EXECUTION

INSTALLATION

For the Cargo Shed and Guardhouse and Port Lighting System the interior and exterior lighting and wiring installation system shall be installed as shown in the approved plans.

Floodlight Pole and solar lamp post shall be installed as shown on the approved plans including the re- location of existing solar lamp post.

Pole Setting: Depth as shown on the approved plans.

Construction of floodlight pole, and lamp post foundation shall be in accordance with the shape and dimensions as shown on the approved plans.

Excavations / backfilling required before /after installation of floodlight post, solar lamp post and pole foundation with the trench shall conform to the provisions of Earthwork and Concrete construction.

WORKMANSHIP

The work throughout shall be executed in the best and most thorough manner under the direction of and to the satisfaction of the Registered Electrical Engineer or Master Electrician, who will interpret the intent meaning of the drawings and specifications and shall have the power to reject any work and materials which in his judgment, are not in full accordance therewith.

TESTING OPERATIONS

When the electrical installation is completed, the Contractor shall test the installed electrical materials and equipment in the presence of a Registered Electrical Engineer or Master Electrician. The system shall be free from any defects, shorts or grounds. The Contractor at no extra cost shall furnish all necessary instruments and personnel required for the testing.

GUARANTEE

Upon completion and before final acceptance of the work, the Contractor shall furnish the Engineer with a written guarantee stating that all works executed are free from defects on materials and workmanship. The guarantee shall be for a period of one year from the date of final acceptance. Any work that becomes defective during the said period shall be corrected / replaced by the Contractor at his own expense in a manner satisfactory to the Authority.

ITEM 19 : MECHANICAL GENERAL REQUIREMENT

GENERAL

This section applies to all Item of "MECHANICAL WORKS" except where specified in each individual section.

WORK DESCRIPTION

The work shall include the furnishing of equipment, materials, tools, labor, supervision, and other services required to install, complete, test and make operational the whole system as described on the Drawings and the Technical Specifications.

Specifically the work shall involve the following:

a. To supply, deliver, install, wires/cables, conduit, circuit breaker and make operational the wall mounted split type inverter air conditioning units including bathroom exhaust fans for toilets as shown on the Drawings.

b. To supply and install the refrigerant piping system and condensate drain lines including necessary insulation and hangers.

c. To supply and install the electrical wiring connections from the AC supply provided by the Electrical Contractor which is located close to the point of installation. This shall include power and control wirings and interlocks with the thermostat control.

SUBMITTALS

Submit shop drawings, manufacturer's data and certificates for equipment, materials, and finish, and pertinent details for each system where specified in each individual section, and obtain approval before procurement, fabrication, or delivery of the items to the job site. Partial submittals are not acceptable and will be returned without review. Submittals shall include the manufacturer's name, trade name, catalogue model, or number, nameplate data, size, layout dimensions, capacity, project specification and paragraph reference, applicable industry, and technical society publication references, years of satisfactory service, and other information necessary to establish contract compliance of each item the Contractor proposes to furnish. Photographs of existing installations and data submitted in lieu of catalogue data are not acceptable and will be returned without approval. Submittals shall be a minimum of 5 print copies. Submittals of the contractor shall be reviewed and returned within a minimum of 21 days, each stamped with appropriate action.

1. Shop Drawings

Drawings shall be a minimum of 350mm x 500mm in size, with a minimum scale of 1:100 except as specified otherwise. Drawings shall include floor plans, sectional views, wiring diagrams, and installation details of equipment; and equipment spaces identifying and indicating proposed location, layout and arrangement of items of equipment, control panels, accessories, piping, ductwork, and other items that must be shown to assure a coordinated installation. Wiring diagrams shall identify circuit terminals, and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment. Drawings shall indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices. If equipment is disapproved, drawings shall be revised to show acceptable equipment and be resubmitted.

2. Manufacturer's Data

Submittals for each manufactured item shall be manufacturer's brochure products, equipment drawings, diagrams, performance and characteristic curves, and catalogue cuts.

3. Standard Compliance

When materials or equipment must conform to the standards of organizations such as the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), National Electrical Manufacturers Association (NEMA), American Society of Mechanical Engineers (ASME), Air Movement and Control Association, Inc. (AMCA), American Refrigeration Institute (ARI), and Underwriters' Laboratories (UL), proof of such conformance shall be submitted to the Engineers for approval. If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified in the individual sections. In lieu of the label or listing, the Contractor shall submit a certificate from an independent testing organization which is competent to perform acceptable testing and is approved by the Owner or his authorized representative. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard. For materials and equipment whose compliance with organizational standards or specifications is not regulated by an organization using its own listing or label as proof of compliance, a certificate of compliance from the manufacturer shall be submitted for approval. The certificate shall identify the manufacturer, the product, and the referenced standard and shall simply state that the manufacturer certifies that the product conforms to all requirements of the project specification and of the reference standards listed. The edition or the revised version of such codes and standards current at the date twenty eight (28) days prior to date of bid submission shall apply. During Contract execution, any changes in such codes and standards shall be applied after approval by the Owner.

4. Codes, Inspection, Permits and Fees

a. The work under this contract shall conform to the latest requirements of:

1) Philippine National Building Code

2) Regulations of the Local Municipality

3) SMACNA

4) ASHRAE

b. Nothing contained in these specifications or shown on the drawings shall be construed as to conflict with the National and local ordinances or laws. All such laws and ordinances are made a part of these Specifications.

c. All construction permits and fees for this work shall be obtained at the expense of the Contractor. The Contractor shall furnish the Owners and Engineers the final certificates of inspection and approval from the appropriate government authorities.

OPERATION AND MAINTENANCE MANUAL

Furnish an operation and maintenance manual for each item of equipment. Furnish three (3) copies of the manual bound in hardback binders or an approved equivalent. Furnish one complete manual prior to the time that the equipment are performed and furnish the remaining manuals before the contract is completed. Inscribe the following identification on the cover: the words OPERATION

AND MAINTENANCE MANUAL, the name and location of equipment or the building, the name of the Contractor, and the contract number. The manual shall include the names, addresses, and the telephone numbers of each subcontractor installing the equipment, and of the local representatives for each item of equipment. The manual shall have a table of contents and be assembled to conform to the table of contents with the tab sheets placed before instructions covering the subject. The instructions shall be legible and easily read, with large sheets of drawings folded in. The manual shall include: wiring and control diagrams with data to explain detailed operation and control of each item of equipment; a control sequence describing start-up, operation and shutdown; description of the function of each principal item of equipment; the procedure for starting; the procedure for operating; shutdown instructions; installation instructions; maintenance instructions; lubrication schedule including type, grade, temperature range, and frequency, safety precautions, diagrams, and illustrations; test procedures; performance data; and parts list. The parts list for equipment shall indicate the sources of supply, recommended spare parts, and the service organizations which is reasonably convenient to the project site. The manual shall be complete in all respect for equipment, controls, accessories, and associated appurtenances provided.

POSTED OPERATING INSTRUCTIONS

Furnish approved operating instructions for each system and principal item of equipment for the use of the operation and maintenance personnel. The operating instructions shall include wiring diagrams, control diagrams, and control sequence for each principal item of equipment. Operating instructions shall be printed or engraved and shall be framed under glass or in an approved laminated plastic and posted where directed by the Owner. Operating instructions shall be attached to or posted adjacent to each principal item of equipment and include directions for start up, proper adjustment, operating, lubrication, shut down, safety precautions, procedure in the event of equipment failure, and other areas as recommended by the manufacturer of each item of equipment. Operating instructions exposed to the weather shall be made of weatherproof materials or shall be suitably enclosed to be weather protected. Operating instructions shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

SAFETY

1. Rotating Equipment Safety

   Couplings, motor shafts, gears and other exposed rotating or rapidly moving parts shall be fully guarded. The guards shall be cast iron or expanded metal. Guard parts shall be rigid and suitably secured and shall be readily removable without disassembling the guarded unit.

INSTRUCTION TO OWNER'S PERSONNEL

When specified in other sections, the Contractor shall furnish the services of competent instructors who will give full instruction to the designated personnel in the adjustment, operation, and maintenance, including pertinent safety requirements of the equipment or system specified. Each instructor shall be thoroughly familiar with all the parts of the installation and shall be trained in operating theory as well as practical operation and maintenance work. Instruction shall be given during the first regular work week after the equipment or system has been accepted and turned over to the Owner for regular operation. The number of man-days (8 hours) of instruction furnished shall be as specified in other sections. When more than 4 man-days of instruction are specified, approximately half of the time shall be used for classroom instruction. All other time shall be used for instruction with the equipment or system. When significant changes or modifications in the equipment or system are made under the terms of contract, additional instruction shall be provided to acquaint the operating personnel with the changes or modifications.

DELIVERY AND STORAGE

Equipment and materials shall be handled, stored, and protected to prevent damage before, during, and after installation, in accordance with the manufacturer's recommendations and as approved. Damaged or defective items shall be replaced without cost to the Owner.

STANDARD PRODUCTS/SERVICE AVAILABILITY

1. Materials and Equipment

   Materials and equipment shall be standard products of manufacturer regularly engaged in the manufacture of such products, which are of a similar material, design and workmanship. The standard products shall have been in satisfactory commercial or industrial use for seven years prior to bid opening. The seven year use shall include applications of equipment and materials under similar circumstances and of similar size as specified for the Project. The equipment shall be soled exclusively by a single, stable distributor with after sales capability.

2. Experience Required

   The five (5) years experience must be satisfactorily completed by a product which has been sold or is offered for sale on the commercial market through advertisements, manufacturers' catalogues, or brochures.

3. Alternative Service Record

   Products having less than a five-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6000 hours, exclusive of the manufacturer's factory or laboratory tests can be shown.

4. Service Record

   The equipment items shall be supported by service organizations. The Contractor shall submit a certified list of qualified permanent service organizations for support of the equipment which includes their addresses and qualifications. These service organizations shall reasonably be convenient to the equipment installation and able to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

5. Manufacturer's Nameplate
   Each item of equipment shall have a nameplate bearing the manufacturer's name, address, model number, and serial number affixed in a conspicuous place; the nameplate of the distributing agent will not be acceptable.

SAFETY REQUIREMENTS

Belts, pulleys, chains, gears, couplings, projecting set screws, keys, and other rotating parts located so that any person can come in close proximity thereto shall be fully enclosed or properly guarded in accordance with OSHA 29 CFR 1910.219. High temperature equipment and piping so located as to endanger personnel or create a fire hazard shall be properly guarded or covered with insulation of a type as specified herein. Items such as catwalks, ladders, and guardrails shall be provided where required for safe operation and maintenance of the equipment.

MANUFACTURER'S RECOMMENDATIONS

Where installation procedures or any part are required to be in accordance with the manufacturer's recommendations of the material being installed, printed copies of these recommendations shall be furnished to the Owners and Engineers prior to installation. Installation of the item will not be

allowed to proceed until the recommendations are received. Failure to furnish these recommendations can be cause for rejection of the material.

ELECTRICAL REQUIREMENTS

Electrical components of mechanical equipment and systems such as motors, starters, and controls shall be provided under this Item and shall be as specified herein and as necessary for complete and operable system. Extended voltage range motors will not be permitted. Interconnecting wiring for components of packaged equipment shall be provided as an integral part of the equipment.

ELECTRICAL MOTORS

1. All electrical motors of sizes and types as specified for driving air conditioning and ventilating equipment shall be furnished and erected under this section. All motors shall be of proper power and speed to suit the specified makes of equipment. If other makes of equipment are accepted in any case, the proper adjustment of motor speed and power including affected changes in electrical system circuit breakers and wiring must be included without additional cost to the Owner. Technical data shall be submitted for approval before the equipment is purchased.

2. All motor ratings shall be as specified on the drawings.

3. Generally, all motors shall be constant speed, squirrel-cage type motors and energy efficient except as otherwise listed on plans. Single phase motors shall be capacitor start induction-run or split phase type as approved for the service.

4. All belt-connected motors shall have adjustable bases and set screws to maintain proper belt tension, and shall be provided with proper belt guards.

5. All motors and accessories shall comply in all respect with NEMA Standards. Types shall be as required by Local Code.

6. All motors shall be furnished with type "B" insulation and tropical fungus proofing according to NEMA standards.

CHANGES IN WORK DUE TO APPROVAL OF ALTERNATE MATERIALS

Assure the cost of, and the entire responsibility for any changes in the work shown on the Contract Documents which may be occasioned by approval of materials proposed by the Contractor other than those specified.

GUARANTEE

Furnish the Owner a written guarantee covering the satisfactory operation of the mechanical installation in all its parts for a period of one (1) year after date of final acceptance of work. During this period, repair or replace any defective work, materials or equipment furnished and installed without any cost to the Owner. Include with this guarantee certificate of every material supplier engaged by this trade of the project.

AS-BUILT DRAWINGS

1. The Contractor shall, during the progress of work, keep record of all deviations of the actual installation from that shown on the Contract Drawings.

2. Upon completion of work, the Contractor shall submit two (2) copies of the as-built drawings, signed by the Contractor's Registered Professional Mechanical Engineer and Owner Project Inspector, indicating the work as actually and finally installed, including new information not originally shown in Contract Drawings.

3. Approval of as-built drawings by the Engineer shall be a requirement for final acceptance of the completed works and of final payment.

QUALITY ASSURANCE

1. Surveys and Measurements:

   a. The Contractor shall base measurements, both horizontal and vertical, from established benchmarks. All work shall agree with these established lines and levels. Verify all measurements at site and check the correctness of same as related to the work.

   b. Should the Contractor discover any discrepancy between actual measurements and those indicated, which prevents following good practice or intent of the drawings and specifications, he shall notify the Owner's representative and shall not proceed with his work until he has received instructions from the Owner's representative upon referring the matter to the Engineer.

2. Drawings and Minor Modification:

   a. Drawings are diagrammatic and indicate the general arrangement of the system and work included in the contract. Drawings are not to be scaled. The drawing and details shall be examined for exact location of fixtures and equipment by verifying actual site conditions.

   b. The Contractor shall follow drawings in laying out work and check drawing of other trades to verify spaces in which work will be installed. Maintain maximum headroom and space conditions at all points. Where headroom or space conditions appear inadequate, Owner's representative shall be notified before proceeding with installation, if directed by the Owner's representative, the Contractor shall, without extra charge, make reasonable modifications and the layout as needed to prevent conflict with work of other trades or for proper execution of the work.

   c. Materials and Workmanship

   All materials and apparatus required for the work, except as specified otherwise, shall be new of first class quality, and shall be furnished, delivered, erected, connected and finished in every detail, and shall be so selected and arranged as to fit properly into the building spaces. Where no specific kind or quality of materials is given, first class standard articled shall be furnished.

ITEM 20 : UNITARY AIR-CONDITIONING SYSTEMS

GENERAL

"Mechanical General Requirements" applies to this Item with additions and modification specified herein.

GENERAL REQUIREMENTS

1. Unitary Air-Conditioning System

Capacity of equipment shall not be less than that indicated. In the NFPA standards and SMACNA manuals referred herein, the advisory provisions shall be considered to be mandatory, as though the word "shall" had been substituted for "should" wherever it appears. Reference to the "authority having jurisdiction" shall be interpreted to mean the Engineer.

2. Refrigerant Piping, Fittings and Accessories

Refrigerant piping assembly as used in this section includes pipes, flanges, bolting, gaskets, valves, relief devices, fittings, and the pressure containing parts of other piping components. It also includes hangers and supports and other equipment items necessary to prevent overstressing the pressure containing parts.

a. Piping

ANSI 15 and ANSI B31.5. Compatible with fluids for which they are being used and capable of withstanding the pressures and temperatures of the service that they are handling.

b. Tubing

Refrigerant piping shall be seamless copper tubing, hard drawn, type K, ASTM B88. Tubing used for refrigerant service shall be cleaned, sealed, capped or plugged prior to being shipped from the manufacturer's plant. Fittings for copper tubing shall be wrought copper or bronze, brazing or solder joint type ANSI B16.18 or ANSI B16.22. Copper flared type tubing may be made only in annealed copper tubing ASTM B280 and in nominal sizes smaller than one- inch only for connection to equipment and no larger than 1-3/8 inches diameter for other connections. Flanges shall be of bronze ANSI B16.24.

3. Corrosion Prevention

Unless specified otherwise, equipment fabricated from ferrous metals that do not have a zinc coating shall be treated for prevention of rust with a factory coating or paint system that will withstand 125 hours in a salts-pray fog test except that equipment located outdoors shall be tested for 500 hours. The salt-spray fog test shall use a 20 percent sodium chloride solution. Immediately after completion of the test, the coating shall show no signs of blistering, wrinkling or cracking, no loss of adhesion, and the specimen shall show no signs of rust creep age beyond 1/8 inch on either side of the scratch mark. The film thickness of the factory coating or paint system applied on the equipment shall be not less than film thickness used on the test specimen.

4. Safety Standards

a. Design, Manufacture and Installation of Mechanical Refrigeration Equipment: ASHRAE Safety Code for Mechanical Refrigeration.

b. Machinery Guards: Fully guard drive mechanisms, or other moving parts. Provide guards fabricated of steel and expanded metal, rigidly mounted, and readily removed without disassembly.

MATERIAL REQUIREMENTS

Unitary Air –Conditioning System – Split Type Inverter

1. General

The air-conditioning systems shall be designed, constructed, and rating tested in accordance with ARI Standard 210 for unitary air-conditioning equipment of capacities below 135,000 Btu's per hour and ARI Standard 300 for unitary equipment with capacities of 135,000 Btu's per hour and greater. Units shall be ARI certified. Units with capacities below 135,000 Btu's per hour shall be listed in the ARI Directory of Certified Unitary Air-Conditioners.

2. Performance Rating

Cooling capacity of unit shall meet the sensible heat requirements and total requirements indicated. In selecting unit size, make true allowance for "sensible to total heat ratio" to satisfy required sensible cooling capacity. Submittals shall include catalogue selection data which accounts for sensible to total heat ratio, entering air-conditions at evaporator, and condenser air-conditions.

3. Air Conditioners, Wall mounted Type Inverter

The indoor unit draws in warm air, cools it, and then circulates the cooled air back into the room. The outdoor unit handles the cooling process by releasing heat outside. Many models come with filtration systems that help remove dust, allergens, and other contaminants, improving air quality. Modern wall-mounted air conditioners are designed for quiet operation, ensuring a comfortable and peaceful environment. Features like auto swing, sleep mode, and timer functions enhance convenience and energy efficiency.

4. Compressors

Provide hermetic, semi-hermetic rotary, or screw type provided with all the minimum standard equipment and accessories listed therein. Compressor speed for compressors above 20 tons shall not exceed 1750 rpm. Provide compressors with automatic capacity reduction of at least 50 percent for units over 10 tons. Compressors shall start unloaded. Provide each compressor with devices to protect the compressor from short-cycling when shut-down by safety controls. Provide a pump-down cycle of the non-recycling start type for each compressor 20 tons and over. Provide compressors with vibration isolators. Compressor motor shall be suitable for electric power characteristics as indicated. Motor shall conform to NEMA NG-1. Motor starters shall conform to NEMA ICS. Motors shall be constant speed, squirrel-cage induction, open type or hermetically sealed, low starting current, high-torque type, and shall be furnished with reduced voltage or and magnetic across-the-line type motor starter with weather-resistant enclosures

5. Coils

a. Cooling coils shall conform to ARI 410 and to paragraph entitled, Cooling Coils. Coils shall be the type indicated or specified herein.

b. The air-cooled condenser coil shall be extended-surface fin-and-tube type with seamless copper or aluminum construction. Aluminum alloy conforming to ASTM B210, alloy 1100, shall be used for the tubes, and aluminum alloy conforming to chemical requirements of ASTM B209, alloy 7072, shall be used for fins and sheets. Fins shall be soldered or

mechanically bonded to tubes and installed in a metal casing. Coils shall be air tested under water for leakage. After testing, dry coils for remote type units to remove free moisture, and cap to prevent entrance of foreign matter. Evacuate and seal coils at the factory.

6. Controls

a. Condenser Controls

Provide load pressure control to insure condensing temperature for proper system operation at all ambient temperatures down to 40°F.

b. Condenser Start-up Control Provide condenser with a start-up control package which permits start-up compressor regardless of low ambient temperatures. Package shall temporarily bypass system low pressure-start to permit start-up whenever minimum ambient temperature is below design evaporator coil suction temperature.

7. Refrigerant Circuits

Entire refrigerant circuit shall be dehydrated, purged, and charged with refrigerant and oil at factory. Factory oil charge shall be the full amount required for operation. Factory charge for refrigerant shall be the full amount required for operation.

8. Corrosion Protection

Units shall be factory corrosion protected in accordance with paragraph entitled, Corrosion Prevention.

COOLING COILS

1. Direct-Expansion Coils

Direct-expansion coils shall be fin-and-tube type constructed of seamless copper or aluminum tubes and copper or aluminum fins mechanically bonded or soldered or helically wound to tubes. Casing and tube support sheets shall be not lighter than 16-gauge (0.0635-inch nominal thickness) galvanized steel, formed to provide structural strength. Suction header shall be seamless copper tubing or seamless or resistance welded steel tube with copper connection. Supply header shall consist of a distributor to distribute the refrigerant liquid through seamless copper tubing, equally to all the circuit in the coil. Tubes shall be circuited to insure minimum pressure drop and maximum heat transfer. Circulating shall permit refrigerant flew from liquid inlet to suction outlet without causing oil staging or restricting refrigerant flow in coil. Rack coil shall be tested at the factory under water at not less than 300 psi air pressure and shall be suitable for 200 psi working pressure. Each coil shall be completely dehydrated and scaled at the factory upon completion of pressure tests. Coil shall be mounted for counter flow service.

2. Filters

Filter shall be of the sectional or panel cleanable type and be capable of filtering the entire air supply.

CLEANING, PAINTING AND IDENTIFICATION

Cleaning, painting and identification of piping shall be as specified under, "Painting" of "Building Works".

IDENTIFICATION TAGS AND PLATES

Provide equipment, thermometers, valves, and controllers with tags numbered and stamped for their use. Plates and tags shall be of brass or suitable non-ferrous material, securely mounted or attached. Minimum letter and numeral size shall be 1/8 inch.

EXECUTION

INSTALLATION

Application and installation practices for unitary air-conditioning systems shall conform to the requirements of an acceptable industry standard for installation of unitary systems.

1. General

Install equipment and components in a manner to insure proper and sequential operation of the equipment and its controls. Installation of equipment not covered herein or in manufacturer's instructions shall be installed as recommended by manufacturer's representative. Provide proper foundations for mounting of equipment, accessories, appurtenances, piping and controls including, but not limited to, supported vibration isolators, stands, guides, anchors, clamps, and brackets. Foundations for equipment shall conform to equipment manufacturer's recommendation, unless otherwise shown in the drawings. Set anchor bolts and sleeves accurately using properly constructed templates. Anchor bolts shall be of adequate length and provided with welded-on plates on the head end embedded in the concrete. Level equipment bases, using jacks or steel wedges, and neatly grouted-in with a non-shrinking type of grouting mortar. Locate equipment so that working space is available for all necessary servicing such as shaft removal, disassembling compressor cylinders and pistons, replacing or adjusting drives, motors, or shaft seals, access to water heads and valves of shell and tube equipment, tube cleaning or replacement, access to automatic controls, refrigerant charging, lubrication, oil draining and working clearance under overhead lines. Provide electric isolation between dissimilar metals for the purpose of minimizing galvanic corrosion.

2. Unitary Air-Conditioning System

Install system as indicated, in accordance with the requirements of ASHRAE 15-76 and as recommended in the manufacturer's installation and operational instructions.

3. Electrical Work

Electric motor driven equipment specified herein shall be provided complete with motors, motor starters, and controls. Electrical equipment and wiring shall be in accordance with "Electrical General Requirements" . Motor starters shall be provided complete with properly sized thermal overload protection and other appurtenances necessary for the motor control wiring required for controls and devices but not indicated.

4. Piping

a. Piping Sleeves
Pipe sleeves shall be as Galvanized Iron, Schedule 20.

b. Provide refrigerant driers, sight glass liquid indicators, moisture indicators, and strainers in refrigerant piping for remote installations when not furnished by the manufacturer as part of the equipment.

c. Locate strainers close to equipment they are to protect. Provide a strainer in the common refrigerant liquid supply to two or more thermal valves in parallel when each thermal

valve has a built-in strainer. Install strainers with screen down and in direction of flow as indicated on strainers body.

d. Solenoid valves shall be installed in horizontal lines with stem vertical and with flow in direction indicated on the valve. If not incorporated as internal part of the valve, provide strainers upstream of the solenoid valve. Provide service valves upstream of the solenoid valve, upstream of the strainer, and downstream of the solenoid valve. Remove the internal parts of the solenoid valve when brazing the valve.

5. Auxiliary Drain Pans, Drain Connections, and Drain Lines

Provide auxiliary drain pans under all drain pans of the units located above finished ceilings or over mechanical or electrical equipment where condensate overflow over unit drain pan may cause damage to ceilings, piping, and equipment below. Provide drain lines for all drain and auxiliary drain pans. Trap the drain from bottom pan of air-conditioning units to insure complete pan drainage. Drain lines shall be full size of opening.

6. Air Filters

Provide access panels for all concealed valves, controls, dampers, and other fittings requiring inspection and maintenance.

7. Inspection Plates and Test Holes

Inspection plates and test holes where required in casings for air balance measurements shall conform to SMACMA High Pressure Low Velocity Duct Construction Standards. Test holes shall be a factory-fabricated, air-tight, non-corrosive test hole with screw cap and gasket. Extend cap through insulation.

8. Flashing and Pitch Pockets

Provide flashing and pitch pockets for equipment support and roof penetrations and flashing where piping or ductwork passes through exterior walls.

FIELD TESTS AND INSPECTIONS

1. Tests

All tests shall be performed and materials and equipment required for test shall be furnished by the Contractor. Tests after installation and prior to acceptance shall be performed in the presence of a representative of the Owner and subject to his approval. Equipment and material certified as having been successfully tested by the manufacturer in accordance with referenced specifications and standards will not require retesting before installation. Equipment and materials not tested at the place of manufacturer will be tested before or after installation, as applicable, where necessary to determine compliance with referenced specifications and standards.

2. Leak Testing

Upon completion of installation of the air-conditioning equipment, test all factories as well as field refrigerant piping with an electronic-type leak detector to acquire leak tight refrigerant systems. If leaks are detected at the time of installation or during the guarantee period, remove the entire refrigerant charge from the system, correct the leaks and retest the system.

3. Evacuation, Dehydration, and Charging

After system is found to be without leaks, evacuate the system using a reliable gauge and a vacuum pump capable of pulling a vacuum of at least 1 mm lig absolute. Evacuate system in strict compliance with the triple evacuation and blotter method or in strict accordance with equipment manufacturer's printed instructions. System leak testing, evacuation, dehydration, and charging with refrigerant shall comply with the requirement contained in an acceptable industry standard.

4. Start-Up and Operation Tests

The air-conditioning system and its components shall be started and initially placed under operation and checked to see that it is functioning correctly. Adjust safety and automatic control instruments as necessary to place them in proper operation and sequence. The operational test shall be not less than 8 hours.

5. Performance Tests

Upon completion of evacuation, charging, start-up, final leak testing, and proper adjustment of controls, the system shall be performance tested to demonstrate that it complies with the performance and capacity requirements of the specifications and plans. Test the system for not less than 8 hours, during which time hourly readings shall be recorded. At the end of the test period, the readings shall be averaged and the average shall be considered to be the system performance.

6. Sound Tests, Air-conditioners, Unitary, Split Type

Sound pressure level measurements shall be conducted on units designated by the Owner. Calculate sound power levels by ASHRAE Systems Handbook and Product Directory. Submit test results and calculations.

ITEM 21 : EXHAUST EQUIPMENT

GENERAL

"Mechanical General Requirements" applies to this Item with additions and modification specified herein.

SCOPE OF WORK

1. Furnish materials that are new, of first-class quality.
2. Install all materials in strict accordance with the manufacturer's instructions and specifications.

PRODUCTS

MATERIAL REQUIREMENTS

1. Bathroom Ceiling Mounted Exhaust Fan

The exhaust fans shall be of the built-in ceiling type, ceiling mounted, suitable for operation. Sizes and capacities are based on models or approved equal. Brand and models indicated herein is for the purpose of establishing product quality, capacities and dimensions. Other brands satisfying the same shall likewise be accepted, subject to the approval of the owner and Engineer In-Charge. The capacities of the units shall be as shown on the Drawings.

EXECUTION

1. Install the fan securely to the ceiling.
2. Install back-draft dampers and fire dampers and check to make sure they are free to open and close.
3. Connect power and check rotation of fan.

ITEM 22 : PROJECT BILLBOARD

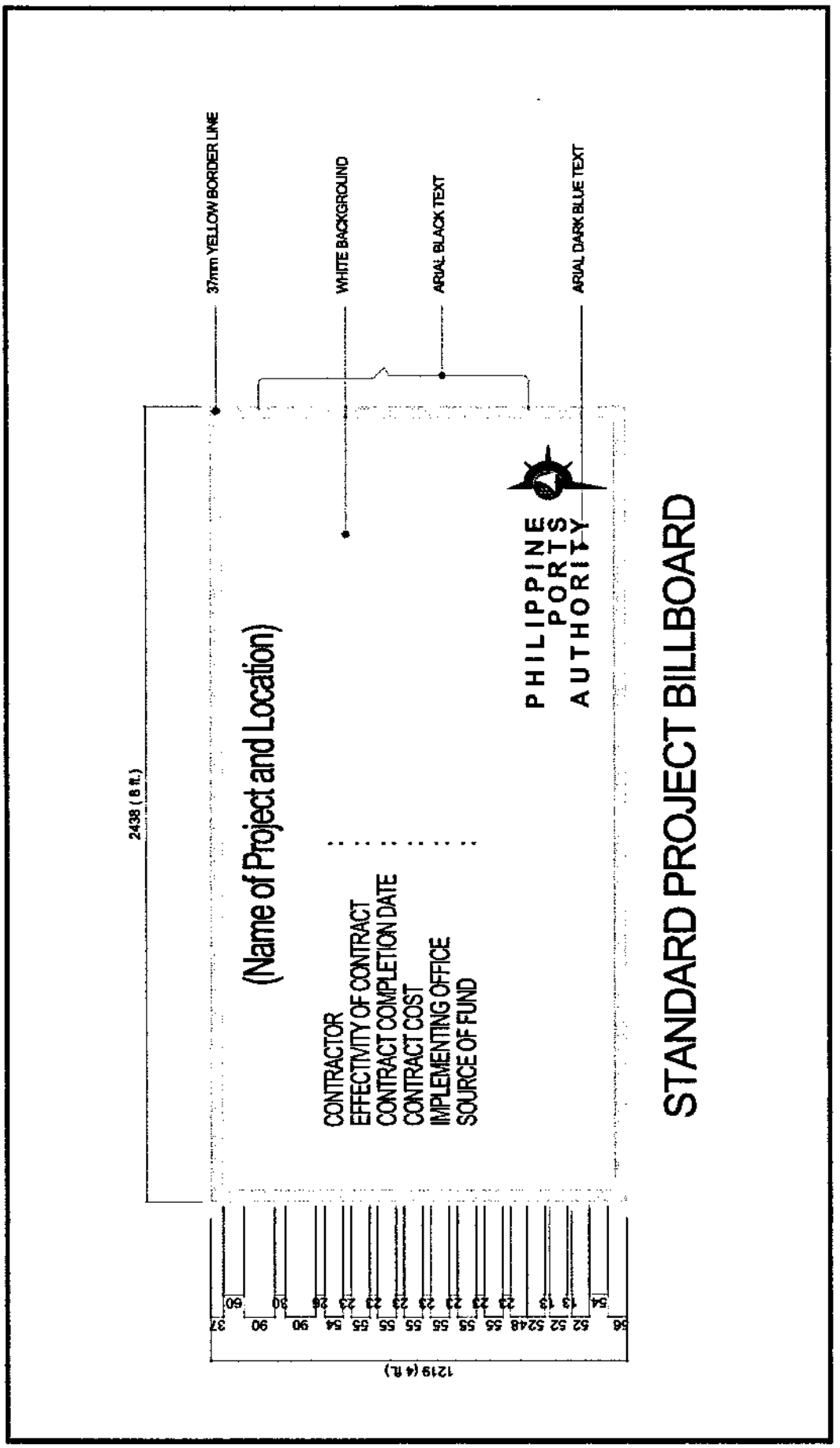
SPECIFICATION

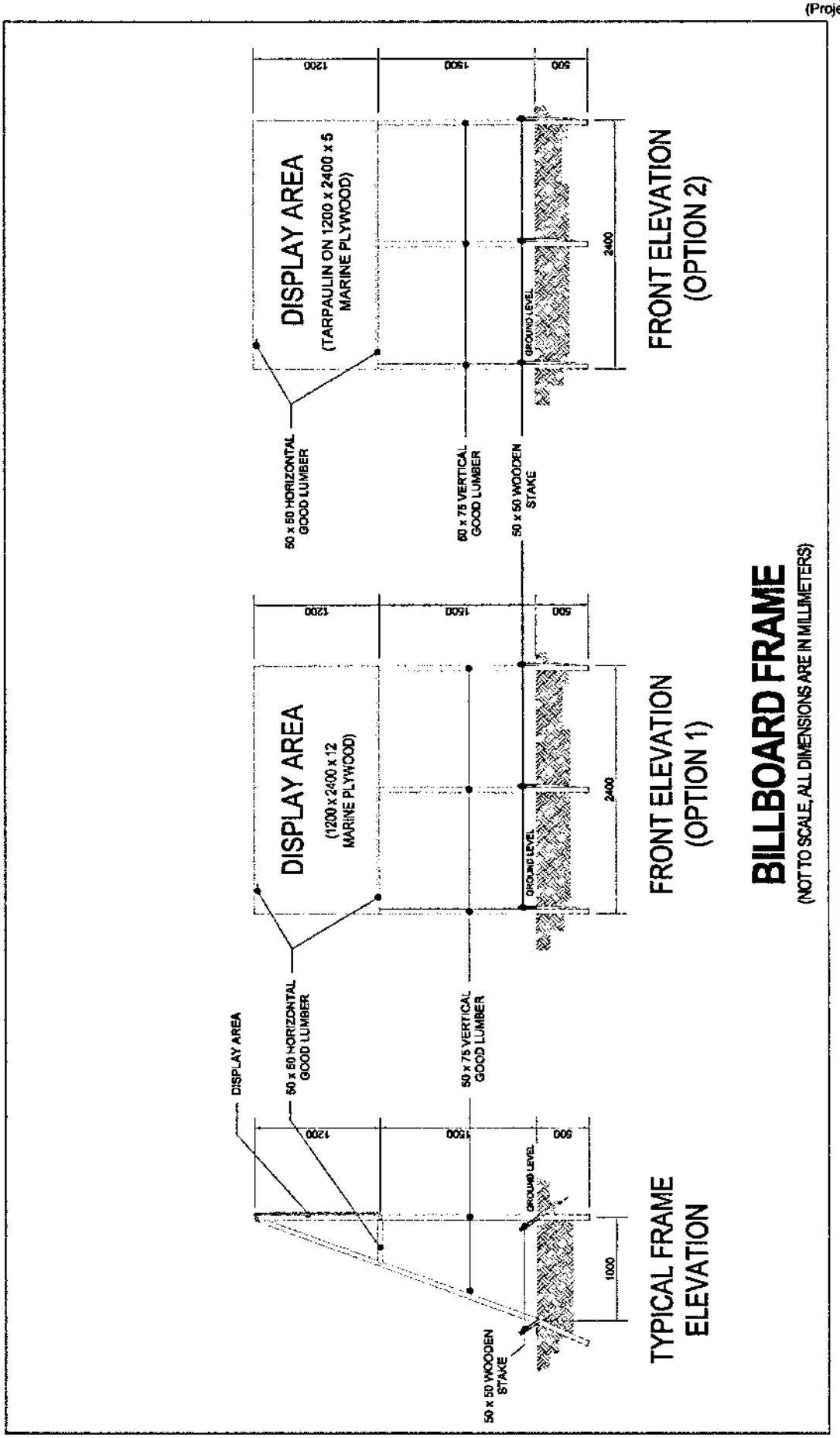
The Project Billboard shall be installed at location(s) designated by the Engineer.

The size and specifications of materials for the standard billboard shall be 4ft. x 8ft. (1,200mm x 2,400mm) using ½ inch (12mm) marine plywood or tarpaulin poster on 3/16 inch (5mm) marine plywood.

Project billboards shall not contain Name(s) and/or picture(s) of any personages.

See attached drawings for further details of the standard billboard.


STANDARD PROJECT BILLBOARD
37mm YELLOW BORDER LINE
WHITE BACKGROUND
ARIAL BLACK TEXT
ARIAL DARK BLUE TEXT
PHILIPPINE PORTS AUTHORITY
(Name of Project and Location)
CONTRACTOR
EFFECTIVITY OF CONTRACT
CONTRACT COMPLETION DATE
CONTRACT COST
IMPLEMENTING OFFICE
SOURCE OF FUND
2438 (8 ft.)
1219 (4 ft.)


BILLBOARD FRAME
(NOT TO SCALE, ALL DIMENSIONS ARE IN MILLIMETERS)
TYPICAL FRAME ELEVATION
FRONT ELEVATION (OPTION 1)
FRONT ELEVATION (OPTION 2)
DISPLAY AREA
50 x 50 HORIZONTAL GOOD LUMBER
50 x 75 VERTICAL GOOD LUMBER
50 x 50 WOODEN STAKE
GROUND LEVEL
DISPLAY AREA (1200 x 2400 x 12 MARINE PLYWOOD)
DISPLAY AREA (TARPAULIN ON 1200 x 2400 x 5 MARINE PLYWOOD)
1200
1500
500
2400
1000

ITEM 23 : SAFETY SIGNAGES AND BARRICADES

DESCRIPTION

This work includes the furnishing and installing of safety signages and barricades in accordance with the specifications and to the details shown below in the drawings, or as directed by the Engineer.

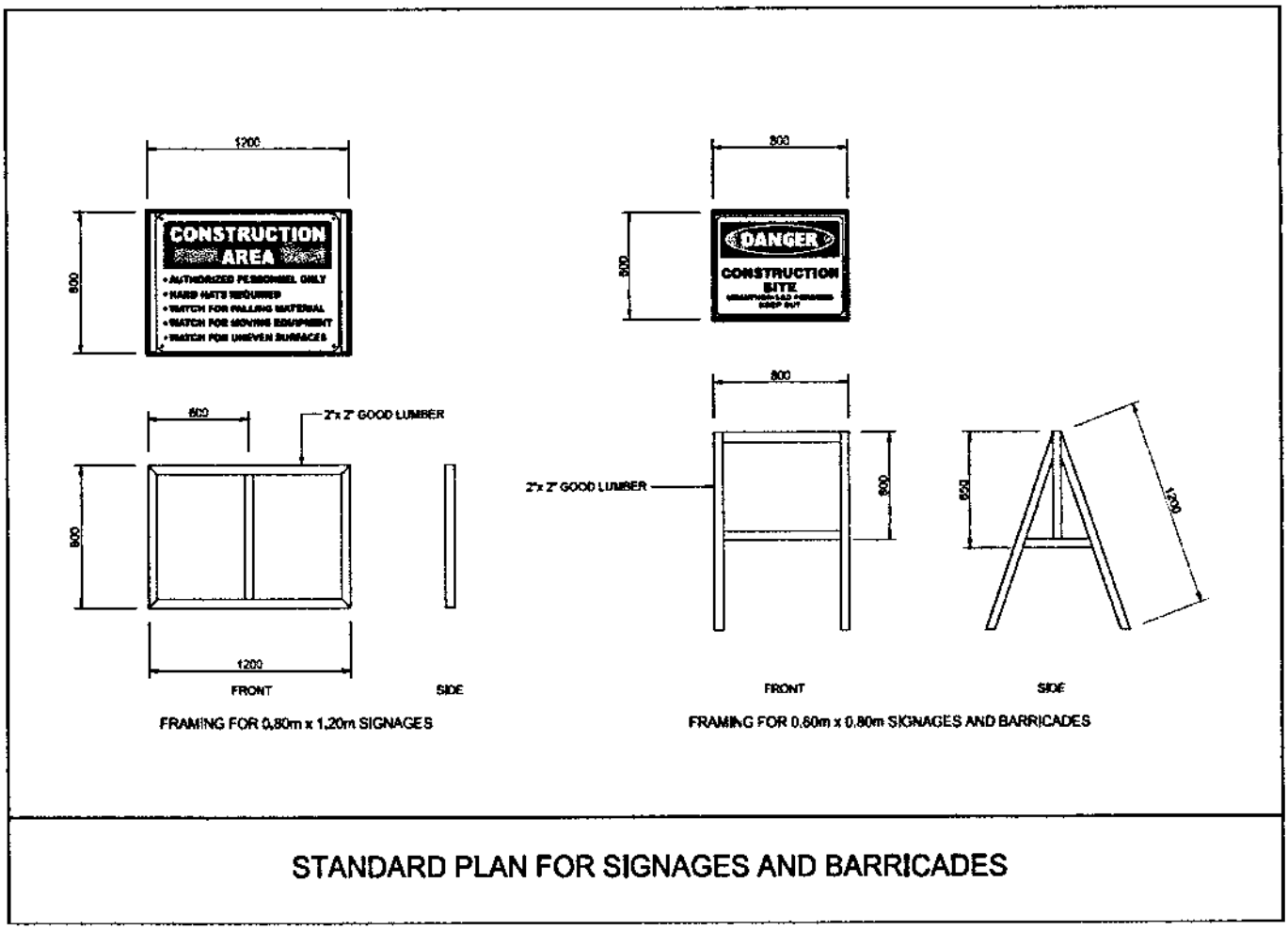
SPECIFICATION

The Signage's and Barricades shall be installed at location(s) designated by the Engineer.

The sizes of the standard signages shall be 2-2/3ft x 4ft (800mm X 1,200mm) for fixed type and 2ft x 2–2/3ft (600mm x 800mm) for mobile type. For barricade standard 2ft x 2–2/3ft (600mm x 800mm) shall be provided.

The materials to be used for signages and barricades are ½ inch (12mm) marine plywood or tarpaulin poster on 2" x 2" (50mm x 50mm) good lumber frame (see drawing below).

The printing or painting shall be the discretion of the Engineer.



STANDARD PLAN FOR SIGNAGES AND BARRICADES

SECTION VII

DRAWINGS
(APPROVED PLANS)

DRAWINGS AND APPROVED PLANS
(SEE ISSUED APPROVED PLANS)

LIST OF DRAWINGS:

PORT OPERATIONAL AREA

S-01 OF 22 - Development Plan, Vicinity Map, General Notes, Table of Contents

S-02 OF 22 - General Plan

S-03 OF 22 - Piling Plan

S-04 OF 22 - Section A-A

S-05 OF 22 - Section B-B

S-06 OF 22 - Section C-C, Section D-D

S-07 OF 22 - Section E-E, Section F-F

S-08 OF 22 - Section G-G, Section H-H

S-09 OF 22 - Section I-I, Section J-J, Section K-K

S-10 OF 22 - Detail of Retaining Walls, Detail of Wing Wall, Detail of Anchor Pile Block

S-11 OF 22 - Detail of Mooring Block, Detail of Anchor Block, Installation Detail of Steel Ramp Protection

S-12 OF 22 - Detail of Lateral Drain, Detail of Concrete Blocks

S-13 OF 22 - Detail of Catch Drain Manhole, Detail of Fence

S-14 OF 22 - Key Sheet Piling Plan, Detail of Tie Rod

S-15 OF 22 - Storm Drainage Layout

S-16 OF 22 - Detail of Rubber Dock Fender, Detail of 35 Ton Mooring Bollard

S-17 OF 22 - Detail of 800mmØ x 13mm THK Tubular Steel Sheet Pile

S-18 OF 22 - Detail of Concrete Blocks, Detail of 50 Ton Mooring Bollard

S-19 OF 22 - Port Lighting Layout Plan, Legend

S-20 OF 22 - Detail of Lamp Post Foundation, Detail of Lamp Post Foundation (Cantilever), Existing Integrated Solar Street Light

S-21 OF 22 - Detail of 12M.HT. Flood Light Pole, Platform Plan of Floodlight, Platform Mounting Detail, Step Bar Detail, Lower/Upper Plate, Upper/Lower Post, Base Plate, Specification, Air Terminal Copper Rod

S-22 OF 22 - Detail of Flood Light Foundation, Load Schedule, General Notes

GATE COMPLEX

GC-01 OF 12 - Perspective, Floor Plan, Roof Plan, Reflected Ceiling Plan, Front Elevation, Rear Elevation, Right Side Elevation, Left Side Elevation, Section Thru A-A', Section Thru B-B', Section Thru C-C'

GC-02 OF 12 - Ramp Blow Up Detail, Schedule of Doors, Windows and Gates, Signage Blow-Up Detail, PPA Logo Detail

GC-03 OF 12 - General Notes and Standards

GC-04 OF 12 - Standard Details

GC-05 OF 12 - General Layout Plan, Foundation Plan, Wall Footing & SOG Plan, FGL. EL +3.40m Framing Plan, FGL. EL +5.40m Framing Plan, Typical Detail of SOG, Slab Change Soffit Detail, WF-1 Detail, WF-2 Detail

GC-06 OF 12 - Footing Schedule, Footing Tie Beam Schedule, Column Schedule, C-1/F-2 Elevation, Beam Schedule

GC-07 OF 12 - Typical Stiffener Column Elevation, Wall Supported By FTB, Parapet Wall 1 Detail, Parapet Wall 2 Detail, Corner Slab Detail, Ramp Longitudinal Section, Typ. 1-Way Slab Reinforcement Detail, Typ. 2-Way Slab Reinforcement Detail, Slab Schedule

GC-08 OF 12 - Detail A, Detail B, Typical Plan and Elevation of CHB Fence

GC-09 OF 12 - General Notes and Specifications, Material Specifications, Plumbing Layout Site Plan

GC-10 OF 12 - Sewer and Storm Water Drainage Floor Plan, Sewer and Storm Water Roof Plan, Sewer and Storm Water Drainage Isometric Plan, Water Distribution Layout Plan, Water Distribution Isometric Plan

GC-11 OF 12 - Details of Septic Tank, Details of Manhole Cover, Details of Catch Basin, Details of Plumbing Fixture, Details of Clean out, Details of Floor Drain, Details of Roof Drain, Detail of Trenching, Bedding & Backfilling of Pipes, Details of Pipe Penetration on R.C. Wall

GC-12 OF 12 - Lighting Layout Plan, Power Layout Plan, Schedule of Loads, Legend

TRANSIT SHED

TS-01 OF 30 - Location Plan, Site Development Plan

TS-02 OF 30 - Perspective, Floor Plan, Front Elevation

TS-03 OF 30 - Rear Elevation, Right Side Elevation, Left Side Elevation, Section Thru A-A', Section Thru B-B'

TS-04 OF 30 - Reflected Ceiling Plan, Roof Plan

TS-05 OF 30 - Doors and Windows Schedule

TS-06 OF 30 - Toilet Details, Typical Mirror Details, Office Details, Ramp Details, PPA Logo Details

TS-07 OF 30 - General Notes (Structural)

TS-08 OF 30 - Piling Plan, Schedule of Piles, Foundation Plan

TS-09 OF 30 - Detail of Frame-A

TS-10 OF 30 - Detail of Frame-E

TS-11 OF 30 - Detail of Frame-1

TS-12 OF 30 - Detail of Frame-5

TS-13 OF 30 - Detail of Frame-B, C & D

TS-14 OF 30 - Spot Detail 1, Spot Detail 2, Typ. Detail of Gusset Plate, Detail of Retaining Wall-1, Detail of Lintel Beam, Slab on Fill Reinforcement Detail, Detail of Wall Footing

TS-15 OF 30 - Detail of PC1-C1, Detail of F2-C2

TS-16 OF 30 - Roof Framing Plan (Office), Detail of Beam-1, Detail of Beam-2, Detail of C3-F3, Detail of Ramp-Up, Detail of Retaining Wall-2

TS-17 OF 30 - Connection Detail-A, Connection Detail-B, Connection Detail-C

TS-18 OF 30 - Connection Detail-D, Connection Detail-E, Connection Detail-F, Connection Detail-G

TS-19 OF 30 - Roof Framing Plan

TS-20 OF 30 - Details of 400mm x 400mm Pre-Stressed Concrete Pile

TS-21 OF 30 - Removal of Existing Pavement Layout, 300mm Thick PCC Pavement Layout Plan, Scrapping of Fill Material Section, Detail of 300mm Thick PCC Pavement

TS-22 OF 30 - General Notes and Specifications, Material Specifications, Plumbing Layout Site Plan

TS-23 OF 30 - Water Supply Layout Plans, Sewer and Vent Layout Plans

TS-24 OF 30 - Water Supply Isometric Plan, Sewer and Vent Isometric Layout

TS-25 OF 30 - Storm and Drainage Roof Plan, Drainage Line Isometric Plan, Storm and Drainage Detailed Plan

TS-26 OF 30 - Details of Septic Tank, Details of Manhole Cover, Details of Catch Basin, Details of Plumbing Fixture, Details of Cleanout, Details of Floor Drain, Details of Roof Drain, Detail of Trenching, Bedding & Backfilling of Pipes, Details of Pipe Penetration on R.C. Wall

TS-27 OF 30 - Lighting Layout Plan, Power Layout Plan, Schedule of Loads, Riser Diagram, Legend

TS-28 OF 30 - General Notes, Abbreviations, Drawing Index, Equipment Schedule, Legends and Symbols

TS-29 OF 30 - Air-Conditioning and Ventilation Layout, Miscellaneous Details

TS-30 OF 30 - General Notes, Fire Extinguisher Layout, Miscellaneous Details

SECTION VIII

BILL OF QUANTITIES and ATTACHMENTS

BID SUMMARY

LAMAO (LILOY) PORT EXPANSION PROJECT

Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte

NO.	DESCRIPTION OF WORK	AMOUNT (Pesos)
BILL NO.	1 GENERAL EXPENSES	
BILL NO.	2 REMOVAL, DISPOSAL AND EXCAVATION WORKS	
BILL NO.	3 PORT OPERATIONAL AREA WITH RORO RAMP ON FILL	
BILL NO.	4 CARGO SHED, GATE AND GUARDHOUSE	
BILL NO.	5 REIMBURSABLE ITEMS	1,050,000.00
	BID PRICE	

Name of Firm

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Date

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Lloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
4.25	Supply and install water line pipes and fittings including accessories.	lot	1		
4.26	Supply and install sewerage pipes and fittings including accessories.	lot	1		
4.27	Supply and install drainage pipes and fittings including accessories	lot	1		
4.28	Construct septic vault including fittings and accessories	no.	1		
4.29	Supply, deliver and install electrical materials including accessories	lot	1		
4.30	Supply, deliver and install airconditioning unit and other apurtenances	lot	1		
4.31	Supply and install ventilation system including accessories	lot	1		
4.32	Supply and install fire extinguishers including accessories	set	6		
4.33	Construct guardhouse ang gate and other appurtenances	lot	1		
4.34	Supply, deliver and install PPA Logo including accessories	lot	1		
	TOTAL FOR BILL NO. 4				-

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**5 REIMBURSABLE ITEMS**				
5.01	Secure approval of environmental Compliance Certificate (ECC) Application, Clearance and other necessary documentary requirements	lot	1	1,050,000.00	1,050,000.00
	TOTAL FOR BILL NO. 5				**1,050,000.00**

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO. 1	**GENERAL EXPENSES**				
1.01	Mobilization, demobilization and cleaning	lot	1		
1.02	Rental of temporary site office and residence for the Engineer and staff	mo.	24		
1.03	Maintain temporary site office and residence for the Engineer and staff	mo.	24		
1.04	Provide Construction Safety and Health Program in the execution of the project	mo.	24		
	TOTAL FOR BILL NO. 1				-

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Lliloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**2 REMOVAL, DISPOSAL AND EXCAVATION WORKS**				
2.01	Remove existing fender and turn over to the authority as directed by the Engineer	no.	10		
2.02	Remove existing mooring bollard and turn over to the authority as directed by the Engineer	no.	7		
2.03	Remove and dispose existing RC deck	sq.m.	430		
2.04	Remove and dispose existing building structures	sq.m.	26		
2.05	Cut and dispose existing PSC Piles up to seabed elevation	no.	64		
2.06	Excavation of existing seabed up to required elevation prior to installation of core rocks	cu.m.	8,484		
2.07	Excavation of existing portion of fill up to required elevation including backfilling and disposal of unsuitable materials thereinafter	cu.m.	23		
2.08	Chip-off and dispose existing R.C. Curb, flush to required elevation and smoothen with mortar	l.m.	86		
2.09	Remove existing lamp post and turn over to the authority	set	8		
2.10	Remove and dispose existing fence and gate	l.m.	96		
	TOTAL FOR BILL NO. 2				-

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Lloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**3 PORT OPERATIONAL AREA WITH RORO RAMP ON FILL**				
3.01	Supply and deliver to site 800mm dia. tubular steel pipe piles including connectors	m.t.	1,203		
3.02	Handle, pitch and drive Steel pipe piles and connectors	l.m.	4,425		
3.03	Supply and install steel waling and splice plate for the steel sheet piles	kg.	15,487		
3.04	Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 1,500 microns dry film thickness or equivalent)	sq.m.	4,004		
3.05	Supply, fabricate and install reinforcing cylinder band for steel pipe piles	no.	177		
3.06	Extraction of clogged and unsuitable materials inside the steel pipe piles	cu.m.	416		
3.07	Supply and install reinforcing steel cage for steel pipe piles	kg.	116,768		
3.08	Supply and place 3,500 psi concrete filler for steel pipe piles	cu.m.	916		
3.09	Supply and deliver to site 450mm x 450mm PSC anchor & vertical piles	l.m.	506		
3.10	Handle, pitch and drive 450mm x 450mm PSC anchor & vertical piles	l.m.	506		
3.11	Chip/cut and dispose portion of newly driven PSC anchor & vertical piles	no.	24		
3.12	Supply and place 3,500 psi concrete for the anchor wall, anchor pile wall retaining wall, rc curb, drainage outfall, and electrical works	cu.m.	575		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
3.13	Supply and install steel reinforcement for the anchor wall, anchor pile wall retaining wall, rc curb, drainage outfall, and electrical works	kg.	20,062		
3.14	Supply and place gravel bedding	cu.m.	25		
3.15	Supply and place 50-100 kg. Core rocks	cu.m.	6,632		
3.16	Supply and place 1000kg. Armour rocks	cu.m.	113		
3.17	Supply and Install Concrete blocks including lifting handle:				
	a) Concrete block no. 1	no.	4		
	b) Concrete block no. 2	no.	1		
	c) Concrete block no. 3	no.	1		
	d) Concrete block no. 4	no.	2		
3.18	Supply and place sacked concrete	cu.m.	12		
3.19	Supply and install tie-rod of various sizes including accessories				
	a) 50mm Ø x 13.00m	set	14		
	b) 50mm Ø x 16.00m	set	45		
	c) 50mm Ø x 14.60m	set	1		
	d) 50mm Ø x 12.40m	set	1		
	e) 50mm Ø x 10.10m	set	1		
	f) 50mm Ø x 7.90m	set	1		
	g) 50mm Ø x 5.70m	set	1		
	h) 50mm Ø x 3.40m	set	1		
	i) 32mm Ø x 16.00m	set	4		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
3.20	Supply and install Geotextile Fabric	sq.m.	3,265		
3.21	Supply and place Sand and Gravel fill	cu.m.	14,740		
3.22	Supply, spread and compact aggregate sub-base course	cu.m.	4,038		
3.23	Supply, spread and compact aggregate base course	cu.m.	624		
3.24	Construct portland cement concrete pavement (300mm thk) including dowel bars and construction joint	sq.m.	3,122		
3.25	Supply, fabricate and install 20mm thk., ASTM A572 Grade Plate Machine Bended including dowel bars	set	16		
3.26	Supply deliver and install port lighting system including floodlight	lot	1		
3.27	Construct lateral drainage including accessories	l.m.	77		
3.28	Construct catch drain manhole including accessories	no.	5		
3.29	Supply and lay 600mm dia. reinforced concrete pipe including accessories	l.m.	66		
3.30	Construct perimeter fence	l.m.	32		
3.31	Supply and deliver to site rubber dock fender (V-type, 600H x 2,000L) including accessories	set	8		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
3.32	Install rubber dock fender and accessories	set	8		
3.33	Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories	set	2		
3.34	Install mooring bollards (T-head type) and accessories	set	2		
3.35	Reinstallation of lamp post including accessories	set	7		
	TOTAL FOR BILL NO. 3				-

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Lliloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	4 CARGO SHED, GATE AND GUARDHOUSE				
4.01	Supply and deliver to site 450mm x 450mm PSC piles	l.m.	250		
4.02	Handle, pitch and drive 450mm x 450mm PSC piles	l.m.	250		
4.03	Cut/chip and dispose newly driven PSC pile up to required elevation	no.	10		
4.04	Supply and apply soil treatment	sq.m.	410		
4.05	Supply, place and compact gravel bedding	cu.m.	32		
4.06	Supply, spread and compact aggregate sub-base course	cu.m.	60		
4.07	Supply and place 4,000 psi. concrete for building structure	cu.m.	47		
4.08	Supply and install steel reinforcement for building structure	kg.	6,102		
4.09	Construct 4,000 psi. concrete slab, stairs and ramp on-fill including reinforcement	sq.m.	336		
4.10	Supply, fabricate and install structural steel materials including accessories, and epoxy anti corrosive paint with zinc phosphate	kg.	37,605		
4.11	Construct 150mm thick CHB wall including reinforcement	sq.m.	478		
4.12	Construct 100mm thick CHB wall including reinforcement	sq.m.	25		
4.13	Supply and place 13mm thick cement Plaster finish	sq.m.	1,211		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
LAMAO (LILOY) PORT EXPANSION PROJECT
Port of Lamao, Brgy. Lamao, Lliloy, Zamboanga Del Norte

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
4.14	Supply and apply Elastomeric paint (2-coats)	sq.m.	1,211		
4.15	Supply and apply water proofing for toilets, footbaths, stair wells, roof deck and canopies	sq.m.	5		
4.16	Supply and install pre-insulated pre painted GI sheet including accessories	sq.m.	472		
4.17	Supply and install 0.6m x 0.6m Unglazed Ceramic Tile Finish	sq.m.	17		
4.18	Supply and place power epoxy floor coating	sq.m.	270		
4.19	Supply and install 0.3m x 0.6m Ceramic wall tiles	sq.m.	13		
4.20	Supply and install Aluminum Clip-in Perforated Panel including accessories (0.60 x 0.60 x 0.0007m)	sq.m.	18		
4.21	Supply and install fabricated 1.5 mm thk. Aluminum Framed Doors, windows and glass partition including accessories	lot	1		
4.22	Supply and install fabricated Marine Plywood Finish Flush Doors, and PVC Louver Door including door jambs, hinges, locksets and other accessories	lot	1		
4.23	Supply and install manually operated pre-painted galvalume roll-up door including accessories (5.8m x 5.05m)	no.	1		
4.24	Supply and install toilet fixtures and accessories	lot	1		

Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)

BASIS OF PAYMENT FOR WORK ITEMS INCLUDED IN THE PROPOSAL

The work items included in the proposal and the basis of payments are as follows:

BILL NO. 1
GENERAL EXPENSES

Item 1.01 Mobilization, demobilization, and cleaning

The quantity to be paid for shall be the minimum equipment requirement enumerated in the bid documents mobilized, demobilized and cleaning of the site and accepted by the Engineer. The contract lump sum price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to mobilize and demobilize all the minimum equipment requirement enumerated in the bid documents including cleaning of the site. Fifty percent (50%) of the total amount shall be payable after the mobilization activity while the remaining (50%) payable after demobilization and cleaning.

Item 1.02 Rental of temporary site office and residence for the Engineer and staff

The quantity to be paid for shall be the actual rental of site office and residence for the engineer and staff and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary for the provision of temporary site office and residence for the engineer and staff.

Item 1.03 Maintain temporary site office and residence for the Engineer and staff

The quantity to be paid for shall be the actual services rendered in maintaining the site office and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the maintenance of the temporary site office and residence as well as other expenses such as provision for electric power, telephone bill, potable water supply, janitorial and security services.

Item 1.04 Provide construction safety and Health Program in the execution of the project

The quantity to be paid for shall be the actual implementation of construction safety and health program and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the implementation of the Construction Safety and Health Program, as required and approved by the Department of Labor and Employment (DOLE).

BILL NO. 2
REMOVAL, DISPOSAL AND EXCAVATION WORKS

Item 2.01 Remove existing fender and turn over to the authority as directed by the Engineer

The quantity to be paid for shall be the actual number of existing fender to be removed and turned over to the authority as directed by the Engineer in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.02 Remove existing mooring bollard and turn over to the authority as directed by the Engineer

The quantity to be paid for shall be the actual number of existing mooring bollard to be removed and turned over to the authority as directed by the Engineer in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.03 Remove and dispose existing RC deck

The quantity to be paid for shall be the actual area in square meter of existing RC deck to be removed, including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.04 Remove and dispose existing building structures

The quantity to be paid for shall be the actual area in square meter of existing building structures to be removed, including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.05 Cut and dispose existing PSC Piles up to seabed elevation

The quantity to be paid for shall be the actual number of existing PSC Piles to be cut up to seabed elevation, including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.06 Excavation of existing seabed up to required elevation prior to installation of core rocks

The quantity to be paid for shall be the actual volume in cubic meter of existing seabed to be excavated up to required elevation prior to installation of core rocks in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.07 **Excavation of existing portion of fill up to required elevation including backfilling and disposal of unsuitable materials thereinafter**

The quantity to be paid for shall be the actual volume in cubic meter of existing portion of fill to be excavated up to required elevation, including backfilling and disposal of unsuitable materials thereinafter, in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.08 **Chip-off and dispose existing R.C. Curb, flush to required elevation and smoothen with mortar**

The quantity to be paid for shall be the actual length in linear meter of existing R.C. Curb to be chipped-off, flushed to required elevation and smoothened with mortar, including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.09 **Remove existing lamp post and turn over to the authority**

The quantity to be paid for shall be the actual set of existing lamp post to be removed and turned over to the authority in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 2.10 **Remove and dispose existing fence and gate**

The quantity to be paid for shall be the actual length in linear meter of existing fence and gate to be removed and disposed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

BILL NO. 3
PORT OPERATIONAL AREA WITH RORO RAMP ON FILL

Item 3.01 **Supply and deliver to site 800mm dia. tubular steel pipe piles including connectors**

The quantity to be paid for shall be the actual weight in metric ton of 800mm dia. tubular steel pipe piles including connectors to be supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.02 **Handle, pitch and drive Steel pipe piles and connectors**

The quantity to be paid for shall be the actual length in linear meter of Steel pipe piles and connectors to be handled, pitched and driven in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.03 Supply and install steel waling and splice plate for the steel sheet piles

The quantity to be paid for shall be the actual weight in kilogram of steel waling and splice plate for the steel sheet piles to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.04 Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 1,500 microns dry film thickness or equivalent)

The quantity to be paid for shall be the actual area in square meter of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 1,500 microns dry film thickness or equivalent) to be applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.05 Supply, fabricate and install reinforcing cylinder band for steel pipe piles

The quantity to be paid for shall be the actual number of reinforcing cylinder band for steel pipe piles to be supplied, fabricated, and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.06 Extraction of clogged and unsuitable materials inside the steel pipe piles

The quantity to be paid for shall be the actual volume in cubic meter of clogged and unsuitable materials inside the steel pipe piles to be extracted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.07 Supply and install reinforcing steel cage for steel pipe piles

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel cage for steel pipe piles to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.08 Supply and place 3,500 psi concrete filler for steel pipe piles

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete filler for steel pipe piles to be supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.09 Supply and deliver to site 450mm x 450mm PSC anchor & vertical piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC anchor & vertical piles to be supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price

shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.10 Handle, pitch and drive 450mm x 450mm PSC anchor & vertical piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC anchor piles & vertical piles to be handled, pitched, and driven in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.11 Chip/cut and dispose portion of newly driven PSC anchor & vertical piles

The quantity to be paid for shall be the actual number of newly driven PSC anchor & vertical piles to be chipped/cut, including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.12 Supply and place 3,500 psi concrete for the anchor wall, anchor pile wall retaining wall, rc curb, drainage outfall, and electrical works

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete for the anchor wall, anchor pile wall retaining wall, rc curb, drainage outfall, and electrical works to be supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.13 Supply and install steel reinforcement for the anchor wall, anchor pile wall, retaining wall, rc curb, drainage outfall, and electrical works

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement for the anchor wall, anchor pile wall, retaining wall, rc curb, drainage outfall, and electrical works to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.14 Supply and place gravel bedding

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding to be supplied and placed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.15 Supply and place 50-100 kg. Core rocks

The quantity to be paid for shall be the actual volume in cubic meter of 50-100 kg. core rocks, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of core rocks shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.16 Supply and place 1000kg. Armour rocks

The quantity to be paid for shall be the actual volume in cubic meter of 1000 kg. Armour rocks, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of armour rocks shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work

Item 3.17 Supply and install Concrete blocks including lifting handle:

a) Concrete block no. 1
b) Concrete block no. 2
c) Concrete block no. 3
d) Concrete block no. 4

The quantity to be paid for shall be the actual number of concrete blocks including lifting handle to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.18 Supply and place sacked concrete

The quantity to be paid for shall be the actual volume in cubic meter of sacked concrete to be supplied and placed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.19 Supply and install tie-rod of various sizes including accessories

a) 50mm Ø x 13.00m
b) 50mm Ø x 16.00m
c) 50mm Ø x 14.60m
d) 50mm Ø x 12.40m
e) 50mm Ø x 10.10m
f) 50mm Ø x 7.90m
g) 50mm Ø x 5.70m
h) 50mm Ø x 3.40m
i) 32mm Ø x 16.00m

The quantity to be paid for shall be the actual set of tie-rod of various sizes including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.20 Supply and install Geotextile Fabric

The quantity to be paid for shall be the actual area in square meter of Geotextile Fabric to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.21 Supply and place Sand and Gravel fill

The quantity to be paid for shall be the actual volume in cubic meter of Sand and Gravel fill, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of sand and gravel fill shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.22 Supply, spread and compact aggregate sub-base course

The quantity to be paid for shall be the actual volume in cubic meter of aggregate sub-base course to be supplied, spread and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.23 Supply, spread and compact aggregate base course

The quantity to be paid for shall be the actual volume in cubic meter of aggregate base course to be supplied, spread and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.24 Construct portland cement concrete pavement (300mm thk) including dowel bars and construction joint

The quantity to be paid for shall be the actual area in square meter of portland cement concrete pavement (300 mm thk) including dowel bars and construction joints to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.25 Supply, fabricate and install 20mm thk., ASTM A572 Grade Plate Machine Bended including dowel bars

The quantity to be paid for shall be the actual set of 20mm thk. ASTM A572 Grade Plate Machine Bended including dowel bars to be supplied, fabricated and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.26 Supply, deliver and install port lighting system including floodlight

The quantity to be paid for shall be the actual lot of port lighting system including floodlight to be supplied, delivered, and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.27 Construct lateral drainage including accessories

The quantity to be paid for shall be the actual length in linear meter of lateral drainage including accessories to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.28 Construct catch drain manhole including accessories

The quantity to be paid for shall be the actual number of catch drain manhole including accessories to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.29 Supply and lay 600mm dia. reinforced concrete pipe including accessories

The quantity to be paid for shall be the actual length of 600mm dia. reinforced concrete pipe including accessories to supplied and laid in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.30 Construct perimeter fence

The quantity to be paid for shall be the actual length in linear meter of perimeter fence to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.31 Supply and deliver to site rubber dock fender (V-type, 600H x 2,000L) including accessories

The quantity to be paid for shall be the actual set of rubber dock fender (V-type, 600H x 2,000L) including accessories to be supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.32 Install rubber dock fender and accessories

The quantity to be paid for shall be the actual set of rubber dock fender and accessories to be installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.33 Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories

The quantity to be paid for shall be the actual set of mooring bollard (35 Tons, T-head) including accessories to be supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.34 Install mooring bollards (T-head type) and accessories

The quantity to be paid for shall be the actual set of mooring bollard (T-head type) and accessories to be installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.35 Reinstallation of lamp post including accessories

The quantity to be paid for shall be the actual set of lamp post including accessories to be reinstalled in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

BILL NO. 4
CARGO SHED, GATE AND GUARDHOUSE

Item 4.01 Supply and deliver to site 450mm x 450mm PSC piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC piles to be supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.02 Handle, pitch and drive 450mm x 450mm PSC piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC piles to be handled, pitched and driven in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.03 Cut/chip and dispose newly driven PSC pile up to required elevation

The quantity to be paid for shall be the actual number of newly driven PSC piles to be cut/chipped, including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.04 Supply and apply soil treatment

The quantity to be paid for shall be the actual area in square meter of soil treatment to be supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.05 Supply, place and compact gravel bedding

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding to be supplied, placed and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.06 Supply, spread and compact aggregate sub-base course

The quantity to be paid for shall be the actual volume in cubic meter of aggregate sub-base course to be supplied, spread and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.07 Supply and place 4,000 psi. concrete for building structure

The quantity to be paid for shall be the actual volume in cubic meter of 4,000 psi. concrete for building structure to be supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.08 Supply and install steel reinforcement for building structure

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement for building structure to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.09 Construct 4,000 psi. concrete slab, stairs and ramp on-fill including reinforcement

The quantity to be paid for shall be the actual area in square meter of 4,000 psi. concrete slab, stairs and ramp on-fill including reinforcement to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.10 Supply, fabricate and install structural steel materials including accessories, and epoxy anti corrosive paint with zinc phosphate

The quantity to be paid for shall be the actual weight in kilogram of structural steel materials including accessories, and epoxy anti corrosive paint with zinc phosphate to be supplied, fabricated, and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.11 Construct 150mm thick CHB wall including reinforcement

The quantity to be paid for shall be the actual area in square meter of 150mm thick CHB wall including reinforcement to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.12 Construct 100mm thick CHB wall including reinforcement

The quantity to be paid for shall be the actual area in square meter of 100mm thick CHB wall including reinforcement to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full

compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.13 Supply and place 13mm thick cement Plaster finish

The quantity to be paid for shall be the actual area in square meter of 13mm thick cement Plaster finish to be supplied and placed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.14 Supply and apply Elastomeric paint (2-coats)

The quantity to be paid for shall be the actual area in square meter of Elastomeric paint (2-coats) to be supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.15 Supply and apply water proofing for toilets, footbaths, stair wells, roof deck and canopies

The quantity to be paid for shall be the actual area in square meter of water proofing for toilets, footbaths, stair wells, roof deck and canopies to be supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.16 Supply and install pre-insulated pre painted GI sheet including accessories

The quantity to be paid for shall be the actual area in square meter of pre-insulated pre painted GI sheet including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.17 Supply and install 0.6m x 0.6m Unglazed Ceramic Tile Finish

The quantity to be paid for shall be the actual area in square meter of 0.6m x 0.6m Unglazed Ceramic Tile Finish to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.18 Supply and place power epoxy floor coating

The quantity to be paid for shall be the actual area in square meter of power epoxy floor coating to be supplied and placed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.19 Supply and install 0.3m x 0.6m Ceramic wall tiles

The quantity to be paid for shall be the actual area in square meter of 0.3m x 0.6m Ceramic wall tiles to be supplied and installed in accordance with the plans and

specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.20 Supply and install Aluminum Clip-in Perforated Panel including accessories (0.60 x 0.60 x 0.0007m)

The quantity to be paid for shall be the actual area in square meter of Aluminum Clip-in Perforated Panel including accessories (0.60 x 0.60 x 0.0007m) to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.21 Supply and install fabricated 1.5 mm thk. Aluminum Framed Doors, windows and glass partition including accessories

The quantity to be paid for shall be the actual lot of fabricated 1.5 mm thk. Aluminum Framed Doors, windows and glass partition including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.22 Supply and install fabricated Marine Plywood Finish Flush Doors, and PVC Louver Door including door jambs, hinges, locksets and other accessories

The quantity to be paid for shall be the actual lot of fabricated Marine Plywood Finish Flush Doors, and PVC Louver Door including door jambs, hinges, locksets and other accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.23 Supply and install manually operated pre-painted galvalume roll-up door including accessories (5.8m x 5.05m)

The quantity to be paid for shall be the actual number of manually operated pre-painted galvalume roll-up door including accessories (5.8m x 5.05m) to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.24 Supply and install toilet fixtures and accessories

The quantity to be paid for shall be the actual lot of toilet fixtures and accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.25 Supply and install water line pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of water line pipes and fittings including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.26 Supply and install sewerage pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of sewerage pipes and fittings including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.27 Supply and install drainage pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of drainage pipes and fittings including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.28 Construct septic vault including fittings and accessories

The quantity to be paid for shall be the actual lot of septic vault including fittings and accessories to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.29 Supply, deliver and install electrical materials including accessories

The quantity to be paid for shall be the actual lot of electrical materials including accessories to be supplied, delivered, and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.30 Supply, deliver and install air-conditioning unit and other appurtenances

The quantity to be paid for shall be the actual lot of air-conditioning unit and other appurtenances to be supplied, delivered, and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.31 Supply and install ventilation system including accessories

The quantity to be paid for shall be the actual lot of ventilation system including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.32 Supply and install fire extinguishers including accessories

The quantity to be paid for shall be the actual set of fire extinguishers including accessories to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.33 Construct guardhouse and gate and other appurtenances

The quantity to be paid for shall be the actual lot of guardhouse and gate and other appurtenances to be constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.34 Supply, deliver and install PPA Logo including accessories

The quantity to be paid for shall be the actual lot of PPA Logo including accessories to be supplied, delivered, and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

BILL NO. 5
REIMBURSABLE ITEMS

Item 5.01 Secure approval of environmental Compliance Certificate (ECC) Application, Clearance and other necessary documentary requirements

Payment for the aforementioned items will be made upon the successful securement of the approved ECC and, if necessary, the Area Clearance for the Lamao (Liloy) Port Expansion Project located at the Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte. These approvals will be issued by the concerned Department of Environment and Natural Resources (DENR).

The contract's lump sum price will serve as full compensation to the Contractor, who is responsible for all activities related to securing the ECC and Area Clearance, whether carried out in-house or through a commissioned consultant. Claims for payment must be accompanied by invoice and/or other supporting documents (e.g., a notarized certificate of completion). The total amount payable shall not exceed the contract's lump sum price.

FACILITIES TO BE PROVIDED FOR THE ENGINEER & HIS STAFF

RENTAL OF SITE OFFICE AND RESIDENCE FOR THE ENGINEER & STAFF

The Contractor shall provide a temporary site office and residence (rental) with an area of at least 48 square meters for use of the Engineer and his staff for the whole duration of the project.

Secure Approval of Environmental Compliance Certificate (ECC) Application and Area Clearance (If Necessary)

The Contractor shall be responsible for facilitating the securement of the Environmental Compliance Certificate (ECC) and, if necessary, the Area Clearance prior to the commencement of the project. This process may be carried out through either in-house resources or a commissioned consultant. The Contractor's responsibilities include, but are not limited to:

A. Preparation of the Environmental Impact Assessment (EIA) Report

The Contractor shall prepare the EIA Report in compliance with all applicable laws, policies, and guidelines set forth by the Department of Environment and Natural Resources (DENR).

B. Submission of Required Documents

The Contractor shall submit all necessary documentation to the appropriate DENR Regional Office and coordinate with other government agencies to acquire the ECC and Area Clearance. This includes obtaining any additional clearances or permits that may be required.

C. Technical Expertise

The Contractor shall provide technical expertise throughout the processing of the ECC and Area Clearance applications until the approvals are granted.

D. Facilitation of Related Activities

The Contractor shall facilitate any other activities or undertakings associated with obtaining the necessary approvals.

During the initial stages of the ECC application, the Contractor may seek assistance from the concerned Port Management Office (PMO) for tasks such as identifying necessary documents and navigating the initial application submission process.

MINIMUM MAJOR EQUIPMENT REQUIREMENTS

1	unit/s	Air Compressor (250 cfm, minimum), owned
1	unit/s	Backhoe (0.40 cu.m., 94.30hp, minimum), owned
1	unit/s	Clamshell, owned
1	unit/s	Concrete cutter, owned
1	unit/s	Concrete Mixer (1 bagger, minimum), owned
1	unit/s	Concrete bucket, owned
1	unit/s	Concrete Screeder, owned
1	unit/s	Concrete Vibrator (3.5 hp, minimum), owned
1	unit/s	Crane Barge (319 GW, minimum) with 60T crane, owned
1	unit/s	Crawler Crane (30T, minimum), owned
1	unit/s	Crawler Crane (20T, minimum), owned
1	unit/s	Pile Hammer (Diesel, 10,500 kg.m. min. - 16,000 kg.m. max or hydraulic equivalent), owned
2	unit/s	Diving equipment (complete), owned/leased
1	unit/s	Drop Hammer (2T, minimum), owned
1	unit/s	Dump Truck (10T, net capacity, minimum), owned
2	unit/s	Bar Bender (electric, 25mm dia min.), owned
2	unit/s	Bar Cutter (electric, 25mm dia min.), owned
2	unit/s	Jackhammer, owned
2	unit/s	Oxy/Acetylene cutting outfit, owned
1	unit/s	Payloader (80 hp, minimum), owned
1	unit/s	Plate Compactor (5 hp, minimum), owned
1	unit/s	Road Grader (125 hp, minimum), owned/leased
1	unit/s	Road Roller (10T, vibratory, minimum), owned/leased
1	unit/s	Transit Mixer (6 cu.m. cap., minimum), owned/leased
1	unit/s	Tugboat (500hp, minimum), owned/leased
2	unit/s	U/W cutting equipment, owned/leased
1	unit/s	Water Truck with pump (1,000 gal., minimum), owned
2	unit/s	Welding Machine (400 amp., minimum), owned
1	unit/s	Cargo Truck (2T, minimum) , owned
1	unit/s	Concrete breaker (Backhoe Attachment), owned

CONSTRUCTION SAFETY AND HEALTH REQUIREMENT

The Contractor shall implement the construction safety and health program in accordance with the applicable provisions of the Occupational Safety and Health Standards (OSHS) of the Department of Labor and Employment (DOLE).

The Contractor, subject to the approval of the Engineer shall provide and maintain throughout the duration of the contract a medical room with at least 15 square meters together with all necessary supplies to be sited in the Contractor's main area.

The Contractor shall provide the following minimum requirements:

L A B O R

1	no.	Safety Engineer / Officer
1	no.	Nurse / Health Officer

EQUIPMENT / MATERIALS

Personnel Protective Equipment

51	pcs.	Hard Hats
51	pairs	Gloves (rubberized)
51	pcs.	Safety Glasses/Goggles (clear)
102	pcs.	Long sleeve T-shirt
4	pcs.	Aprons
51	pairs	Safety Shoes

Safety Devices

1	lot	Barricades
1	lot	Warning signs
2	unit/s	Fire extinguisher (10kg)

Medical and First Aid System - Twenty-four (24) mos.

NOTE:

The Contractor shall provide the above-cited minimum construction safety and health requirements or as required by the Engineer.

PPA MEMORANDUM CIRCULAR
No 02
Series of 2018
Attachment

REVISED SCHEDULE OF MINIMUM TEST REQUIREMENTS OF CONSTRUCTION MATERIALS FOR PPA INFRASTRUCTURE PROJECTS

Materials/Items of Work	*Required Tests*	*Minimum Incremental Frequency of Tests*
I. Construction of Pier/Wharf, Platform and Ramp		
Structural Concrete (SC)		
A Portland Cement	Quality Test	For every 2,000 bags (40kg) or fraction thereof
B Fine Aggregate	Quality Test for Grading, Elutriation (wash), Bulk Specific Gravity, Absorption, Mortar Strength, Soundness, Organic Impurities, Unit Weight, % Clay Lumps and Shale	For every 1,500 cubic meter or fraction thereof
C Coarse Aggregate	Quality Test for Grading, Bulk Specific Gravity, Absorption and Abrasion	For every 1,500 cubic meter or fraction thereof
D Water	Certificate from the Engineer or Quality Test for Density and Chloride Content	One per source
E Steel Bars	Mill Certificate and Quality Test for Chemical Composition and Mechanical Properties	For every 10,000 kg or fraction thereof
F Concrete	Compressive Strength on cylinder samples	1 set consisting of 3 concrete cylinder samples shall be taken from each day's pouring and to represent not more than 75 cu m of concrete or fraction thereof
	Slump Test	For every mix
G Admixture and Concrete Curing Materials	Quality Test	One per shipment
Piling (P)		
A Concrete Piles	Fabrication Report	One per fabrication
1 Concrete	Same test as for SC (F)	Same frequency as SC (F)
2 Steel Bars	Same test as for SC (E)	Same frequency as SC (E)
3 High Tension Strand	Test for Chemical Composition and Mechanical Properties	For every 20000kg or fraction thereof

Materials/Items of Work	Required Tests	Minimum Incremental Frequency of Tests
4 Coarse Aggregates	Same Test as for SC (C)	Same frequency as SC (C)
5 Fine Aggregates	Same Test as for SC (B)	Same frequency as SC (B)
B Steel Pipe Piles	Fabrication Report, Mill Certificate and Quality Test for Chemical and Mechanical properties	One per fabrication
1 Steel	Chemical Composition (refer below)	
	- Under 14" (355 60mm) Outside Diameter	2 from 200 pipe of fraction thereof
	- 14" to 36" (355 6 to 914mm) Outside Dia	2 from 100 pipe or fraction thereof
	- Over 36" (914mm) Outside Diameter	2 from 3000ft (914m) or fraction thereof
	Mechanical/Tensile	One (1) tension test shall be made on one length or fraction thereof of each size, or one piece of skelp representing each lot of 200 lengths or fraction thereof of each size
2 Polyurethane Coating	Mill Certificate and Quality Test	One per fabrication
3 Concrete	Same test as for SC (F)	Same frequency as SC (F)
4 Fine Aggregate	Same test as for SC (B)	Same frequency as SC (B)
5 Coarse Aggregate	Same test as for SC (C)	Same frequency as SC (C)
6 Steel Bars	Same Test as SC (E)	Same frequency as SC (E)
7 Water	Same Test as SC (D)	Same frequency as SC (D)
Rubber Dock Fenders (RDF)	Physical Test	All units
	Performance Test for Energy Absorption and Reaction Force	All units
Accessories		
Washer and Fixing Bolt, Anchor Bolt	Physical Test	All units
	Quality Test for Chemical Composition and Mechanical Properties	One per fabrication

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
Mooring Bollard (MB) and Accessories (Hexagon Nuts, Plain Washer, Anchor Ring and Anchor Bolt)	Physical Test Quality Test for Chemical Composition and Mechanical Properties	All Units One per fabrication
II. Construction of Back-Up Area, Causeway and Pavement		
Sheet Piling (SP)		
A Concrete Sheet Piles		
1 Concrete	Same test as for SC (F)	Same frequency as SC (F)
2 Steel Bars	Same test as for SC (E)	Same frequency as SC (E)
3 High Tension Strands	Same test as for P (A 3)	Same frequency as P (A 3)
4 Fine Aggregates	Same test as for SC (B)	Same frequency as SC (B)
5 Coase Aggregates	Same Test as for SC (C)	Same frequency as SC (C)
B Steel Pipe Piles		
1 Steel	Same test as for P (B1)	Same frequency as P (B1)
2 Concrete	Same test as for SC (F)	Same frequency as SC (F)
3 Fine Aggregate	Same test as for SC (B)	Same frequency as SC (B)
4 Steel Bars	Same test as for SC (E)	Same frequency as SC (E)

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
Rocks	Test for Apparent Specific Gravity and Abrasion	For every 1,500 cubic meter or fraction thereof
Geotextile Filter	Physical and Mechanical Test Mill Certificate	One per batch One per batch
Sand and Gravel Fill	Quality Test for Organic Impurities and Grading	For every 1,500 cubic meter or fraction thereof
Selected Fill	Quality Test for Grading, Plasticity and Laboratory Compaction Test Laboratory California Bearing Ratio (CBR) Field Density Test	For every 1,500 cubic meter or fraction thereof For every 2,500 cubic meter or fraction thereof For every layer of 150mm of compacted depth at least one group of three in-situ density test for every 500 sq m or fraction thereof
Aggregate Base Course	Quality Test for Grading and Plasticity Quality Test for Grading, Plasticity, Abrasion and Laboratory Compaction Test Laboratory California Bearing Ratio (CBR) Field Density Test	For every 300 cubic meter or fraction thereof For every 1,500 cubic meter or fraction thereof Same frequency as Selected Fill Same frequency as Selected Fill
Portland Cement Concrete Pavement (PCCP)		
A Portland Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine Aggregate	Same test as for SC (B)	Same frequency as SC (B)
C Coarse Aggregate	Same test as for SC (C)	Same frequency as SC (C)
D Water	Same test as for SC (D)	Same frequency as SC (D)
E Steel Bars (Dowels)	Same test as for SC (E)	Same frequency as SC (E)
F Joint Filler	Quality Test	One (1) per shipment

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
G Admixture and Concrete Curing Material	Same test as for SC (G)	Same frequency as SC (G)
H Concrete	Same test as for SC (F)	Same frequency as SC (F)
	Flexural Test	3 beam samples for every 330 sq m or fraction thereof
I Completed Pavement	Core Test	1 set (3 specimen) for every 2,500 sq m and fraction thereof
Interlocking Concrete Blocks		
A Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine Aggregate	Same test as for SC (B)	Same frequency as SC (B)
C Coarse Aggregate	Same test as for SC (C)	Same frequency as SC (C)
D Water	Same test as for SC (D)	Same frequency as SC (D)
E Admixture & Concrete Curing Materials	Same test as for SC (G)	Same frequency as SC (G)
F Completed Blocks	Physical Test and Compressive Strength	6 blocks per day of fabrication
Cement Treated Base Course (CTB)		
A Portland Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine & Coarse Aggregates	Quality Test for Grading, Abrasion and Soundness	For every 1,500 cubic meter or fraction thereof
C Water	Same test as for SC (D)	Same frequency as SC (D)
D Completed CTB	Field Density Test	For every layer of 150mm of compacted depth at least one group of three In-situ density test every 500 sq m or fraction thereof
Retaining Wall/Coping Wall/RC Curb/RC Ditch/Shear Key/Concrete Blocks\Lean Concrete		
A Portland Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine Aggregate	Same test as for SC (B)	Same frequency as SC (B)

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
C Coarse Aggregates	Same test as for SC (C)	Same frequency as SC (C)
D Water	Same test as for SC (D)	Same frequency as SC (D)
E Steel Bars	Same test as for SC (E)	Same frequency as SC (E)
F Admixture and Concrete Curing	Same test as for SC (G)	Same frequency as SC (G)
G Concrete	Same test as for SC (F)	Same frequency as SC (F)
Tie Rod		
A Steel	Same test as for SC (E)	One per batch
B Assembly	Performance Test (Tension)	One per batch
Tie Bars and Dowels	Same test as for SC (E)	For every 10,000 kg or fraction thereof per Tie bars and Dowels
Pipe Culverts and Storm Drains		
A Pipes	Test for Strength, Absorption and Physical	For every 50 pieces
B Mortar or Joint	Same Test as for SC (A,B and D) Alternative Test Same test as for SC (F) and Inspection Report	For every 25 pieces
Concrete Hollow Blocks		
A Portland Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine Aggregates	Same test as for SC (B)	Same frequency as SC (B)
C Water	Same test as for SC (D)	Same frequency as SC (C)
D Concrete	Same test as for SC (F)	Same frequency as SC (F)
E Completed CHB	Quality Test	One for every 500 pieces or fraction thereof
Construction Joints (CJ)		
A Angle Bars	Test for Physical and Mechanical Properties	One per batch
B Steel Bars	Same test as for SC (E)	One per batch
C Zinc (Hot Dip Galvanizing) Coatings	Physical Test for Appearance, Stripping, Weighing, Adherence and Adhesion	All units
	Coating Thickness Magnetic Thickness Measurement	1 set (3 specimen) for every 100,000 sq mm or fraction thereof

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
Sacked Concrete		
A Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine Aggregates	Same test as for SC (B)	Same frequency as SC (B)
C Coarse Aggregates	Same test as for SC (C)	Same frequency as SC (C)
D Water	Same test as for SC (D)	Same frequency as SC (D)
E Concrete	Same test as for SC (F)	Same frequency as SC (F)
F Sack (jute)	Physical Test	One for every 50 pieces
Rubble Concrete		
A Cement	Same test as for SC (A)	Same frequency as SC (A)
B Fine Aggregates	Same test as for SC (B)	Same frequency as SC (B)
C Coarse Aggregates	Same test as for SC (C)	Same frequency as SC (C)
D Water	Same test as for SC (D)	Same frequency as SC (D)
E Concrete	Same test as for SC (F)	Same frequency as SC (F)
F Rocks	Same test as for ROCKS	Same frequency as ROCKS
Earthworks		
A Sub-grade preparation	Grading Test Plasticity Test (LL,PL,PI) Laboratory Compaction Test	For every 1,500 cubic meter or fraction thereof
	Density Test	For every layer of 150mm of compacted depth at least one group of three In-situ density test every 500 sq m or fraction thereof
B Structure Excavation	If excavated materials shall be used as Backfill Grading Test Plasticity Test (LL,PL,PI) Laboratory Compaction Test	For every 1,500 cubic meter or fraction thereof
	Density Test	For every layer of 150mm of compacted depth at least one group of three In-situ density test every 500 sq m or fraction thereof

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
III Port Operations Building/Passenger Terminal Building/Transit Shed/Warehouse		
STRUCTURAL WORKS	Refer to Structural Concrete (SC) and Piling Works (P)	
ARCHITECTURAL WORKS		
Ceramic – Filled Liquid Membrane / Water Proofing, Hydrophobic Poreblocking Ingredients with Superplasticizer	Physical Property, Mechanical and Chemical Property, Leak Test / Flood Test	One per shipment
Paint	Quality Test	One 4-L can for every 100 cans or fraction thereof
Ceramic Tile	Inspection and Evaluation Report from the Engineer	One per shipment
Stainless Steel	Inspection and Evaluation Report from the Engineer	One per shipment
Roofing Materials	Inspection and Evaluation Report from the Engineer	One per shipment
Ceiling Materials	Inspection and Evaluation Report from the Engineer	One per shipment
ELECTRICAL AND MECHANICAL WORKS		
Wires / Cables	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment
Electrical Devices	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment
Fire Alarm System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Wiring Devices	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment

Materials/Items of Work	Required Tests	Minimum Incremental Frequency of Tests
Protective Devices	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment
Telephone System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
CCTV System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
CATV System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Background Music and Paging System	Inspection and Evaluation Report from the Engineer, Testing and Commissioning	One per item
Air Conditioning Units & Ventilation	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Conduit Pipes	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Lighting Fixtures	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
PLUMBING WORKS		
Pipes	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item

Materials/Items of Work	Required Tests	Minimum Incremental Frequency of Tests
Fixtures	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Pipe Culverts	Compression Strength Inspection and Evaluation Report from the Engineer	For every size not more than 25 pipes cast in the field
IV Miscellaneous Materials Fencing A Barbed Wire, Cyclone Wire Mesh, Chain Link B Concrete Post	 Physical Test (Dimensions and Coatings) Refer to Superstructure (SC)	 One per Batch Refer to Superstructure (SC)
Lamp Post A Structural Steel B Zinc (Hot Dip Galvanizing) Coatings	Physical Test (Dimensions) Same test as for SC (E) Same test as for CJ (C)	All units One per batch
Drainage Steel Grating	Same test as for SC (E) Inspection Report	One (1) batch
Metal Pipe (Cast Iron Galvanized, etc)	Physical Test (Dimensions and Coatings)	1 per delivery
Welding Works	Destructive and Non Destructive Test	One (1) per lot

NOTES
1. **Testing of RDF shall be performed only by an independent Testing Laboratory duly accredited by BRS, DOST and PPA**
2. **Testing of other materials shall be performed only by an independent Testing Laboratory duly accredited by BRS and PPA.**
3. **All other issuances which are otherwise inconsistent herewith are hereby revoked or otherwise amended.**

Approved

RAUL T. SANTOS
Officer-In-Charge,
Office of the General Manager

SECTION IX

CHECKLIST OF TECHNICAL AND FINANCIAL DOCUMENTS

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages)

Technical Documents

☐ (b) 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**

☐ (c) 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**

☐ (d) Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; **and**

☐ (e) 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**

(f) Project Requirements, which shall include the following:

☐ a. Organizational chart for the contract to be bid;

☐ 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;

☐ 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**

☐ (g) 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.

Financial Documents

☐ (h) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

☐ (i) 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;
or
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.

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

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

☐ (l) 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; **and**

☐ (m) Cash Flow by Quarter.

SECTION X

BIDDING FORM

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____
Project Identification No. : _____

To: **Philippine Ports Authority**
PPA Building, Bonifacio Drive,
South Harbor, Port Area, Manila

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin 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: **Lamao (Liloy) Port Expansion Project, Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte**;

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: _____;

d. The discounts offered and the methodology for their application are: _____;

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 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 _____ 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

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

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 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 **Lamao (Liloy) Port Expansion Project, Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte** of the **Philippine Ports Authority**.

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: _____

STATEMENT OF THE BIDDER'S ALL ONGOING GOVERNMENT AND PRIVATE CONTRACTS, INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED

I hereby declare that all ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid are listed below:

Name of outstanding Contracts 1]	Owner's Name and Address	Scope of Work 2]	Contractor's Role and Percentage of Participation 3]	Total Contract Amount or Value 4]	Date of Contract and NOA 5]	Value of Outstanding Works 6]	Accomplishment (in percentage, %) 7]		Contract Duration 8]	
							Planned	Actual	Start of Project	Estimated Completion Date
A) Government Contracts i. On-going ii. Awarded but not yet started B) Private Contracts i. On-going ii. Awarded but not yet started										

NOTE:

1] As appearing in the contract executed by the parties.
2] With special reference to the Scope of Works of the Project as described/enumerated in the Contract.
3] Indicate the percentage of participation and whether as Sole Contractor, Sub-Contractor or Member in a Joint Venture / Consortium.
4] Indicate the FOREX used if Contract Value is expressed in a currency other than the Philippine Peso.
5] As appearing in the Contract and Notice of Award (NOA).
6] Amount or value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.
7] Percentage of Accomplishment as of the preceding month which should not be earlier than two (2) months from the date of bid submission.
8] As appearing in the Notice to Proceed and Contract.

This Statement shall be supported by:

a) Notice of Award
b) Notice to Proceed and Contract

Name of Firm (Signatory's Legal Capacity)	Name of Bidder/Authorized Representative	Date

Revised: September 2021

STATEMENT OF THE BIDDER'S SINGLE LARGEST COMPLETED CONTRACT (SLCC) SIMILAR TO THE CONTRACT TO BE BID

Name of the completed Contract 1]	Owner's Name and Address	Scope of Work 2]	Contractor's Role and Percentage of Participation 3]	Total Contract Value At 4]			Date of Award 5]	Contract Duration 6]	
				Award	Completion	Escalated Value to Present Prices		Start	Completed

NOTE :

1] As appearing in the contract executed by the parties.
2] With special reference to the Scope of Works of the Project as described/enumerated in the Contract.
3] Indicate the percentage of participation and whether as Sole Contractor, Sub-Contractor or Member in a Joint Venture / Consortium.
4] Indicate the FOREX used if Contract Value is expressed in a currency other than the Philippine Peso. Attached the computation for the escalated contract value.
5] As appearing in the Notice of Award.
6] As appearing in the Notice to proceed and Certificate of Completion.

A. The bidder must have an experience of having completed a SLCC that is similar to the contract to be bid equivalent to at least fifty percent (50%) of the ABC, adjusted if necessary, by the Bidder to current prices using the PSA consumer price indices. A contract is considered to be "similar" to the contract to be bid if it has the same Major Categories of Work as stated in the Bid Data Sheet (BDS).

B. This Statement shall be supported by:
   a. Notice of Award, Notice to Proceed and Contract.
   b. Project Owner's Certificate of Final Acceptance issued by the owner and/ or Constructors Performance Evaluation System (CPES) Final Rating, which must be at least Satisfactory. The said Certificate of Acceptance shall contain the following: 1) Name of project owner that issued the certificate, 2) Name of Contractor/ Constructor, 3) Name of Contract, and 4) Contract Duration.
   c. Recapitulation or Final Bill of Quantities.

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: September 2021

STATEMENT OF THE BIDDER'S EXPERIENCE ON MAJOR CATEGORIES OF WORK OF THE SLCC INCLUDING OTHER COMPLETED CONTRACTS SIMILAR TO THE CONTRACT TO BE BID

Major Categories of Work 1]	Unit of Measure 1]	Quantity 1]	SLCC similar to the contract to be bid 2]	Other completed contracts similar to the contract to be bid 2]			Unit of Measure 2]	Quantity 2]
			Name of the contract	Name of the contract	Name of the contract	Name of the contract		
1. Offshore Pile Driving works	l.m.	2,591						
2. Reinforced Concrete works	cu.m.	769						
3. Rockworks (50-1000 kg/pc.)	cu.m.	3,373						
4. Placing of Fill Materials	cu.m.	9,389						
5. Construction of Portland cement concrete pavement	sq.m.	1,561						
6. Construction of Building	sq.m.	205						

NOTE:
1] As stated in the Bid Data Sheet.
2] As appearing in the Recapitulation and/ or Final Bill of Quantities.
This statement shall be supported by:

a. Notice of Award, Notice to Proceed and Contract.
b. Project Owner's Certificate of Final Acceptance issued by the owner and/ or Constructors Performance Evaluation System (CPES) Final Rating, of at least satisfactory. The said Certificate of Acceptance shall contain the following: 1) Name of project owner that issued the certificate, 2) Name of Contractor/Constructor, 3) Name of Contract, and 4) Contract Duration.
c. Recapitulation and/ or Final Bill of Quantities.

Name of Firm	Name of Bidder/Authorized Representative Signatory's Legal Capacity	Date

Revised: September 2021

FINANCIAL DATA

A. The prospective bidder's audited Financial Statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "RECEIVED" by the Bureau of Internal Revenue (BIR), or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission.

	Year
1. Total Assets	
2. Current Assets	
3. Total Liabilities	
4. Current Liabilities	
5. Net worth (1-3)	
6. Net Working Capital (2-4)	

B. The computation of the bidders Net Financial Contracting Capacity (NFCC) must be at least equal to the ABC to be bid, as follows:

NFCC = [(Current assets minus current liabilities) (15)] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.

NFCC = _____

Attached herewith are certified true copies of the audited financial statements stamped received by the BIR or BIR authorized collecting agent for the latest/immediately preceding calendar year.

_____
Name of Firm/Applicant

_____
Authorized Signing Official

Date:_____

NOTES:

If Partnership or Joint Venture, each Partner or Member Firm of Joint venture shall submit separate financial statements.

STATEMENT OF THE BIDDER'S KEY PERSONNEL PLEDGED FOR THE CONTRACT TO BE BID

I hereby declare that the following key personnel are qualified and available for the duration of the contract to be bid:

Position of Key Personnel 1]	Name	No. of Key Personnel	Similar Experience in the Position (Years) 2]	Total Experience in the Position (Years)	Attachment(s)	Annex(es)
Project Manager					PRC License (CE Preferred) Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Project Engineer					PRC License (CE Preferred) Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Project Architect					PRC License (Architect Preferred) Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Materials Engineer II					PRC License (CE Preferred) Submit Valid and Renewed DPWH Certificate of Accreditation Submit Accreditation Identification Card as Materials Engineer Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Construction Safety and Health Officer					Certificate of Safety and Health Construction Related Course issued by DOLE Accredited Trainings Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Foreman					Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Other Position(s)					Complete Qualification and Experience Data Certificate of Commitment	Annex "_"

NOTE: 1] As stated in the Bid Data Sheet
2] The number of years of experience of the key personnel shall be as indicated in the qualification and experience data or curriculum vitae.

Minimum qualification requirements: The key personnel must have a work experience that is similar in nature and complexity to the contract to be bid.

- Project Manager - Five (5) years
- Project Engineer - Three (3) years
- Project Architect - Three (3) years
- Foreman - Five (5) years
- Materials Engineer – One (1) year
- Construction Safety and Health Officer – One (1) year
- Materials Engineer I – for projects costing up to 100M
- Materials Engineer II – for projects costing more than 100M

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: September 2021

STATEMENT OF THE BIDDER'S EQUIPMENT PLEDGED FOR THE CONTRACT TO BE BID

I hereby declare that the following equipment are in good operating condition and available for the duration of the contract to be bid:

DESCRIPTION (Type, Model, Make)	No. of Unit(s)	Capacity/ Output 1]	Owned, Leased, and/or under purchased agreement 2]	Proof of Ownership/ Leased/ Under Purchase Agreement (Mark as Annex "A.....Z") 3]	OTHER INFORMATION (As Applicable)				
					Manufacturer	Engine Serial No.	Chassis No./ Name of Vessel	Location	Status

NOTE:

1] The unit of capacity of the pledged equipment shall be as indicated in the Proof of Ownership, i.e. GW (for crane barge), DWT (for deck barge and hopper barge), Ton (for crane, road roller and drop hammer), kg.-m/blow (for diesel hammer), Ton (for dump truck), hp (for tugboat, road grader, bulldozer and concrete vibrator), cfm (for compressor), gal (for water truck with pump), amp (for welding machine), bagger (for concrete mixer). If the capacity of the pledged equipment is not indicated in the Proof of Ownership/Lease Contract/Purchased Agreement, submit other proof of capacity such as specifications, brochures or other verifiable printouts indicating the model name, model number and other details of the equipment.

2] Indicate if the pledged equipment are owned, leased or under purchase agreement.

3] If the pledged equipment is owned, it should be in the name of the bidder. Submit proof of ownership, i.e. deed of sale, sales invoice, official receipt; For owned Water Truck, Dump Truck, Cargo Truck and Transit Mixer submit LTO Certificate of Registration and valid Official Receipt; For owned barge/tugboat, submit Marina Certificate of Ownership and valid Cargo Ship Safety Certificate.

If the pledged equipment is leased/under purchase agreement, submit the following:

For equipment under lease agreement:

a. certification of availability of equipment from the equipment lessor for the duration of the project
b. duly Notarized copy of lease contract
c. For Water Truck, Dump Truck, Cargo Truck and Transit Mixer submit LTO Certificate of Registration and valid Official Receipt

For equipment under purchase agreement:

a. certification of availability of equipment from the equipment vendor
b. duly Notarized copy of purchase agreement
c. For Water Truck, Dump Truck and Transit Mixer submit LTO Certificate of Registration and valid Official Receipt or copy of conduction sticker, whichever is applicable.

If the pledged barge/tugboat is leased/under purchase agreement, submit certification of availability of barge/tugboat from the equipment lessor/vendor for the duration of the project, and duly Notarized copy of lease contract/purchased agreement together with a copy of the Marina Certificate of Ownership and valid Cargo Ship Safety Certificate.

The Minimum Major Equipment Requirements are listed in Section 8, Annex 3.

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: April 2025

Omnibus Sworn Statement for Sole Proprietorship

[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, _____, of legal age, [Civil Status], [Nationality], and residing at _____, after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the sole proprietor or authorized representative of _____ with office address at _____;

2. As the owner and sole proprietor, or authorized representative of _____, I have 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 **Lamao (Liloy) Port Expansion Project, Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte** as shown in the attached duly notarized Special Power of Attorney;

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. The owner or sole proprietor is not related to the Head of the Procuring Entity, Procurement Agent if engaged, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

   a. Carefully examining all of the Bidding Documents;
   b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
   c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
   d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

_____
Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)
AFFIANT

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Omnibus Sworn Statement for Partnership or Cooperative

[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, _____, of legal age, [Civil Status], [Nationality], and residing at _____, after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the duly authorized and designated representative of _____ with office address at _____;

2. I am 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 **Lamao (Liloy) Port Expansion Project, Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte** of the **Philippine Ports Authority**, as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, Procurement Agent if engaged, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

   a. Carefully examining all of the Bidding Documents;
   b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
   c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
   d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

_____
Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)
AFFIANT

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Omnibus Sworn Statement for Corporation or Joint Venture

[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, _____, of legal age, [Civil Status], [Nationality], and residing at _____, after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the duly authorized and designated representative of _____ with office address at _____;

2. I am 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 **Lamao (Liloy) Port Expansion Project, Port of Lamao, Brgy. Lamao, Liloy, Zamboanga Del Norte** as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, **by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;**

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, Procurement Agent if engaged, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

   a. Carefully examining all of the Bidding Documents;
   b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
   c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
   d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. **In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.**

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ____, 20__ at _____, Philippines.

_____
Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)
AFFIANT

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Bid Securing Declaration Form

[shall be submitted with the Bid if bidder opts to provide this form of bid security]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION
Project Identification No.: _____

To: **Philippine Ports Authority**
PPA Building, Bonifacio Drive,
South Harbor, Port Area, Manila

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.

2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f),of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.

3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:

   a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
   b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
   c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of *[month] [year]* at *[place of execution]*.

_____
Name of Bidder/ Authorized Representative
(Signatory's Legal Capacity)
AFFIANT

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

CONSTRUCTION METHODOLOGY

Name of Project : _____

Project Description : _____

Location : _____

MINIMUM SCOPE OF CONSTRUCTION METHODOLOGY

A. REMOVAL, DISPOSAL AND EXCAVATION WORKS

1. Removal of existing fender (10 nos.) and mooring bollards (7 nos.) including turning over of materials with value to PPA
2. Removal and Disposal of existing RC deck (430 sq.m.) and building structures (26 sq.m.)
3. Cutting of existing PSC Piles up to seabed elevation (64 no.)
4. Excavation of existing seabed up to required elevation prior to installation of core rocks (8,484 cu.m.)
5. Excavation of existing portion of fill up to required elevation including backfilling and disposal of unsuitable materials thereinafter (23 cu.m.)
6. Chip-off and dispose existing R.C. Curb, flush to required elevation and smoothen with mortar (86 l.m.)
7. Removal of existing lamp post and turn over to the authority (8 sets)
8. Removal and disposal existing fence and gate (96 l.m.)

B. PORT OPERATIONAL AREA WITH RORO RAMP ON FILL

1. Supply and deliver to site of 800mm dia. Tubular Steel Pipe pile and connectors (1,203 MT) including driving (4,425 l.m.) of SPP and application of polyurethane external coating and mastic filler (4,004 sq.m.)
2. Supply, fabricate and install reinforcing cylinder band for steel pipe piles (177 no.)
3. Supply and installation of steel waling and splice plate for SPP (15,487 kgs.)
4. Extraction of clogged materials inside the SPP (416 cu.m.)
5. Supply and installation of reinforcing steel cage for SPP (116,768 kgs.)
6. Supply and placing of concrete filler for SPP (916 cu.m.)
7. Supply and deliver to site 400mm x 400mm PSC anchor and vertical piles (506 l.m.) including driving (506 l.m.) and cutting of portion of newly driven PSC Pile (24 no.)
8. Supply and placing of 3,500 psi concrete for the anchor wall, anchor pile wall, retaining wall, rc curb, drainage outfall, and electrical works (575 cu.m.)
9. Supply and installation of reinforcing steel bars the anchor wall, anchor pile wall, retaining wall, rc curb, drainage outfall, and electrical works (20,062 kgs.)
10. Supply and placing of gravel bedding (25 cu.m.)
11. Supply and placing of 50 to 100 kg. core rocks (6,632 cu.m.)
12. Supply and placing of 1,000 kg. armour rocks (113 cu.m.)
13. Supply and installation of concrete blocks in various sizes including lifting handle (8 no.)
14. Supply and placing of sacked concrete (12 cu.m.)
15. Supply and installation of Tie-rod of various sizes including accessories (69 set)
16. Supply and installation of geotextile fabric (3,265 sq.m.)
17. Supply and placing of sand and gravel fill (14,740 cu.m.), aggregate subbase course (4,038 cu.m.) and aggregate base course (624 cu.m.)
18. Construction of PCC Pavement including dowel bars and construction joint (3,122 sq.m.) with 20mm thk. steel ramp protection (16 sets)
19. Construction of Portlighting system (1 lot)

20. Construction of lateral drainage (77 l.m.) and catch drain manhole (5 nos.) including laying of 600mm dia. reinforced concrete pipe (66 l.m.)
21. Construction of security fence (32 l.m.)
22. Supply, deliver and install rubber dock fenders (V-type 600H x 2000L) (8 sets) and mooring bollard (35 Tons) (2 sets).
23. Reinstallation of lamp post including accessories (7 set)

C. CARGO SHED, GATE AND GUARDHOUSE

1. Construction of Cargo Shed, complete with architectural finishes, electrical, mechanical, water/sewerage system, etc. (300 sq.m.)
2. Construction of Gate and Guardhouse (1 lot)

D. REIMBURSABLE ITEMS

1. Secure approval of Environmental Compliance Certificate (ECC)

NOTES:

The narrative construction method will guide and familiarize the contractor and the PPA on how the project shall be carried out in accordance with the highest standard of workmanship.

The construction method shall be consistent with the Bar Chart / S-Curve Schedule, Equipment Schedule and Manpower Schedule.

_____
Name of Bidder/Authorized Representatives
(Signatory's Legal Capacity)

Revised: September 2021

MANPOWER SCHEDULE

Name of Project : _____

Project Description : _____

Location : _____

MANPOWER (Minimum)	CONTRACT DURATION (_____ Calendar Days)																							
	MONTHLY																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Project Manager																								
Project Engineer																								
Project Architect																								
Materials Engineer II																								
Construction Safety and Health Officer																								
Foreman																								
Specify other applicable positions, ie.:																								
- Carpenter																								
- Steelman																								
- Mason																								
- Electrician																								
- Rigger																								
- Others																								

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

EQUIPMENT UTILIZATION SCHEDULE

Name of Project : _____

Project Description : _____

Location : _____

EQUIPMENT (Minimum)	No. of Units	CONTRACT DURATION (_____ Calendar Days)																							
		M O N T H L Y																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

CASHFLOW BY QUARTER AND PAYMENT SCHEDULE

Name of Project: : _____

Project Description : _____

Location : _____

Project Duration (days or months)	Payment Schedule (Monthly, in Pesos)	Cash flow (Quarterly, in Pesos)
TOTAL		

NOTES

- The cash flow by quarter and payment schedule should be consistent with the Bar Chart and S-curve.
- Payment schedule shall not be more than once a month.

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

Contract Agreement Form for the Procurement of Infrastructure Projects (Revised)

[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT AGREEMENT

THIS AGREEMENT, made this _____ day of _____, _____ between **Philippine Ports Authority** with principal office at PPA Building, Bonifacio Drive, South Harbor, Port Area, Manila (hereinafter called the "Entity") and **[name and address of Contractor]** (hereinafter called the "Contractor").

WHEREAS, the Entity is desirous that the Contractor execute **[name and identification number of contract]** (hereinafter called "the Works") and the Entity has accepted the Bid for **[contract price in words and figures in specified currency]** by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as part of this Agreement, *viz.:*

   a. Philippine Bidding Documents (PBDs);
      i. Drawings/Plans;
      ii. Specifications;
      iii. Bill of Quantities;
      iv. General and Special Conditions of Contract;
      v. Supplemental or Bid Bulletins, if any;

   b. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

   Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (*e.g.*, Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

   c. Performance Security;

   d. Notice of Award of Contract and the Bidder's conforme thereto; and

   e. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. **Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.**

3. In consideration for the sum of **[total contract price in words and figures]** or such other sums as may be ascertained, **[Named of the bidder]** agrees to **[state the object of the contract]** in accordance with his/her/its Bid.

4. The **Philippine Ports Authority** agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

JAY DANIEL R. SANTIAGO General Manager	**Name of Bidder/ Authorized Representative** (Signatory's Legal Capacity)
for:	for:
Philippine Ports Authority	**Contractor**

Acknowledgment

[Format shall be based on the latest Rules on Notarial Practice]