



SCOPE OF WORKS / TECHNICAL SPECIFICATIONS

Project Title	Re-Bidding for the Expansion of Maintenance Building
Location	REGION II TRAUMA AND MEDICAL CENTER
Source of Fund	Hospital Income
Appropriation	Php 2,538,530.63
Proposed Budget for the Contract	Php 2,538,530.63
Project Duration	80 Calendar Days
Project Type	By Contract
Mode of Implementation	Expansion of Maintenance Building with the following scope of work: General Requirements, Earthworks, Demolition and Removal of Existing Windows, Formworks and Scaffoldings, Concrete Works, Reinforcing Steel Bars, Masonry Works, Concrete Topping, Ceiling
Project Description	

Equipment Requirements:	(a) One-Bagger Mixer, (b) Welding Machine, (c) Cutting Machine/Cut-off Wheel, (d) Electric Hand Drill, (e) Excavator, (f) Dumptruck, (g) Plate Compactor, (h) Concrete Vibrator
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Scope of Work

Item	Description of Work	Unit	Qty	Specification
I	GENERAL REQUIREMENTS <ul style="list-style-type: none"> Mobilization/Demobilization Temporary/Facilities, Water and Electric Consumption, Safety and Health Program Project Billboard Furnishing of Materials, Labor, and Equipment 	lot	1.00	<ul style="list-style-type: none"> Mobilization/demobilization of equipment, material, manpower and temporary facilities to the site including clearing of all waste or debris generated during the entire construction duration. Construction of Site Office and other temporary facilities. Observe the use of good source of potable water, and source of electricity for the entire duration of the project. The contractor shall, at his own expense, furnish his workers with protective equipment for eyes, face, hands and feet, lifeline, safety belt/harness, protective shields and barriers whenever necessary by reason of the hazardous work process or environment, chemical or radiological or other mechanical irritants of hazards capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical agent All Personal Protective Equipment and Devices shall be in accordance with the requirement of the Occupational Safety and Health Standards (OSHS) and should pass the test conducted and/or standards sets by the Occupational Safety and Health Center (OSHC). Billboard shall be installed prior to all items programmed in the project. Contents of billboard shall be as indicated under COA Circular No. 2013-004 Billboard shall be installed in a safe & visible location near or within the starting point of the project or as directed by the R2TMC Engineer-in-charge of the project. The construction shall conform to all the requirements of the National Building Code, Department of Health, as well as the local rules and regulations of the Municipality of Bayombong, Nueva Vizcaya.
II	EARTHWORKS (EXCAVATION, BACKFILLING, LEVELLING, GRAVEL BEDDING) <ul style="list-style-type: none"> Excavations using an excavator Leveling and shaping of subgrade using manual labor. Compaction of subgrade using portable compactor. Furnishing of Aggregates Base Coarse, Labor and Equipment Placing and compacting of aggregates base coarse materials for slab on grade using portable compactor Backfilling to suit subgrade level. Site Clearing Furnishing of Materials and Labor 	cu.m.	52.84	<ul style="list-style-type: none"> All excavations shall be made to grade as indicated in the drawings. Where the building site is covered with any kind of fill, the excavation for footings should be made deeper until the stratum for safe bearing capacity of the soil is reached. Utilize suitable cut materials in addition to furnished materials. Selected fill materials shall consist of pit run gravel, disintegrated rock, sand and or other similar materials or as directed by the R2TMC Engineer-in-charge of the project. The materials shall not contain more than 35% passing the No. 200 sieve and fraction of the material passing the No. 40 sieve shall have a liquid limit not greater than 35 and plasticity index not greater than 12. Source of aggregates: Magat Gravel Pit or as directed by the R2TMC Engineer-in-charge of the project.
III	DEMOLITION AND REMOVAL OF EXISTING WINDOWS <ul style="list-style-type: none"> Demolition of existing CHB wall using manual labor Removal and Salvage of Existing Window Site Clearing 	lot	1.00	<ul style="list-style-type: none"> The contractor shall clear each part of the site to the extent required by the R2TMC Engineer-in-charge. All demolished materials should be managed, stored and disposed of properly in accordance with all relevant waste legislation Remove existing windows and prepare for reuse and reinstallation as directed by the R2TMC Engineer-in-charge
IV	FORMWORKS AND SCAFFOLDINGS <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	lot	1.00	<ul style="list-style-type: none"> Forms and scaffoldings shall consist of form phenolic board and good lumber including common wire nails. All material shall be new and recycled materials shall not be allowed. All forms for concrete works shall be properly braced or connected together so as to maintain the correct position and shapes of the concrete members. Forms shall be constructed sufficiently tight to prevent bulging and seepage of water. Forms shall not be removed until the concrete has attained sufficient strength to support its own weight and any loads that may be placed on it. Side forms of beams and girders may be removed earlier than the bottom forms but additional posts or shoring must be placed under the beams or girders until they have attained their strength. Rental of scaffoldings may include G.I. pipes, swivel clamps, and steel platforms
V	CONCRETE WORKS <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	cu.m.	29.45	<ul style="list-style-type: none"> All concrete works shall be done in accordance with the standard specifications for the plain and reinforced concrete as adopted by the Government or as directed by the R2TMC Engineer-in-charge of the Project. 40kgs/bag Portland cement shall be used for concrete. Concrete shall be well compacted after placing on its final position. Dimensions and other details shall be based on the issued plans and drawings. Testing shall be conducted. Concrete shall attain compressive strength of

				<ul style="list-style-type: none"> 3000psi at 28 days of age otherwise specified in the plan or as directed by the R2TMC Engineer-in-charge of the project. The coarse aggregates for concrete shall consist of round or crushed rock of durable and strong qualities, or clean and hard gravel. Sand shall be washed river sand, well screened, clean, and free from loam, silt and other impurities. Source of aggregates: Magat Gravel Pit or as directed by the R2TMC Engineer-in-charge of the project. Fine and coarse aggregates shall pass 3/8" and 2" sieve respectively using grading "A". Pouring of concrete for all reinforced concrete works must only be done upon the approval and with direct supervision of the R2TMC Engineer-in-charge of the project. Concrete Pouring of Reinforced footing foundation, beams, columns, slab and lintel beams.
VI	REINFORCING STEEL BARS <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	lot	1.00	<ul style="list-style-type: none"> Reinforcing Steel Bars shall be new, corrugated and shall be grade 40 Reinforcing Steel Bars shall be laid according to drawings and plans All steel reinforcing bars shall be done in accordance with standard specification adopted by the Governmnet or as directed by the R2TMC Engineer incharge of the Project. All steel reinforcing steel bars to be used in this construction shall consist of round deformed bars with lugs or projections on their sides to provide a greater bond between the concrete and steel. The steel reinforcing bars indicated for footing, columns, slabs, beams, girder and other concrete members shall conform to the number, size and spacing as indicated in the drawings or schedule of steel reinforcedments. Anchorage, lapping and concrete cover for reinforce steel bars shall be under the approval of the the R2TMC Engineer- in- Charge of the Project. No metal reinforcement shall be installed in place unless it is free from rust, scale or other coatings, which will destroy or reduce the bond with concrete. RSB shall be tested prior to installation
VII	MASONRY WORKS			
(a)	CHB Laying <ul style="list-style-type: none"> Furnishing of Materials and Labor Provision of coarse aggregates and mixture of concrete. 	sq.m.	164.80	<ul style="list-style-type: none"> All concrete hollow blocks shall be mechanically made. All concrete hollow block walls shall be laid, and the cells filled with cement mortar consisting of 1 part Portland cement and 3 parts of sand by volume (1:3 mixture). 40kgs/bag Portland cement shall be used for masonry mortar All steel reinforcing bars to be used for masonry works shall be round deformed bars, grade 33, with a maximum spacing of 0.60m on center both ways unless otherwise specified in the plan or as directed by the R2TMC Engineer-in-charge of the Project. Fine and coarse aggregates shall pass 3/8" and 2" sieve respectively using grading "A". CHB shall be 6"
(b)	Plastering <ul style="list-style-type: none"> Furnishing of Materials and Labor Provision of coarse aggregates and mixture of concrete. 	sq.m.	329.59	<ul style="list-style-type: none"> All cement plaster mixture for concrete hollow block wall finishes indicated in the drawings shall be 1 part cement, and 2 parts screened sand by volumetric method (1:2 mixture). Cement Plaster must have a minimum thickness of 25mm or otherwise as directed by the R2TMC Engineer-in-charge of the project. 40kgs/bag Portland cement shall be used for masonry plaster Fine aggregates shall be clean, washed sharp river sand and free from dirt, clay, organic matter or other deleterious substances.
VIII	CONCRETE TOPPING <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	sq.m.	128.00	<ul style="list-style-type: none"> All cement mixture for concrete tapping as indicated in the drawings shall be 1 part cement, and 3 parts screened sand by volumetric method (1:3 mixture). 40kgs/bag Portland cement shall be used for mortar of floor tiles and 25kgs/bag Tile Adhesive for wall tiles. Fine aggregates shall be clean, washed sharp river sand and free from dirt, clay, organic matter or other deleterious substances. Thickness shall be 2" and should be smooth finish
IX	CEILING WORKS <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment Provision of Light Metal Framing System Installation 	sq.m.	128.00	<ul style="list-style-type: none"> Ceiling Boards shall be 4.5mm. thick cement fiber board, 0.4mm thick double metal furring, 0.6mm thick carrying channel, 0.4mm thick wall angle, with accessories otherwise specified in the plan and/or drawing. Wall angle is fixed to the walls around the edge of the room providing a location for the Ceiling Furring Channel. Primary 0.6mm thick Channel is suspended at a maximum of 1200mm centres using Rod Suspension Hanger otherwise specified in the plan or as directed by theR2TMC Engineer-in-charge of the project. Spandrel ceiling shall be laid on the eaves of the building
X	PAINING WORKS <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	sq.m.	457.59	<ul style="list-style-type: none"> Surfaces must be clean and free from dirt, oil, grease, dust and any other impurities that will affect the quality of the paint. Concrete neutralizer shall be first grade quality concentrate diluted with clean water and applied as surface conditioner of new interior and exterior masonry walls and other concrete surfaces thus improving paint adhesion and durability. All exterior concrete surfaces must be finished with acrylic odourless elastomeric waterbased paint, and all interior concrete surfaces must be anti-bacterial , odourless & stain-resistant elastomeric waterbased paint. All concrete/masonry surfaces must apply one (1) coat of acrylic concrete primer and sealer, repair surface imperfections with water based putty, spot prime puttied areas with acrylic concrete primer and sealer, and two (2) coats of paint for top coat (acrylic odourless elastomeric paint for exterior and anti-bacterial, odorless & stain-resistant paint for interor). Allow 2 hours drying time in between coats. Metal surfaces must apply two (2) coats of metal primer paint. Ceiling / Fiber cement surfaces must apply one (1) coat of acrylic concrete primer and sealer, repair surface imperfections with water based putty, spot

				<p>prime puttied areas with acrylic concrete primer and sealer, and two (2) coats of anti-bacterial, odorless & stain-resistant paint for interior. Allow 2 hours drying time in between coats.</p> <ul style="list-style-type: none"> Use the same brand of paint from start to finish to a good paint body. Color and pattern shall be specified in the drawings or as approved by the R2TMC Engineer-in-charge of the Project.
XI	FENESTRATION WORKS (INCLUDES UTILIZATION OF EXISTING WINDOWS, INCLUSION OF CLEANING AND REPAINTING) <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment Installation of Salvaged Windows Installation of Doors with complete accessories 	lot	1.00	<ul style="list-style-type: none"> All window frames shall be in place and rigidly anchored. Window location shall conform with the details indicated in the plan/drawing or otherwise as directed by the R2TMC Engineer-in-charge Reinstall recovered windows from existing CHB wall to be demolished, include cleaning and repainting of recovered materials Installation of Single Leaf Swing Hollow Core Wooden Door, Lockset and Door Jamb, and Hinges and Complete Hardware Accessories
XII	ROOFING WORKS			
(a)	Steel Truss <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	lot	1.00	<ul style="list-style-type: none"> All materials and workmanship shall conform to the latest applicable standards or specifications. All works shall conform to the best practice prevailing in the various trades. The contractor shall examine the drawings and shall notify the R2TMC Engineer-in-charge of the project of any discrepancies he may find before proceeding with the work or during construction. Structural steel shall conform to American Society of Testing Materials (ASTM). Electrodes for welding shall conform to the latest code requirements of the American Welding Society (AWS). Surfaces to be welded shall be free from loose scale, slag, rust, grease, paint and any other foreign material. Details for steel works shall be based on the issued plans and drawings
(b)	Roofing Sheet <ul style="list-style-type: none"> Furnishing of Materials, Labor, and Equipment 	sq.m.	250.90	<ul style="list-style-type: none"> All pre-painted metal sheet and roofing accessories shall be oven baked painted and overall thickness with protective coats of 0.50mm, true to profiles indicated on the Plans or otherwise as directed by the R2TMC Engineer-in-charge of the project. Pre-painted rolling sheets shall be fabricated from cold rolled galvanized iron sheets specially tempered steel for extra strength and durability. Design and color shall be subject to the approval of the R2TMC Engineer-in-charge Details of roofing shall be based on the issued drawings Provide 10mm thick double sided insulation
XIII	ELECTRICAL WORKS <ul style="list-style-type: none"> Furnishing of Materials, Hardware, Tools, and Labor 	lot	1.00	<ul style="list-style-type: none"> All works shall be done under the direct supervision of an Electrical Engineer and in strict accordance with these specifications and of the methods as prescribed by the latest edition of the Philippine Electrical Code. All items not specifically mentioned in the specifications as noted on the drawing but which are obviously necessary to make a complete working installation shall be included. All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark unless specified or indicated otherwise. All materials to be used shall conform to the Bureau of Product Standard (BPS) Specifications. Upon completion of the electrical construction work, the contractor shall provide all test equipment and personnel and to submit written copies of all test results.
XIV	PLUMBING WORKS <ul style="list-style-type: none"> Furnishing of Materials, Hardware, Tools, and Labor 	lot	1.00	<ul style="list-style-type: none"> Use 3"Ø uPVC pipe, series 1000 for the rainwater pipe Refer to the drawings for the details of the rainwater pipe
				<p>General Note:</p> <ul style="list-style-type: none"> Any discrepancies within the issued drawings/plans and specifications, the actual site condition and actual construction shall be conferred with the R2TMC Engineers and no execution of work shall be done without their consent and final approval. All materials and workmanship shall conform to the latest applicable standards or specifications. All works shall conform to the best practice prevailing in the various trades. All construction and workmanship shall be subject to inspection, examination and testing by the R2TMC Engineer-in-charge of the project. The R2TMC Engineer-in-charge of the project shall have the right to reject defective materials and workmanship or require its correction.

Submitted by:

Name of the Representative of the Bidder: _____

Position: _____

Signature of the Bidder: _____

Date: _____