conform to the requirements of the Fire Code of the Philippines.

C.2.7 Fixtures and Accessories

- a. Three-way electrical light switches shall be provided at both ends of a long corridor.
- b. Electrical light switches shall be located by the knob side of the door.
- c. Electrical switches and outlets shall be installed plumb and level.

C.2.8 Painting

- a. Painted ceiling shall be in antibacterial paint finish.
- b. Painted interior wall shall be at least in semi-gloss paint finish for ordinary rooms, e.g. offices, unless specified to a higher type of paint.
- c. Painted exterior wall shall be at least moisture-resistant/water-repellant paint finish, textured or smooth, unless otherwise specified.
- d. Paint color and shade shall be approved first before application.

C.2.9 Summary of Materials

- a. Materials to be used shall be fire-resistant, non-toxic, moisture-resistant and termite resistant, e.g. fiber cement board, light-gauge steel frame.
- b. Wet areas, e.g. toilets, and kitchen shall use non-skid/non-slip vitrified ceramic floor tiles.
- c. Heavy traffic areas, e.g. lobby, and corridor shall use non-skid granolithic or granite floor tiles or a higher type of floor material.
- d. Ramps and stairs shall use non-skid/non-slip floor tiles, materials as specified.
- e. Cement board of 3.5mm with metal furring frames; full threaded support with shadowline and hangers.
- f. 8mm diameter 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 furrings. **4.3**

D. Design Parameters (Structural/Civil Works)

D.1 Codes and Standards. The Civil/Structural Design shall be in accordance with the following Codes and Standards:

D.1.1. Codes

- a. National Structural Code of the Philippines (NSCP) 2015, Volume I
- b. National Building Code of the Philippines
- c. Accessibility Law
- d. Local Codes and Ordinances

D.1.2. Standard

- a. American Concrete Institute (ACI)
- b. American Society for Testing Materials (ASTM)
- c. American Welding Society (AWS)
- d. American Institute of Steel Construction (AISC)

D.1.3. Structural Design Criteria

- a. The site shall be soil investigated to determine the actual soil bearing capacity.
- b. In summary, site suitability, conformity with structural code, shape and form subject to structural evaluation and monitoring shall be in effect.

E. Sanitary/Plumbing Design Parameters

E.1 Codes and Standards. The Sanitary/Plumbing Design shall be in accordance with the following Codes and Standards.

E.1.1 Codes

- a. National Building Code of the Philippines
- b. Fire Code of the Philippines
- c. National Plumbing Code of the Philippines (NPCP)
- d. Sanitation Code of the Philippines
- e. Existing Local Codes and Ordinances.

E.1.2 Standards

- a. National Water Resources Board (NWRB)
- b. National Plumbers Association of the Philippines (NAMPAP)
- b3. Philippine Society of Sanitary Engineers, Inc. (PSSE)

D.2 Building Facilities Sanitary/Plumbing System

D.2.1. Waterline System. Provide complete water system. Complete with Pipes & Fittings and necessary accessories.

D.3 Summary of Materials

- a. Cold Waterline pipes; for buildings, Polypropylene Pn16/Pn20 Fusion Weld Pipes including Trims and Fittings (BPS Certified)
- b. Plumbing Fixtures including Trims, Fittings and accessories; (BPS Certified)
- c. Water Closet-Tank Button-Type flush
- d. Lavatory-(Pedestal/Counter Type) /semi-pedestal with faucet
- e. Urinal-Wall hung Flush valve/lever/push button

E. Mechanical Works and Design Parameters

E.1 Codes and Standards. The Mechanical Design shall be in accordance with the following Codes and Standards.

E.1.1 Codes

- a. National Building Code of the Philippines
- b. New Fire Code of the Philippines
- c. Mechanical Engineering Code of the Philippines (ME Code)
- d. Existing Local Government Codes and Ordinances

E.1.2 Standards

- a. Bureau of Product Standards (BPS)
- b. Philippine National Standards (PNS)
- c. Underwriters Laboratory (UL) and Factory Mutual (FM)
- d. International Electro technical Commission (IEC) 1988
- e. National Fire Protection Association (NFPA)
- d. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE).

E. 2 Ventilation and Air Conditioning System

E.2.1 The *Ventilation And Air Conditioning System* shall be composed of complete plans and drawings of the following:

- a. General Notes, Legends and Symbols including Schematic Diagram of the Ventilation and Air Conditioning System;
- b. Floor Layout of the Ventilation and Air Conditioning System indicating the capacity and location of the air conditioners and fans.
- c. Duct layout indicating duct sizes, route and location of the dampers, diffusers, return air register, hangers and sway braces.
- d. Refrigerant piping layout indicating pipe sizes, location of valves, hangers and sway braces.
- e. Equipment Schedule and Details drawings of Air Conditioners and Ventilating System.
 - e.1 Centralized air conditioning and Ventilation will be used only if feasible.
 - e.2 Maintain an air change rate greater than or equal to 7-10 air changes per hour.
 - e.3 Ceiling exhaust fans shall be provided in all toilets.

F. Electrical Design Parameters

F.1 The Electrical System Design Parameters shall be in accordance with the following Codes and Standards.

a. Codes

- a1. Latest Edition of Philippine Electrical Code
- a2. National Electrical Code
- a3. New Fire Code of the Philippines
- a4. National Building Code of the Philippines and Its New IRR
- a5. Existing Local Codes and Ordinances

b. Standards

- b1. Bureau of Product Standards (BPS)
- b2. Underwriters Laboratory (UL)
- b3. National Fire Protection Association
- b4. International Electro-Mechanical Commission (IEC)
- b5. Illumination Engineering Society (IES)
- b6. National Electrical Manufacturer's Association (NEMA)

F.2. Site Works. Based on the proposed project plan, complete Electrical Layout shall be provided with the following:

- a. Panel board Layout
- b. Electrical Devices
- c. Service Conductors and Conduit Layout
- d. Grounding System

F.3 Building Facilities Electrical System

- a. 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.
- b. Power System. Provide and install adequate normal branch circuits for the Power System.
- c. 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, to include that of a solar panel. Tapping point shall be within the perimeter of the project.
- d. Auxiliary System. Provide and install the following Auxiliary System for the whole building
 - d1. Communication System
 - d1.1 Telephone System
 - d1.2 Local Area Network System in critical/selected areas
 - d2. Fire Detection and Alarm System

- e. Provide the following details - Lighting Fixtures/Luminaires; Panelboard and Circuit Breakers; e3. Electrical Equipment⁴. Power and Telephone Handholes (as may be required)

F.4 Summary of Materials

- a. General Lighting Luminaires. Fixtures type shall be as indicated on the Lighting Layout Plan.
 - a.1. Troffer luminaire in general areas
 - a.2 Downlights and Pinlights shall be of heavy gauge spun aluminum equipped with lamp as indicated on the drawings.
 - a.3 Other Special Lighting requirements shall be as approved by the implementing agency.
- a. Wiring Devices: Wiring devices shall be non-automatic control devices, the contact is guaranteed by the pressure of the special spiral springs.
 - b.1 Switches shall be of 15A, 250V or 300V except as otherwise noted and approved. Terminals shall be screw-type or quick-connected type.
 - b.2 General use receptacle shall be 15A, 240V grounding type unless otherwise indicated on the drawings.
- b. Panel boards and Circuit Breakers. The Panel board and Circuit Breakers shall be equipped with moulded-case circuit breakers and shall be the type as indicated in the panel board schedule and details.
 - c.1 Provide moulded-case circuit breakers of frame, trip rating and interrupting capacity as shown on the drawings. The circuit breakers shall be quick break, trip-indicating and shall have common trip on all multiple breakers with internal trip mechanism.
 - c.2 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.
- c. Electrical Conduits, Boxes and Fittings. All conduits, boxes and fittings shall be standard rigid steel, zinc coated or galvanized.
 - d.1 Rigid Steel Conduits (RSC)
 - d.2 Rigid Metal Conduits (RMC)
 - d.3 Intermediate Metal Conduits (IMC)
 - d.4 Electrical Metallic Tubing (EMT)
 - d.4 Unplasticized Polyvinyl Chloride (uPVC) if required shall be schedule 40. f5. *Conductors*: Wires and cables shall be of the approved type and unless specified or indicated otherwise.
 - d.5 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

d.6 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.

d. Fire Detection and Alarm System.

e.1 The Fire Detection and Alarm System shall be zonal
Addressable fire detection

e.2 Signaling system shall occur by manual pull station and fire detection shall be by automatic smoke or heat detector, sprinkler flow switch and tamper switch.

G. Installation and Workmanship

G.1 The Key Personnel of the Contractor shall be specialists highly skilled in their respective trades, performing all labor according to first-class standards. The DBC shall assign a full time Project Engineer/Architect at the jobsite during the construction of the project.

G.2 All works to be subcontracted shall be declared by the Contractor in its Technical Proposal and shall be approved by DSWD-CO.

G.3 The Contractor shall rectify, resubmit, and review any errors, omissions, inconsistencies, inadequacies or failure which do not comply with the requirements at its own cost. If the Contractor wishes to modify any design or document which has been previously submitted, reviewed, and approved, the Contractor shall notify the DSWD within a reasonable period of time and shall shoulder the cost of such changes.