



Republic of the Philippines
BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO
BIDS AND AWARDS COMMITTEE
OFFICE OF THE CHIEF MINISTER

Bangsamoro Government Center, Governor Gutierrez Avenue, Rosary Heights VII, Cotabato City 9600

INVITATION TO BID

NEGOTIATED PROCUREMENT-TWO FAILED BIDDINGS

LOT 1. CONSTRUCTION OF 3-UNIT MULTI-PURPOSE BUILDING: 1) 1-UNIT IN PUROK KINAGATAN, KALANGAN II, COTABATO CITY, 2) 1-UNIT IN MOTHER KALANGANAN, COTABATO CITY, AND 3) 1-UNIT IN KALANGAN I, COTABATO CITY

IB No. TFB-OCM-122023-08

1. In view of two (2) failed biddings, the Office of the Chief Minister, through its Bids and Awards Committee (BAC), invites qualified bidders to participate in the negotiation for **LOT 1. CONSTRUCTION OF 3-UNIT MULTI-PURPOSE BUILDING: 1) 1-UNIT IN PUROK KINAGATAN, KALANGAN II, COTABATO CITY, 2) 1-UNIT IN MOTHER KALANGANAN, COTABATO CITY, AND 3) 1-UNIT IN KALANGAN I, COTABATO CITY**, in accordance with section 53.1 of the revised Implementing Rules and Regulation (IRR) of Republic Act No. 9184 (RA 9184), otherwise known as the "Government Procurement Reform Act".
2. The Approved Budget for the Contract is **Forty-Five Million Pesos (PHP 45,000,000.00)** inclusive all applicable taxes.

Bids received in excess of the ABC shall be automatically rejected

3. The BAC will hold the first negotiation on **December 27, 2023, 9:00 a.m.** at **3rd Floor, Bangsamoro Planning and Development Authority 1, Bangsamoro Government Center, Cotabato City**. The suppliers are requested to submit three (3) copies of its eligibility, technical and financial documents enumerated in Annex "A", which is attached hereto. Bids should be submitted in a sealed envelope.
4. For further information, please refer to:

Bids and Awards Committee Secretariat

Procurement Service

1st floor, OCM-Annex Building, Bangsamoro Government Center,

Bangsamoro Government Center, Gov. Gutierrez Ave.,

Rosary Heights VII, Cotabato City

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Originally signed

MOHD ASNIN K. PENDATUN

Chairperson, Bids and Awards Committee

SPECIFICATIONS AND PROJECT DESCRIPTIONS

1. SECTION 02200 EARTHWORK

PART 1 GENERAL

02200.1 SCOPE

- a. Work Included:
 1. Furnishing of all labor equipment and material for excavation and backfilling.
 2. Inspection of site to survey necessary labor, equipment and materials.
 3. Excavation and hauling of excavated materials.
 4. Backfilling and grading up to the property line.
- b. Related Work Specified Elsewhere:
 1. Preparation of sub-grade for concrete pouring.
 2. Trenching and backfilling for storm sewer system.
 3. Trenching and backfilling for sanitary sewer system.

02200.2 PROTECTION

- a. Provide adequate bracing and shoring to existing construction as may required.
- b. Perform all excavation work with a minimum amount of damage to work, which is to remain.
- c. Repair any damage caused by negligence of Contractor at his own expense.
- d. Provide adequate protection measures for materials, men and adjoining property.
- e. Avoid creating nuisance to adjacent areas.

02200.3 MEASUREMENT AND PAYMENT

- a. Excavation shall be measured in its original position by cross-sectioning the area excavated. Volume will be computed from the cross-section measurements by the average-end-area method.
- b. Accepted quantities will be paid for at the contract price per unit of measurement for excavation, including embankment construction.

PART 2 PRODUCTS

02200.4 MATERIALS

- a. Borrow material shall be selected, laboratory approved material obtained from off-site sources and having 3.5 percent liquid limit, and 4 to 12 percent plasticity index.
- b. Granular fill to form a capillary water barrier shall be clean, crushed, non-uniformly graded and of a size, which will pass a 25 millimeters mesh screen and be retained on a No. 4 mesh screen.
- c. Excavated material approved for used as backfill shall be free of fibers, vegetables or organic materials, boulders, large rocks or pockets, lumps or other concentration of silt, debris, or cinders.

- d. No fill material shall be placed when free water is standing in the area where fill is to be placed.

PART 3 EXECUTION

02200.5 PREPARATION

a. Stakes and Batter Boards:

1. Stake out the building accurately and establish grades. Secure the approval of the Owner and/or Architect.
2. Erect batter boards and reference mark where they will not be disturbed during construction.
2. Store material and conduct work in such a manner as to preserve all reference marks.
3. Re-establishment of lines and grades where necessary shall be done at the Contractor's expense.

b. Rough Grading

1. Cut and fill machine grade the site area.
2. Deposit materials in horizontal layers not exceeding 20 centimeter (8 inches) in depth and compact to 95% of maximum density. (Modified Proctor Test)

02200.6 EXCAVATION

a. Foundation:

1. Excavate to grade indicated.
2. Excavate trenches to a near size, leveled to line at the bottom ready to receive the foundation.
3. Excavation greater than required by the drawings and specifications and which is within the bearing area of walls, footings, or floor slabs shall be filled with class "D" concrete at Contractor's expense.
4. All foundations are designed for an allowable soil bearing capacity computed and the soil boring test results. Contractor shall report to the Engineer actual soil conditions uncovered and confirm soil actual capacity before any concreting is started.

b. Trenching for Utility and Foundation Drawings

1. Excavate to a point 1.0 meter beyond building line of sufficient distance from the walls and footings to allow placement removal of forms.
2. Backfill materials and concrete fill. Where excavation is at lower levels or greater depth than required for foundation, or where unsatisfactory material is removed, the excess material shall be replaced with backfill material, except below grade beams, footings or other structural concrete where fill to depth or level shall be with concrete of the same strength as specified.

02200.7 DEWATERING

- a. Water encountered during excavation shall be removed by piling or pumping, care being taken that the surrounding particles of soil are not disturbed or removed.
- b. Pump water out of excavated area throughout the construction.

02200.8 SUB-DRAINAGE

- a. Excavate trenches for underground utility system and drain lines. Grade and tamp to provide firm bed trenches for drain lines.
- b. When rock is encountered, excavate to a depth 15 centimeter below the bottom of the pipe, and before pipe is laid, the space below the pipe shall be filled with sand, gravel or crushed stone.

02200.9 SOIL COMPACTION

All existing earth within building lines that has been disturbed should be placed in 15 centimeter layers and compacted to 95% of maximum density required for fill.

02200.10 DISPOSAL OF EXCAVATED MATERIAL

Surplus materials resulting from the site excavation and grading operations shall be removed from the site and disposed off in proper manner at the Contractor's expense.

02200.11 BACKFILLING AND GRADING

- a. Backfilling:
 - 1. Commence after approval of construction below finish grade, underground utility system inspected and tested, form removed and the excavation clean of trash and debris.
 - 2. Place in layers not more than 15 centimeter thick and evenly compact and ram by wetting, tamping or rolling until the correct grade is reached.
- b. Finish Grading:
 - 1. Place fill materials in horizontal loose layers not exceeding 15 centimeter in thickness and spread, mix and place in such manner as to produce a uniform thickness of material.
 - 2. Start in deepest area and progress approximately parallel to finish grade.
 - 3. Grade finish surface to drain water away from the building.

SECTION 02280 SOIL POISONING

PART 1 GENERAL

02280.1 SCOPE

- a. Soil Poisoning shall be executed by a duly licensed and certified termite and pest control company to guarantee the soil poisoning works for five years.
- b. Furnish material and equipment and perform labor required to complete soil poisoning work.

02280.2 EXAMINATION OF SITE

Visit the site of the work and examine the premises to fully understand all existing conditions relative to the work.

PART 2 MATERIALS

02280.3 SOIL POISONING

- a. Soil poise shall be water-base emulsions. Any of the following may be used:
 1. Benzene Hexachloride - 0.8 percent gamma isomer concentration.
 2. Chloride - 1 percent concentration.
 3. Dieldrin - 0.5 percent concentration.
 4. Aldrin - 0.5 percent concentration.
 5. Heptachlor - 0.5 percent concentration.

PART 3 EXECUTION

02280.4 APPLICATION

- a. Soil poisoning work shall not begin until all preparations for footings, CHB under grade and slab on fill have been completed.
- b. Soil Poisson shall not be applied when soil is excessively wet.
- c. After grading and leveling the soil in the ground and layer of gravel is laid preparatory to the pouring of concrete floor or soap every square meter of floor area with soil Poisoning working solution.
- d. Thoroughly drench and saturate every linear meter excavation for footings and other foundation work with soil poison working solution before pouring of concrete.
- e. 7.6 liters of soil poison working solution per 1.5 linear meter shall be applied to all area immediately below expansion joints, control joints, and all areas, where slab will be penetrate by pipe duct and other construction features.
- e. Hollow masonry walls resting on grades shall have its voids treated with 3.79 liter of soil poison working solution per 1.5 linear meter of wall. Poisons are poured directly into the hollow spaces.
- f. Prior to landscaping of the lawn, saturate very linear meter perimeter of the building about 3 meters wide with soil poison working solution.
- g. Treat earthfill thoroughly. As soon as fill is packed and levelled, drench every 1 square meter area with soil poison working solution.

02280.5 INSPECTION AND TIME

- a. One sample of concentrates toxicant shall be tested.
- b. One sample of working solution shall be tested for each 1,000 square meter of treated area. There shall be at least two sample tested.
- c. Samples shall be taken and analytical tests performed by approved testing laboratory. Test shall be paid by the Contractor. The result shall be submitted to the Owner.

02280.6 GUARANTEE

Upon completion of the work, and a condition of final acceptance, the Owner shall be furnish with a written guarantee which shall provide that: THE SOIL POISONING TREATMENT SHALL PREVENT SUB-TERRANEAN TERMITES FROM ATTACKING THE BUILDING OR ITS CONTENT FOR A PERIOD OF NOT LESS THAN 5 YEARS.

7.1. DIVISION 3 CONCRETE

2. SECTION 03100 - CONCRETE FORMWORK

PART 1 GENERAL

03100.1 SCOPE

- a. Work Included :
 1. All labors, materials, equipment, plant, tools and other facilities necessary to complete all concrete formwork.
 2. Refer to General Conditions.
 3. Work shall BE DONE IN accordance with the "NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, Volume 1, 3rd Editions and the "ACI BUILDING CODE (ACI 318-latest edition)" and the National Building Code, 1988 Edition in so far as they do not conflict with specific provisions.

03100.2 PROTECTION

- a. Forms shall be used whenever necessary to confine the concrete and shape it to the required lines, or to insure the concrete of contamination with materials caving or sloughing from adjacent, excavated surfaces.
- b. Forms shall have sufficient strength to withstand the pressure resulting from placement and vibration of the concrete, and shall be maintained rigidly in correct position.
- c. Forms shall be sufficiently tight to prevent loss of mortar from the concrete.
- d. Forms for exposed surfaces against which backfill is not to be placed shall be lined with a form grade plywood.
- e. Bolts and rods used for internal ties shall be so arranged that when the forms are removed all metal will not be less than two (2) centimeters from the formed surface.

PART 2 PRODUCTS

03100.3 MATERIALS

- a. Forms:
 - 1201.4 Plywood, metal, plaster of Paris or plastic materials or surfaced lumber forms shall be used for all cast-in-place concrete works.
 - 1201.5 In no case shall the forms for beams and slabs be less than 12 millimeters (1/2 in) thick plywood for exposed concrete, 20 millimeters (3/4 in") T & G for covered concrete.

- b. Quality:

Provide forms that will produce correctly aligned concrete. Plastering in general shall not be allowed so that care shall be exercised in the choice of surface of forms and fittings that will be in contact with concrete.

PART 3 EXECUTION

03100.4 PREPARATION

4. Check all formwork for plumbness and correct alignments.
 - a. Provide openings for column forms for cleaning and inspection preferably at lowest points of pour lifts.
 - c. Provide camber as indicated in construction notes.
 - d. Before placing the concrete, the contact surfaces of the form shall be cleaned of encrustations of mortar, the grout, or other foreign material, and shall be coated with a commercial form oil that will effectively prevent sticking and will not stain the concrete surfaces.

03100.5 FORMS AND SHORING

- a. Removal:
 1. Forms and shoring shall not be removed until concrete is adequately set and strong enough to withstand anticipated loading and in no case less than what is required in the following tabulations:

PARTS OF STRUCTURE	CLASSIFICATION OF PARTS	TIME REQUIRED
Footing	a. Massive footing b. Cantilever footing c. Slab Footing	a. 1 day (24 hours) b. 5 days (120 hours) c. 5 days (120 hours)
Walls and Plasters	a. Massive Walls, 30 centimeters b. Thin Walls - less than 150mm c. Cantiliver walls	a. Up to 60 centimeters (2 ft.) - 1 day (24 hours). Add 1 day for additional 90 centimeters (3 ft.) of height or fraction thereof. b. Up to 180 centimeters (6 ft.) high - 2 days (48 hours). Add 1 1/2 days (36 hours) for every additional 90 centimeters of height or fraction thereof but not more than 28 days (672 hours) a. without load same as <u>a</u> and <u>b</u>
Columns	a. ratio of height to least dia. up to 4 b. Ratio of height to least dia. from 4 to 15	a. 2 days (48 hours) b. Add to the above number 1 day (24 hours) for every additional 90 centimeters (3 ft.) of height or fraction thereof but not more than 28 days (672 hours)
Slabs	a. 90 centimeters (3 ft.) to 210 centimeters (7 ft.) span	a. 90 centimeters (3 ft.) span - 5 days (120 hours). Add 1/2 day (12 hours) for every 30 centimeters (1 ft.) span or fraction thereof.

PARTS OF STRUCTURE	CLASSIFICATION OF PARTS	TIME REQUIRED
beams and Girders	b. over 210 centimeters (7 ft.) span	b. 210 centimeters (7 ft.) span - 7 days (168 hours). Add 1/2 day (12 hours) for every 30 centimeters (1 ft.) additional span or fraction thereof but not more than 28 days (672 hours)
	a. sides b. bottoms	a. 3 days (72 hours) b. Up to 425 centimeters (14 ft.) - 15 days (336 hours). Add 1/2 day (12 hours) for every 30 centimeters (1 ft.) additional span or fraction thereof but not more than 28 days (672 hours).

2. Forms and shoring may be removed earlier than specified above provided that test samples of concrete are taken and are shown to be adequately strong to carry safely, dead and construction loads to the satisfaction of the Project Engineer.
3. Forms shall be removed in a manner, which will prevent damage to the concrete. Forms shall not be removed without approval by the Project Engineer. Any repairs of surface imperfections shall be performed at once and curing shall be started as soon as the surface is sufficiently hard to permit it without further damage.

3. SECTION 03200 - CONCRETE REINFORCEMENT

PART 1 GENERAL

03200.1 SCOPE

- a. Related Work Specified Elsewhere:
 1. Concrete Formworks: ITEM 900
 2. Masonry: ITEM
 3. Thermal and Moisture Protection: ITEM 1016

03200.2 PROTECTION

- a. Storage of Materials:

Steel reinforcements shall be stored under cover or otherwise prevented from rusting.
- b. Concrete cover shall be determined before concrete pouring is started.

03200.3 DESIGN CONDITION

All Steel reinforcements shall be designed in accordance with the ACI Building Code (ACI 318-latest edition), Uniform Building Code 1988 Edition, and the National Structural Code of the Philippines, Volume 1, 3rd Edition.

03200.4 TESTING

The Owner, his duly authorized representative or the Architect shall have the right to order the test of any steel supplied by the Contractor, Such tests shall conform to the ASTM Designations enumerated below on materials. Samples shall be provided by the Contractor without cost to the Owner and expenses for testing shall be borne by the Contractor and copies of results shall be furnished to the Owner and to the Architect.

PART 2 PRODUCTS

03200.5 MATERIALS

a. Steel Bars:

1. Reinforcing steel bars to be used shall be new and free from rust, oil, grease or kinds.
2. Shall conform to the latest edition of ASTM Designation A615M Specifications.
3. Reinforcing steel for columns shall be intermediate grade. For all other parts of the structure such as beams, girders, slab, footings, walls, etc., reinforcing steel shall be structural grade, unless noted in the plan.
4. Ties and stirrups for beams and column as well as slab reinforcements may be plain bars unless noted in the plan or specified herein.

PART 3 EXECUTION

03200.6 PREPARATION

- a. Remove all loose rust or scale, adhering materials and oil or other materials , which tend to destroy bond between concrete and reinforcement before steel is placed or before pouring.
- b. All bars shall be bend cold, unless otherwise permitted by the Engineer.

03200.7 PLACING REINFORCEMENTS

a. Metal Reinforcements:

1. Placing shall be in accordance with the plans furnished. Refer to the Architect/Engineer in case of doubt or ambiguity in the placing of steel.
2. Reinforcing bars shall be accurately placed and adequately secured by concrete metal wires, or metal chair spaces.
3. Spacing of bars shall be done in accordance with the ACI - Building Code or as follows:

Clear distance between parallel bars shall be one and one half (1/2 times) the diameter for round bars, and twice the side dimension for square bars.

4. Clear distance shall not be less than 2.54 centimeters (1 inch) nor more than 1 1/3 times the minimum size of aggregates.
5. Where bars are used in two or more layers, the bars in the upper layers shall be placed directly above those in the lower layers at a clear distance of not less than 25 mm.

b. Stirrups and Ties:

Bends for stirrups and ties shall be made around a pin having a diameter of not less than 6 times the minimum thickness of the bar, except that for bars larger

than 25 mm, the pin shall not be less than 8 times the minimum thickness of the bar.

03200.8 OFFSET AND SPLICES IN REINFORCEMENT

a. Splices

1. In slabs, beams and girders at points of maximum stress shall not be made, and may be allowed only upon written approval of splice details by the Project Engineer.
2. Provide sufficient lap to transfer stress between bars by bonding shear or by welding.
3. Splices in adjacent bars shall be generally staggered.
4. Unless otherwise indicated, the minimum splice length shall be 24 times the bar diameter or 300 mm whichever is greater.

- b. Offsets - Where changes in cross section of column occur, longitudinal bars shall be offset in a region where lateral support is afforded. The slope of the inclined portion of an offset bar with axis of column shall not exceed 1 in 6. Portions of the bar above and below an offset shall be parallel to axis of column. Horizontal support at offset bends shall be provided by lateral ties, spirals, or parts of the floor construction. Horizontal support provided shall be designed to resist 1 1/2 times the horizontal component of the computed force in the inclined portion of an offset bar. Lateral ties or spirals, if used, shall be placed not more than 150 mm from points of bend. Offset bars shall be bend before placement in the forms.

DIVISION 4 - MASONRY

SECTION 04110 CEMENT AND LIME MORTARS

PART 1 GENERAL

04110.1 SCOPE

a. Work Included:

1. All labor, materials, equipment, plans and other facilities and the satisfactory performance of all work necessary to complete all cement and masonry work shown on the drawings and specifies herein.
2. Refer to the General Conditions accompanying these specifications.

PART 2 PRODUCTS

04110.2 MATERIALS

- a. Sand : ASTM C-4
- b. Portland Cement : ASTM C150, Type I
- c. Water shall be clean and free from deleterious substances.

04110.3 MIXES

a. Cement Mortar for Finish Coat:

1 part - Portland Cement

2 part - Sand but not more than 4 parts

b. Cement Mortar for Plastering:

1 part - Portland Cement

3 part - Sand

PART 3 EXECUTION

04110.4 INSTALLATION

- a. Surface to receive plasters shall be cleaned of all projections, dust, loose particles, grease bone breaker and other foreign matter. Plaster shall be applied directly to concrete on masonry surface that have been coated with bituminous compound, to surface that have been painted on previously plastered. Before the plasterwork is started, masonry surface shall be wetted thoroughly with fog spray of clean water to produce a uniformly moist condition. Metal grounds, corner bend and other accessories shall be checked carefully for alignment before work is started.
- b. Brown coat shall be applied with sufficient pressure to fill the groove in hollow block on concrete to prevent air pocket and receive a good bond. Brown coat shall be lightly scratched. Each coat of cement plaster shall be kept moist for 48 hours after application and then allowed to dry.
- c. Finish coat shall be applied after brown coat has seasoned for days. Just before application of the finish coat, brown coat shall again be evenly moistened with fog spray. Finish coat shall be floated first to a true and even surface with the trowel in a manner that will force the sand particles down into the plaster. Plaster surface shall be smooth and free from rough areas, trowel marks, checks and blemishes.

04110.5 PATCHING

- a. Patch plaster following work of other trades.

4. SECTION 04200 UNIT MASONRY

PART 1 GENERAL

04200.1 SCOPE

- a. Furnish materials and equipment and perform labor required to complete concrete unit masonry.
- b. See drawing for sizes, details and location work required.

04200.2 HANDLING AND STORAGE

- a. Handle in a manner to prevent undue chipping and breakage.
- b. Protect storage piles, stacks on bins from heavy traffic.
- c. Provide platforms to protect bottom piles from contact with soil.

PART 2 PRODUCTS

04200.3 MATERIALS

- a. Concrete Hollow Block - 100 mm x 200 mm x 400 mm and 150 mm x 200 mm x 400 mm and 200 mm x 200 mm x 800 mm.

- b. Mortar - 1 part Portland Cement, 3 parts sand
- c. Wire Ties - 16 gauge looped at both ends.
- d. Bars and Rods - ASTM Standard of masonry reinforcement and minimum diameter at 10 millimeter (3/8 inch).

PART 3 EXECUTION

04200.4 ERECTION

- a. Lay all masonry units plumb, true to line, level and with accurately spaced courses.
- b. Bond shall be kept plumb throughout. Corners and reveals shall be plumb and true.
- c. Built-in anchors, wall plug and accessories to masonry as erection progresses.
- d. Each course shall be solidly bedded in Portland cement mortar. All must be damp when laid.
- e. Units terminating against beam or slab soffits shall be wedged tight with mortar and reinforcement properly secured to dowels.
- f. Reinforcements shall be as shown in drawings. Minimum reinforcement is 12 millimeters (1/2 inch) round horizontal bars at every 3 courses and 12 millimeters (1/2 inch) round vertical bars at every 2 blocks.

04200.5 UNFINISHED WORK

- a. Unfinished work shall be stepped back for joining with new works.
- b. Before new work is started, all loose mortar shall be removed and the exposed joint thoroughly wetted not less than one hour before laying new work.

04200.6 PLASTERING

- a. Grout wall to be plastered generously and let dry.
- b. Apply scratch coat same as specified under Section 04110.4.
- c. Final plaster finish shall be 1 part Portland cement and 2part sand, and 1/4 part hydrates lime. Plaster shall conceal all joints and even-out wall surface to a uniform smooth finish using Manila Paper or rubber sponge.

04200.7 CLEANING

Wash finish wall with a solution of 10 percent by volume of muriatic acid applied with stiff fiber brushes.

04200.8 OPENINGS

- a. Provide beam blocks over or above openings not exceeding 1.20 meters span with same height and width as unit masonry blocks exceeding at least two masonry block lengths beyond the edge of the opening into the wall.
- b. Provide 2-4 longitudinal reinforcing bars each at top and bottom of beam blocks with ties at 25 centimeter (10 inches O.C.).

- c. For openings over 1.20 meters (4 ft.) in span, refer to drawing of cast-in-place design of lintel beam.

04200.9 CONSTRUCTION STANDARDS

Provisions of Section 6.10 of the National Structural Code of the Philippines, 3rd Edition, shall strictly be followed.

04200.10 TESTING

Testing of masonry materials shall be done in accordance with ASTM C140-70, METHOD OF TEST FOR CONCRETE MASONRY UNITS.

DIVISION 6 WOOD AND PLASTIC

SECTION 06100 ROUGH CARPENTRY

PART 1 GENERAL

06100.1 SCOPE

- a. Furnish materials and equipment and perform labor required to complete framing sheathing and related rough carpentry work as indicated on the drawings and/or specified herein.
- b. Include in the work, plates, straps, joints hangers, rods, dowels, rough hardware, fasteners and other miscellaneous iron and steel items pertinent to rough carpentry work.
- c. See drawings and details for location of framing, sheathing and related rough carpentry work required.

06100.2 STORAGE AND PROTECTION

- a. Stack framing lumber and plywood to insure against deformation and maintain proper ventilation.
- b. Protect lumber and plywood from elements.
- c. Lumber in contact with concrete or masonry shall be coated with asphalt or any approved preservative.

PART PRODUCTS

06100.3 LUMBER

- a. Moisture Content - not to exceed 20 percent.
- b. Grade and Trade Mark - required on each piece of lumber.
- c. Quality - lumber must be sound, thoroughly seasoned, well cut and free from wrap.
- d. Preservative and Pressure Treatment - all lumber shall be pressure impregnated with waterborne preservative like wolman salt, boiled salt and tanalite H.R. Surface, cut after treatment, shall be brush coated with same preservative.

06100.4 PLYWOOD

Unless otherwise specified or indicated in drawings, use the following:

- a. For Interior Plywood: Use 6 millimeter (1/4 inch) thick.
- b. Pressure Treatment: All plywood shall be pressure treated.

06100.5 ROUGH HARDWARE AND METAL FASTENERS

Plates, straps, nails, spikes, screws, bolts, joists, hangers, rods, dowels, fasteners and miscellaneous iron and steel items shall be of size and types to rigidly secure members in place.

PART 3 EXECUTION

06100.6 INSTALLATION

- a. Framing shall be cut square on bearings, closely fitted, accurately set to required lines and levels and rigidly secured in place. Plans and dress side of frames that will receive wallboards or sidings.
- a. Wood Furring and Nailers shall be in accordance with detailed drawings. Where not indicated on the drawings or mentioned herein, furring trips shall be 2.5 centimeter x 5 centimeter (1" x 2") spaced at 40 centimeter (16 inches) on center both ways. Fasten wood furring securely by expansion bolts or other approved device at every 60 centimeter (2 ft.) on center. Wood plugs shall not be used.

06100.7 SCHEDULES

- a. Treated Apitong Lumber shall be used for:
 - 1. Vertical and Horizontal Studding of Wood Partitions.
 - 2. Ceiling Nailers and Ceiling Joists
 - 3. Other Related Rough Lumber Works
- b. Well-seasoned Yakal shall be used for all plates, plugs and other portions of the work directly in contact with concrete or masonry.

5. SECTION 07610 SHEET METAL ROOFING

PART 1 GENERAL

07610.1 SCOPE

- a. Furnish materials and equipment and perform labor required to complete:
 - 1. sheet metal roofing
 - 2. metal roof flashing and trim
- b. See drawings and details for sizes and location of work required.

07610.2 SAMPLES

Submit samples of sheet metal flashing and trim, grilled and louvers.

07610.3 GUARANTEE

THE CONTRACTOR SHALL ISSUE A WRITTEN GUARANTEE TO THE OWNER TO MAINTAIN ENTIRE ROOF FLASHING AND COUNTER FLASHINGS IN A WATERTIGHT CONDITION FOR A PERIOD OF FIVE (5) YEARS.

PART 2 PRODUCTS

07610.4 MATERIALS

- a. Corrugated Sheets - Gauge 26 galvanized iron zinc coated by hot dip process.
- b. Plain Sheets - Gauge 26 galvanized iron sheet zinc coated by hot dip process.
- c. Solder - Standard solder for galvanized iron sheets.

PART 3 EXECUTION

07610.5 INSTALLATION OF SHEET METAL ROOFING

- a. Space purlins to fit sizes of the sheets so that center line of purlins will come of line 15 centimeters (6 inches) from bottom line of end laps.
- b. Space intermediate purlins equidistant from purlins at end laps.
- c. Minimum end lap shall be 25 centimeters (10 inches). Minimum side lay shall be 2-1/2 corrugations.
- d. Lay sheets in a manner such that vertical joints are broken. Lay top sheets with side corrugation down. Nail upper end of each sheet securely to purlins with 8-d G.I. nail in the valley of every second corrugation. The upper end of each sheet shall be covered by other sheets or by ridge and hip rolls.
- e. Secure lower end of first sheet laid at gutter line by straps to the purlins after gutter hangers are in place. Use No. 24 gauge strap one inch wide with corners clipped off at riveting ends. Bend strap around purlins and rivet to the sheets.
- f. Place first row of straps at gutter line. Then rivet the lower end of every sheet to the sheet beneath at the top of every fourth corrugation. Such rivets to alternate with rivets engaging top line of straps.
- g. Rivet side laps with two lines of rivets staggered and spaced not to exceed 23 centimeters (9 inches) on centers.
- h. Rivets must be anchored on top of corrugations.

07610.6 RIDGE ROLLS, HIP ROLLS AND VALLEY

- a. Use Gauge 24 ridge roll. Minimum lay of ridge roll shall be 30 centimeters (12 inches) over roofing sheets. Rivet ridge to roofing sheets at top of every fourth corrugation in addition to rivets engaging top line of straps
- b. Use Gauge 24 hip roll. Minimum lay of hip roll shall be 30 centimeters (12 inches) over roofing sheets. Rivet hip roll at every second corrugation.
- c. Use Gauge 24 valley. Project 45 centimeters (18 inches) away and under roofing sheet edge each way and secure to framework with G.I nails spaced not to exceed 30 centimeters (12 inches) on center.

07610.7 FLASHING AND COUNTER FLASHING

- a. Use Gauge 24 plain G.I. sheet for flashings at intersection of roof and parapet walls. Raise one wing of flashing not less 20 centimeters (8 inches) high terminated at horizontal reglet.
- b. Where corrugation run parallel to the walls, corrugate one wing of the flashing sheet to match corrugation of G.I. sheets which other wing shall go up against the walls and counterflashed.

7.2. DIVISION 8 - DOORS AND WINDOWS

6. SECTION 08210 WOOD DOORS

PART 1 GENERAL

08210.1 SCOPE

- a. Furnish materials and equipment and perform labor required to complete flush doors and other wood doors
- b. See drawings and details for sizes, location, extent and other requirements.

08210.2 SAMPLES

Submit sample corner sections of wood doors and jambs.

08210.3 PROTECTION

Adequately protect doors from scratches, and other stains with heavy building paper.

PART 2 PRODUCTS

08210.4 MATERIALS

- a. Plywood: First quality plywood grain and color suitable for painted finish.
- b. Framing: Kiln-dried tanguile treated lumber for interior framing.

08210.5 FABRICATION

- a. Assemble joints in doors with water-resistant glue keep doors under pressure until glue has thoroughly set.
- b. Sand smooth finished door. Door must have tiger joints and clear-cut mouldings.
- c. Faces shall be free from defects or machine marks that will show through the finish.
- d. Wood flush doors hollow core:
 - 1. Size, design and thickness shall be as indicated on the drawings.
 - 2. Doors shall have cross banding, and faces of two or more plies with a combined minimum thickness of 2.5 millimeters (1/10 inch) after sanding. Face veneer shall be first class quality selected plywood either rotary-cut or sliced-cut.

Provide lock blocks of size required for hardware use. Rails and side edge bands shall be of hardwood same as face veneer.

3. Doors shall be rimmed square and factory pre-fit to standard sizes.

PART 3 EXECUTION

08210.6 INSTALLATION

- a. Each door shall be accurately cut, trimmed and fitted to its frame and hardware.
- b. Give allowance for painter's finish and possible swelling or shrinkage.
- c. Clearance at lock and hanging stiles and at top shall not exceed 3 millimeters (1/8 inch). At bottom, not bigger than 6 millimeters (1/4 inch).
- d. All corners shall be rounded to 1.5 millimeters (1/16 inch radius). Lock and rail edges shall be slightly leveled.
- e. The screws for hardware shall not be driven, but merely started by driving and then screwed home.
- f. All doors shall operate freely and with all hardware properly adjusted and functioning.

08210.7 SCHEDULE

Refer to Schedule of Drawings.

7. SECTION 08800 GLASS

PART 1 GENERAL

08800.1 SCOPE

- a. Furnish glass free from imperfections and watermarks and other materials and equipment and perform labor required to complete all glass and glazing work.
- b. See drawings for size, location and details.

08800.2 SAMPLES

Submit samples of glass panel.

08800.3 PROTECTION

Protect materials from loss, injury, staining, and breakage. Lost and damaged materials shall be replaced by the Contractor at his own expense.

PART 2 PRODUCTS

08800.4 MATERIALS

- a. Plate Glass - mechanically round and polished after rolling resulting in parallel, distortion free surfaces. Use where good vision is required.
- b. Float Glass - manufactured by "floating continuous ribbon of molten glass onto a bath of molten tin where it is reheated to obtain a flat, fire-polished finish. It is then allowed to cool to a degree permitting it to be drawn on rollers in a long oven and then annealed.

Commonly used in windows, sliding doors, and window walls.

Grade AA - intended for use where superior quality is required.

Grade A - intended for selected glazing.

Grade B - intended for general glazing.

Greenhouse quality - intended for Greenhouse glazing or similar application where quality is unimportant.

08800.5 GLAZING

Glazing materials for glass installation may be:

a. Bull compounds such as:

Mastics - elastic compounds and non-skinning compound.

Puttied - wood sash putty, metal sash putty.

Sealant - one component, two components.

b. Performed sealant such as:

Synthetic polymer - bass sealant - resilient or non-resilient type.

Performed gaskets - compression type, structural type.

PART 3 EXECUTION

08800.6 GLAZING

- a. Prevent glass from all contact with metal or any hard or sharp materials by use of resilient shims placed at quarter points.
- b. Use resilient sealant.
- c. Use stops in sizes permitting a "good grip" of the glass.
- d. Install glass only in openings that are rigid, plumb and square.
- e. Allow sufficient clearance at edges of glass to compensate for its expansion or for some settlement of the building. Clearance should be 6 millimeters (1/4 inch) from edge to frame and 3 millimeters (1/8 inch) for face.
- f. Markings, banners, posters, and other decay shall not be applied directly to glass surface as these could cause thermal stress.
- g. Removal of putty or glazing compound smears from glass shall be performed by the glazing contractor during the materials normal work life. Failure to do so may result in damage to the glass.

08800.7 HEAT ABSORBING GLASS

- a. Special attention must be given to the installation of all types of heat absorbing glass, because of its ability to absorb heat. Partial shading, painted signs, large interior labels, tight draperies or blinds, heavy masonry structure, and heating-cooling outlets directing aid against the glass may increase edge tension stresses.
- b. The ability of heat absorbing glass to resist solar energy breakage is primarily related to its edge strength. Therefore:

1. Clean out all edges.
2. Do not install glass with flared edges at bottom.
3. Do not seal edges.
4. Do not nib edges nor scarf corners.
5. Do not bump nor brush edges against metal or other hard objects.
6. Do not use pocket flush glazing.
7. Radius cutting should be reviewed by manufacturer.

8. SECTION 09900 PAINTING

PART 1 GENERAL

09900.1 SCOPE

- a. Furnish materials and equipment and perform labor required to complete painting and varnishing works
- b. See Drawings for location, quantity and extent of surfaces to receive paints.

09900.2 DELIVERY OF MATERIALS

- a. Deliver at jobsite in original container with labels intact and seals unbroken.
- b. Submit to Owner the manufacturer's certificate of origin and quality of paints including quantity purchased.

09900.3 QUALIFICATION OF PAINTING CONTRACTOR

- a. Painting contractor shall be approved by the Owner

09900.4 TEST PANELS

- a. Sample panels of selected color or shade shall be prepared on 60 centimeters (2 feet) plywood panel for approval by the Architect.

09900.5 PROTECTION

- a. Provide all drop cloth and other coverings requisite to protection of floors, walls, aluminum, glass, finishes and other works.

PART 2: PRODUCTS

09900.6 PAINT MATERIALS

- a. Tinting colors and thinning materials must be the same brand as the paint specified

09900.7 SCHEDULE

EXTERIOR

a.	Exterior concrete painted surface	3 coats Acrylic base masonry paint
b.	Exterior concrete exposed aggregate finish	one coat water repellent
c.	Exterior metal ferrous	prime with epoxy enamel primer
d.	Exterior metal galvanized	prime with zinc chromate primer
e.	Exterior wood painted	3 coats oil based paint
f.	Exterior wood varnished	water repellent varnish

INTERIOR

a.	Interior concrete or masonry painted	2 coats acrylic base masonry paint
b.	Interior concrete exposed aggregate finish	no paint
c.	Interior metal ferrous	prime with epoxy enamel primer follow 2 coats enamel paint
d.	Interior wood work sea-mist	3 coats 3 part thinner 1 part lacquer paint apply wood filler
e.	Interior wood work varnish	1 st coat - one part sanding sealer to one part solvent 2 nd coat - 2/3 sanding sealer, 1/3 solvent 3 rd coat - same as 2 nd coat 4 th coat pure solvent
f.	Interior woodwork painted	3 coats oil base paint

PART 3 : EXECUTION

09900.8 PREPARATION OF SURFACES

	PREPARATION	TREATMENT	SURFACE CORRECTION
CONCRETE AND MASONRY WORKS	Remove all loose dirt excess mortar or any film left from oil, grease, or concrete curing compound	Treat with one kilo of zinc sulphate crystal to a 4.5liters of water (1 gal.)	Putty surface with patching compound
WOOD WORK	Thoroughly sand to remove excessive roughness, loose edges silvers and splinters then brush to remove dust	Knots, sappy streaks, and stain from wood preservatives shall be given a thin coat of shellac.	Fill all cracks, nail holes and other surface defects with patching paste or putty
METAL WORK	Remove rust, grease or other foreign matter	Wash with metal treatment solution	Scrape, wire-brush, sand-blast or clean with flame

09900.9 GENERAL WORKMANSHIP

- a. All paints shall be evenly applied. Coats shall be of proper consistency and well brushed out so as to show a minimum of brush marks.
- b. Thoroughly stir paint to keep pigment evenly in suspension when paint is being applied.
- c. All coats shall be thoroughly dry before the succeeding coat is applied. Allow at least 24 hours between application of coats.
- d. If surface are not fully covered or cannot be satisfactorily finished in the number of coats specified, such preparatory coats and subsequent coats as may be required shall be applied to attain the desired evenness of the paint without extra cost to the Owner.
- e. If surface is not in proper condition to receive paint, the Project Inspector shall be notified immediately. Work on the questioned portion shall not commenced until receipt of order to proceed from the Project Inspector.
- f. Hardware, hardware accessories, plates, lighting fixtures and other similar items shall be removed or otherwise protected during the painting operations and reinstalled after completion of work.

09900.10 PROCEDURE FOR SEA-MIST FINISH

- a. Depress wood grain by steel brush and sand surface lightly.
- b. Apply sanding sealer
- c. Apply two coats of industrial lacquer paint.
- d. Spray last coat mixed with lacquer.
- e. Apply paste wood filler thinned with turpentine or paint thinner to wood surface
- f. Wipe off pastewood filler immediately
- g. Spray flat or gloss lacquer whichever is specified.

09900.11 PROCEDURE FOR VARNISH FINISH

- a. Sand surface thoroughly
- b. Putty all cracks and other wood imperfections with paste filler
- c. Apply oil stain
- d. Apply lacquer sanding sealer
- e. Sand surface along grain
- f. Spray three coats of clear lead flat lacquer
- g. Polish surface using cloth pad
- h. Spray gloss lacquer if glass finish is desired.

09900.12 PROCEDURE FOR DUCCO FINISH

- a. Sand surface thoroughly

- b. Apply primer surface white or gray by brush or spray
- c. Apply lacquer paint spot putty in thin coat. Allow each coat to become thoroughly dry before applying next coat.
- d. Apply primer surfacer, Allow 2 hours drying time before applying the next coat.
- e. Apply one (1) coat of flat tone semi-gloss enamel as per Architect's color scheme.

DIVISION 12 - MECHANICAL

SECTION 1201 - WATER PUMPING SYSTEM

1201.1 Description

This Item shall consist of furnishing and installation of water pumping system, inclusive of all piping and pipe fitting connections, valves, controls, electrical wiring, tanks and all accessories ready for service in accordance with the approved Plans and Specifications.

1201.2 Material Requirements

1201.2.1 Water Pump

The type, size, capacity, location, quantity and power characteristics shall be as specified or as shown on the Plans.

1201.2.2 Overhead Tank

The tank shall be provided with manhole, cover, drain pipes, distribution pipe outlet, overflow pipes and air vent.

Suitable float switch or electrode shall be provided in the tank to stop and start the operation of the pump.

1201.2.3 Pneumatic Tank

Tank shall be designed for twice the maximum total dynamic pressure required and shall have the following accessories.

- (a) A suitable pressure switch to stop pump if pressure required is attained.
- (b) Air volume control device to maintain correct air volume inside the tank.
- (c) Pressure relief valve should be installed on top of the tank
- (d) Electrode to be connected in the motor pump control the water level.
- (e) Air compressor shall be provided for tank of 3,785 liters to maintain air pressure inside the tank.

1201.2.4 Pipes and Fittings

All pipes and fittings shall be G.I. pipe Schedule 40.

All piping 100 mm and larger shall be welded or flanged while smaller sizes shall be screwed.

1203.3.6 Valves

A gate valve followed by a check valve shall be placed between discharge of pump and tank to prevent back flow of water when pump stops.

1203.3.6 Foundation

Refer to sub-section 1200.2.9 - Air Conditioning System

1203.3.6 Electrical Works

Refer to sub-section 1200.2.10 - Air Conditioning System

1203.3.6 Construction Requirements

Exposed piping shall be provided with concrete saddle or steel clamps or hangers to secure them firmly to the building structures.

Pipe threads shall be lubricated by white lead, red lead, Teflon or other approved lubrication before tightening.

Piping supports shall be placed at 3mm interval or less.

1201.3.1 Test

Appropriate test shall be done to demonstrate that the system complies with the requirements of the Plans and Specifications.

1201.3.2 Guarantee and Service

Refer to sub-section 1200.3.2 - Air Conditioning System.

1201.3.3 Miscellaneous

Refer to sub-section 1200.3.3 - Air conditioning System.

1201.4 Method of Measurement

The work under this Item shall be measured either by set, length and piece actually placed and installed as indicated on the Plans. Equipment shall be measured by set pipes by length, valves and fittings by piece.

1201.5 Basis of Payment

All work performed and measured and as provided for in this Bill of Quantities shall be paid for at the Unit Bid or Contract Unit Price which payment and incidentals necessary to complete this item.

Payment shall be made under:

Item	Description	Unit of Measurement
A	Pump and Water Tank	Set
B	Air Compressor	Set
C	Pipes	Length
D	Valves and Fittings	Piece

MANPOWER REQUIREMENTS

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

Key Personnel	General Experience (YEARS)	Relevant Experience (YEARS)
Project Manager	5	3
Project Engineer	5	3
Material Engineer	3	3
Electrical Engineer	3	2
Construction Safety and Health Officer	3	2
First Aider	2	1
Plumber	2	1
Foreman	5	1

One (1) Safety Officer
Three (3) First Aider
Three (3) Foreman

Supported by the following documents:

- Key Personnel's Bio-data
- Photocopy of valid professional licenses identification card
- Photocopy of the Materials Engineer's DPWH accreditation
- Photocopy of the Certificate of Training of the Construction Safety and Health Personnel/Officer

MINIMUM MAJOR EQUIPMENT REQUIREMENTS

The minimum major equipment requirements are the following:

<u>Equipment</u>	<u>Capacity</u>	<u>Number of Unit Required for this project</u>
Water Truck	1000 Li	1
Dump Truck	12 cu.m	2
Plate Compactor	5 Hp	1
One Bagger Mixer	-----	3

Concrete Vibrator	1.5 – 2.3 kw	1	
Welding Machine		1	
Bar Bender	At least 16mm dia	1	
Bar Cutter	At least 16mm dia	1	
<p><u>With condition of ownership:</u> a. Dump Truck (at least 1 units owned) b. One Bagger (at least 2 units owned)</p> <p>With the following supporting documents: 1. Proof of ownership (OR/OCR/Deed of Absolute Sale) for owned equipment; 2. Certificate of availability of lease equipment for leased equipment ; and 3. Lease contract agreement as well as the proof of ownership of the lessor (OR/OCR/Deed of Absolute Sale – for leased equipment).</p>			

LICENSE CATEGORY: *IRR of Republic Act 9184*

Third Stage of Adjustment on Allowable Ranges of Contract Costs (ARCC) and Single Largest Project (SLP) Completed / Track Record Requirements (Board Resolution No. 201, series of 2017)			
Size Range	License Category	Single Largest Project (₱)	Allowable Ranges of Contract Costs (₱)
Large B	AAAA and AAA	Above 225 Million	< or above 450 Million
Large A	AA	Above 150 Million up to 225 Million	Up to 450 Million
Medium B	A	Above 75 Million up to 150 Million	Up to 300 Million
Medium A	B	Above 15 Million up to 75 Million	Up to 150 Million
Small B	C & D	≤ 15 Million	Up to 30 Million
Small A	Trade/E	Up to 1 Million	Up to 1 Million

Note: Par. 3 of Sec. 23.11.2 of the IRR of RA 9184 allows Small A and Small B contractors without similar experience to bid only for contracts not more than fifty percent (50%) of the allowable range of contract cost of their respective size range(s).

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE	
Class "A" Documents	
<u>Legal Documents</u>	
<input type="checkbox"/>	(a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);
<u>Technical Documents</u>	
<input type="checkbox"/>	(e) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and
<input type="checkbox"/>	(f) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; and
<input type="checkbox"/>	(g) Philippine Contractors Accreditation Board (PCAB) License; or Special PCAB License in case of Joint Ventures; and registration for the type and cost of the contract to be bid; and
<input type="checkbox"/>	(h) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; or Original copy of Notarized Bid Securing Declaration; and
<input type="checkbox"/>	(i) Project Requirements, which shall include the following:
<input type="checkbox"/>	a. Organizational chart for the contract to be bid;
<input type="checkbox"/>	b. List of contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
<input type="checkbox"/>	c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; and
<input type="checkbox"/>	(j) Original duly signed Omnibus Sworn Statement (OSS); and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.
<u>Financial Documents</u>	
<input type="checkbox"/>	(k) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).
Class "B" Documents	
<input type="checkbox"/>	(l) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;

	<p><u>or</u></p> <p>duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.</p>
<p>II. FINANCIAL COMPONENT ENVELOPE</p>	
<input type="checkbox"/>	<p>(m) Original of duly signed and accomplished Financial Bid Form; <u>and</u></p>
<input type="checkbox"/>	<p>(n) Original of duly signed Bid Prices in the Bill of Quantities; <u>and</u></p>
<input type="checkbox"/>	<p>(o) 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; <u>and</u></p>
<input type="checkbox"/>	<p>(p) Cash Flow by Quarter.</p>