power generator to maintain system compatibility and local service responsibility for the complete standby power system.

B. The Automatic Synchronizing Panel shall be free standing enclosure complete with all necessary intelligence unit suitable for use on all types of load.

C. Transfer switch shall have withstand, closing and interrupting ratings sufficient for the voltage employed and the available short circuit at the point of application.

D. Automatic Synchronizing Panel shall be electrically operated with inherent interlocked construction rated 800A, 3P, 60 Hz. 3Ø, 3 wires, 65 KRMS symmetrical withstand at 600Vac.

INSTALLATION

A. Installation shall conform to the requirements of the Code.

B. Testing

1. The Automatic Synchronizing Panel shall receive the manufacturer's standard factory testing prior to delivery with the witness of PPA's representative/s.

2. Prior to acceptance of the installation of the installation, equipment shall be tested on-site together with the generator set and low voltage switchgear without any failure to show it is free of any defects, and subjected to full load test or that load which is available at the job site. Should failure occur during the testing, the Contractor shall rectify deficiencies and shall repeat testing procedure at his own expense and to the satisfaction of the Owner.

3. On completion of the installation, start-up shall be performed by a factory-trained supplier or dealer representative. Comprehensive training on the operation, principle and maintenance of the system shall be conducted to the PPA"s operating personnel.

OPERATION

1. When the synch panel detects utility power outage, the generator sets will start in sequence with an interval of about 1 second. The priority generator will be put on-line as soon as the proper voltage and frequency is established. Then the other generator will be synchronized to the main bus.

2. The generator sets has a loading priority so as to rotate the first generator that will be put on line.

3. The power management will continuously monitor the total load of the generators, spinning reserves and total plant capacity. These data are necessary for the computer to initiate the start and stop

of the generator according to the demand. It will also institute load shedding to prevent power plant back out.

4. A genset is automatically removed on-line if the total load is reduced. Run a genset only when needed.

5. Soft loading and un-loading feature of the synch panel reduces mechanical and electrical stress on the engine and alternator.

6. When utility resumes, the load will be automatically transferred to utility power supply. The power management will de-load the gensets and commence shutdown procedures.

7. The power management will run the generator for five minutes every fixed interval of time (optional).

SYNCHRONIZATION

1. Dead Bus Synchronization

Upon receipt of synch command the synchronizer will control the governor voltage regulator accordingly to the set frequency and voltage. If no generator set is on-line, it will connect immediately to the main bus. Every synchronizer is equipped with dead-bus synch capability.

2. Live Bus Synchronization (Soft Loading)

When the synchronizing controller receives the synch command, it will control the governor and voltage regulator accordingly the main bus frequency and voltage. With its pre-programmed breaker closing delay, the system perfectly closes the breaker with precision accuracy.

At breaker closure, the incoming generator set assumes only 5% of its rated capacity. Say, the genset is rated 750KVA. At breaker closure it's load will only be at the instant of synchronization. This feature reduces the stress on the engine, generator and circuit breaker.

After resting for 10 seconds to warm-up the genset, the system will slowly increase the load of the incoming genset until the entire generator sets on-line have proportional power and amperage.

The initial generator load of 5% and 10 seconds rest are only for discussion purposes. They can be programmed to within allowable values desired by the customer. We can have the incoming genset to assume zero load upon synchronization or 30 seconds rest before taking in load. The rate at which the genset will take the load is also programmable.

UNLOADING (SOFT UNLOADING)

When the system receives the de-load command, it will slowly reduce the load of the out-going genset. When the load is only about 5% of its rated capacity it will initiate breaker opening. The rate of unloading is programmable.

Again, this feature removes the stress on the on-going genset and circuit breaker as well the genset that will be left on-line.

As with synchronization, the breaker opening setting is only for discussion purposes. They can be programmed to within allowable values desired by the customer.

LOAD SHARING

Every generator set is equipped with a GPC. In the GPC it will program the generator parameters, i.e. kW, volt, ampere, etc. and the maximum allowable loading of each generator set. The GPC will control the governor and AVR.

PROTECTION

The generator is adequately protected with reverse power, over current, synch fail, DC low, breaker failure. The system is purely digital; hence it can be assured of protection whenever a fault occurs.

MONITORING

The monitor will display the following:

a. Electrical Parameters (V, A, KW, PF, F, etc.), Generator and Bus
b. Fault Indication in plain text (reverse power, synch fail, etc.)
c. Status indication (breaker on, regulator on, etc.)

PARAMETERS

All the parameters described above such is time delay, ramp up/down, breaker opening/closure kW are all programmable.

POWER MANAGEMENT

The synchronizers, circuit breakers and generators will be coordinated by a programmable logic controller (PLC). Its main function are as follows:

a. Capacity management
b. Start/stop of the generator set
c. Breaker interlock
d. Generator exerciser

DYNAMIC TRANSITION – FUTURE PROVISION

The installed automatic synchronizer can readily upgraded for this feature. Dynamic transition provides uninterrupted transition between Local Utility Company to Generators and V-V.

1. Transferring Load from Local Utility Company to Generators

   The soft loading/unloading features as discussed above will also be implemented here.

   The generators will be synchronized to the utility and assumes minimal load at the instant of paralleling. The load on the generators will be slowly increased while the load on the utility will be reduced. As soon as the utility load has reached, say 5% the main circuit breaker will open and the generators will now handle the entire load.

2. Transferring Load from Generators to Local Utility Company

   The soft loading/unloading features as discussed above will also be implemented here.

   The generators will be synchronized to the utility regardless of transfer mode.

   At the instant of generator and utility paralleling, the latter assumes minimal load. The load of the generators will be slowly reduced while the load on the utility will be increased. The generators will be soft unloaded and removed from the main bus one at a time.

GROUNDING SYSTEM

SCOPE OF WORK

A. The Contractor shall furnish and install complete grounding system as shown in the drawing.

B. Grounding system shall include building perimeter ground wires, ground rods, clamps, connectors, grounding buses, ground wells, grounding panels and auxiliary ground wire taps as shown in the drawings.

C. Equipment Grounding:

The grounded neutrals of the secondary distribution system shall be supplemented by an equipment grounding system to properly safeguard the equipment and personnel. The equipment grounding system shall be designed so all metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment and other conductive items in close proximity with electrical circuits operate continuously at ground potential and provide a low impedance path for possible ground fault currents. The systems shall comply with the Philippine Electrical Code, modified as indicated on the drawings and/or as specified.

Should there be conflicts between these specifications and the plans, or conflicts within specifications and plans, these shall be brought to the attention of the Engineer for resolution.

SUBMITTAL

A. MANUFACTURER'S DATA FOR:

1. Ground Rods
2. Ground Clamps
3. Ground Wires
4. Connectors
5. Grounding Panel

PRODUCTS

A. GROUND WIRE

Ground wire shall be bare copper, stranded, with sizes as shown in the drawings.

B. GROUND BUS

Ground bus shall be solid copper with size as indicated in the drawing.

C. GROUND RODS

Ground rod shall be clad copper with a diameter of 20mm x 3000mm long unless noted otherwise.

GROUND CLAMPS AND CONNECTORS

Ground clamps and connectors shall be solderless, compression or bolted type and shall be bronze unless otherwise noted on plans.

GROUND WELL

Ground well shall be made of 200mm x 200mm x 150mm depth with liftable checkered plate cover.

INSTALLATION

A. GROUND WIRES AND ELECTRODES

The powerhouse perimeter ground wire and electrode shall be installed as shown in the drawing.

B. GROUND WELLS

Location of ground wells are as shown on the plans.

C. CONNECTION TO MAIN SUBSTATION, SWITCHGEARS AND EQUIPMENT

The main substation, switchgears and equipment shall be connected to the grounding system through the ground bus installed as shown in the plans.

D. GROUNDING AND BONDING

Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway system and neutral conductor of wiring systems. Make ground connection at the main service equipment and extend grounding conductor to the point of entrance of the metallic water service. Make connection to the water pipe by a suitable ground clamp or lug connection to a plugged tee. If flanged pipes are encountered, make connection with the lug bolted to the street side of the flanged connection. Supplement the metallic water service grounding system with an additional made electrode in compliance with the code. Make ground connection to buried ground wire on the exterior of the power house or with in reefer rack structure.

1. Grounding Conductor

   Provide an insulated, green-colored equipment grounding conductor in all feeders and branch circuits. This conductor shall be separate from the electrical system neutral conductor.

2. Resistance

   The maximum resistance to ground of the grounding system shall not exceed 10 ohms under normally dry conditions. Where the resistance obtained exceeds 10 ohms, additional grounding rod shall be driven off until 10 ohms meet.

TESTING

Test the grounding system to assure continuity and the resistance to ground is not excessive. Make resistance measurements with the PPA's representative/s in normal dry weather, or not less than 48 hours after rainfall. Submit written results for each test for references.

LIGHTNING PROTECTION SYSTEM

SCOPE OF WORK

A. The Contractor shall furnish and install a complete lightning protection system specified and as shown on the drawing.

B. The reefer rack structure lightning protection system shall include lightning terminals, down conductors, ground rods, clamps and other accessories as required for complete and operational lightning protection system.

Should there be conflicts between these specifications and the plans, or conflicts within specifications and plans, these shall be brought to the attention of the Engineer for resolution.

PRODUCTS

A. AIR TERMINAL

1. The air terminal shall be of early streamer emission type, made of non-corrosive material and shall be of the type that responds dynamically to the appearance of a lightning down leader.

2. The air terminal shall be non-radio active and shall not cause high frequency radio interference except during the strike of lightning.

3. The air terminal shall not be dependent upon batteries or external power supplies for any part of its operation. It shall have no moving parts.

B. DOWN CONDUCTOR

1. The down conductor shall consist of a bare copper conductor not less than 100mm2.

2. The conductor will pass through the center of the structural support steel bolted on 500mm on center.

3. Grounding conductor shall follow contour of structural member or frame and foundation and shall be located to provide protection from severe mechanical damage.

INSTALLATION

A. Installation of the system shall be in accordance with the Code and requirements specified or as recommended by the manufacturer.

B. The support of the air terminal shall be securely bolted to enable the mast system to withstand maximum wind velocity of 250 kph.

C. Maintain vertical or horizontal runs of down conductor so as to ensure that bends have at least 500mm radius. In the final 4.0m to the ground and where it is susceptible physical damage by personnel, the down conductor shall be placed in a protective uPVC conduit.

D. Earthing shall be done by copper wire buried not more than 450mm deep or by deep driven clad copper earth rods.

TESTING

Test the grounding system to assure the continuity and that the resistance to ground.

UNDERGROUND ELECTRICAL WORK

GENERAL REQUIREMENTS

A. The contractor shall furnish and install complete underground electrical system which includes the secondary power service thru cable trench, concrete duct bank, manholes, wires/cable, terminating kit, and the terminations of the same as shown in the drawings.

B. Electrical General Requirements, applies to this section with additions and modifications specified herein.

PRODUCTS

A. CONDUIT

Conduit used for shall be unplasticized polyvinyl chloride conduit (uPVC) where specified, shall be heavy wall, high impact resistant, schedule 40 with factory made bends, couplings and fittings. uPVC cement for joints shall be of the same brand as for the uPVC.

B. WIRES AND CABLES

1. All wires and cables shall be copper and of 99% conductivity insulated in 600 volts working pressure type with "4C Royal Cord Type ST (600 volts, 60 / 75 degree centigrade, "THHN/ THWN-2" unless otherwise noted on plans or specified.

2. All wires and cables shall comply with the requirements of the Underwriters Laboratories, the PNS 260 / PNS 163 , ASTM and ICEA as they apply to the particular usage.

3. Color Coding

   Provide identification for all service, feeder, branch, control and signaling circuit conductors by color coding. Color shall be green for grounding conductors, and white for neutrals. The color of the ungrounded conductors in different voltage systems shall be as follows:

a.	240 volts, 3 phase	Phase A	-	Red
		Phase B	-	Blue
		Phase C	-	Black
b.	480 volts, 3 phase	Phase A	-	Brown
		Phase B	-	Yellow
		Phase C	-	Orange

4. Tag Marking

   In general, branch circuit conductors and cables shall be properly marked by means of a printed tag taped on each wire indicating origin/load and or panel(s) where load is connected

5. Splices and Termination Components

Make splices in accessible locations. Make splices in conductors 5.5mm2 and smaller with an insulated pressure type connector. Make splices in conductors 8mm2 and larger with a solderless connector and cover with an insulation material equivalent to the conductor insulation.

6. Test on 600 volt wiring

Test all 600 volt wiring to verify that no circuits or accidental ground exist. Perform insulation resistance tests on all wiring 14mm2 and larger using an instrument which applies a voltage of approximately 500 volts to provide a direct reading of resistance; minimum resistance shall be 250,000 ohms. Submit written results of each test to the Engineer and indicate the resistance at the time the measurements were made.

PULL WIRE

Pull wire shall be plastic having a tensile strength of 90 kilograms

METAL FRAME AND COVERS

Metal frame and covers shall be steel plate with sizes as shown in the drawing.

INSTALLATION

A. UNDERGROUND DUCT

Underground duct shall be constructed of conduit and encased in concrete as shown on the drawing.

1. The top of the concrete envelope shall be a minimum of 600mm below grade line.
2. Duct banks shall have a continuous slope downward toward underground structures. Except at conduit risers, changes in direction of runs exceeding a total of 10 degrees, either vertical or horizontal, shall be accomplished by long sweep bends having a minimum radius of curvature of 900mm. Sweep bends may be composed of one or more curved or straight sections or combinations thereof. Manufactured bends shall have a minimum radius of 450mm for use with conduits of less than 75mm in diameter and a minimum radius of 900mm for ducts of 75mm diameter and larger.

   Excavate trenches along straight lines from structure so the elevation can be adjusted, if necessary, to avoid unseen obstruction.

3. Terminate conduits in end-bells where duct enter underground structures. Stagger the joints of the conduits by rows and layers to strengthen the duct bank. Before pouring concrete, anchor duct

bank assemblies to prevent assemblies from floating during concrete pouring.

4. As each section of a duct bank is completed from structure to structure, a testing mandrel not less than 300mm long with a diameter of 6mm less than the inside diameter of the conduit shall be drawn through each conduit, after which a stiff-bristled brush, having the diameter of the conduit shall be drawn through until the conduit is clear of earth, sand, and gravel particles. Conduit plugs shall then be immediately installed.

5. New conduit indicated as being unused or empty shall be provided with plugs on each end.

MANHOLES

Manholes shall be poured in place concrete construction as specified herein.

CABLE TRAY

Cable trays are used as an alternative to open wiring or electrical conduit system, and are commonly used for cable management in commercial and industrial construction. It is useful where changes to a wiring system are anticipated, since new cables can be installed by laying them in tray, instead of pulling them through a pipe. It is also used for low voltage wiring, like data and telephone wire cable.

Cable trays are mechanical support systems that provide a rigid structural system for electrical cables, raceways, and insulated conductors used for electric power distribution, control, signal instrumentation, and communication. Metal cable trays are made of galvanized steel, stainless steel, and aluminum. Non-metallic cable trays are made of glass-fiber reinforced plastic.

Specific types include:

- Metal channel-type
- Metal single rail
- Metal and nonmetallic ladder-type
- Metal and nonmetallic trough-type
- Metal wire mesh/basket
- Other cable tray systems

Cable trays are essential to a building's electrical system, supporting cables in the same way that roadway bridges support traffic. They provide versatility and offer savings of up to 84 percent in labor costs.

Cable tray system is advantageous over conduit system, especially in high density electrical wiring installations.

• Safety – Explosive, corrosive and toxic gases can travel through conduits and go to equipment and control rooms and expose personnel and sensitive equipment. Cable tray does not provide a path for the transmission of these gases.

• Dependability – Cable tray system's dependability has been put to test for 50 years or so. Its track record shows excellent performance in highly sensitive facilities where electrical system failures can cause serious downtime and millions of Pesos in lost revenue.

• Space Savings – Cable tray requires substantially less space. A 450MM wide cable tray has an allowable fill area of 21 square inches. It would take 7 pieces of 75MM diameter conduits to have the same allowable fill area. Cable tray allows routing of more cables in less space and at lower costs.

• Flexibility in design- Conduit banks and multiple conduit runs require pull boxes, splice boxes and more hangers and supports. The same wiring system can be done using a single run of cable tray for additional cabling.

• Easier and faster to install- A single run of equivalent cable tray system is much easier and faster to install than multiple runs of conduit. Cable trays are easier to install especially in high elevation installations. Conductor pulling is more complicated and time consuming for conduit wiring system. Conduits may be clogged making cable pulling difficult. Cable insulation damage is common since jamming can occur. Laying cables in cable trays is easier and faster to accomplish.

• Maintenance cost savings- Additional cables are easily installed in existing cable trays, additions or modifications of the wiring can be done quickly with minimum disruption to operations.- - - Heat build-up and moisture are the major causes of conductor failure and electrical equipment damage. With cable tray heat is immediately dispersed and moisture accumulation is avoided. With the open accessibility of cable tray, abandoned cables are easily identified, marked, or removed. By visual inspection cable deterioration or damage is easily identified.

FIREPROOFING (ARC PROOFING) OF WIRES/CABLES IN MANHOLES

Strips of fireproofing tape approximately 1.6mm (1/16 inch) thick by 75mm (3 inches) wide shall be wrapped tightly around each cable spirally in half-lapped wrapping, or in two butt-joined wrappings with the second wrapping covering the joints in the first. The tape shall be applied with the coated side toward the cable and shall extend one inch into the ducts.

To prevent unraveling, the fire-proofing tape shall be random wrapped for the entire length of the fireproofing with pressure sensitive glass cloth tape. The fireproofing tape shall consist of a flexible, conformable fabric having one side coated with flame retardant, flexible, polymeric coating and/or a chlorinated elastomer not less than 1.27mm thick and shall weigh not less than 2.5 pounds per square yard. The tape shall be non corrosive to cable sheath, shall be self-extinguishing, and shall not support combustion. The tape shall not deteriorate when subjected to oil, water, gases, salt water, sewage and fungus.

INTERIOR LIGHTING

SUBMITTALS

Data, shop drawings showing mounting heights, and reports shall employ the terminology, classifications, and methods prescribed by the IES Lighting Handbook, as applicable, for the lighting system specified.

a. Manufacturer's Data

1. Fluorescent Lighting Fixture with 2-36 watt, 240V, soft start electronic type ballast with reflector, industrial type pendant mounted
2. Vertical Downlight, recessed mounted type with 18W compact fluorescent lamp
3. Vertical Downlight, surface mounted type without glass cover 6-8 watt LED bulb, E27, 230V warm white

PRODUCT

Pendant Fluorescent light, 2 * 36 watt with electronic ballast

Pendant fluorescent light is a modern design lighting that brings special illumination for powerhouse and offices. Relaxing ambiance provided by this 2 * 36watt fluorescent Pendant Light giving an unwind feeling for powerhouse facilities.

Electronic ballasts replace the starting and inductive elements of the conventional system. The aim of using electronic ballast is to increase the operating frequency of the system above the 50 or 60Hz determined by the mains - typically to a few tens of kHz.

Vertical downlight recess/ surface mounted type

This fixture with glass cover looks very simple but provides protection to led bulbs. Metal sheet housing gives durability, while mirrored reflection brings additional lighting effect. Equipped with a glass cover that provides a smart overhead illumination solution, very modern and contemporary for decoration. Best for indoor lightings.

Recess / Flush Mounted Fixtures

The Contractor shall provide type that can be re-lamped from the bottom. Trim for the exposed surface of flush-mounted fixtures shall be as indicated.

LED Bulb

Recessed and surface mounted LED globe bulb, use for general lighting to replace the compact fluorescent lamp. It is used in commercial areas and homes for general purposes. Life span of LED is 35,000 to 50,000 hours. Provide 50% more efficient than CFL, reliable electronic power line, strong stability, direct replacement to CFL, energy efficient and environmental friendly and electricity

INTERIOR WIRING SYSTEMS

SUBMITTALS

a. Shop Drawings: Submit for the following:

1. Location of panel boards and circuit breaker
2. Conduit support / hanger's installation drawing

b. Manufacturer's data: Submit for the following:

1. Circuit Breakers
2. Switches
3. Conduit and fittings (each type)
5. Device Plates
6. Insulated conductors
7. Outlet and junction boxes
8. Reefer Outlet
9. Bus Bar Gutter
10. Wire Gutter NEMA-3R
11. Kilo watt Hour Meter

PRODUCTS

CONDUIT AND FITTINGS

a. Conduit shall be polyvinyl-chloride conduit (PVC) where specified, shall be heavy wall, high impact resistant Schedule 40, with factory made bends, couplings and fittings. PVC cement for joints shall be of the same brand as for the PVC pipe.

b. No conduits shall be used in any system smaller than 20mm (1/2") diameter electric trade size, nor shall have more than four (4) 90 degree bends in any one run and where necessary, pull boxes shall be provided as directed.

c. No wire shall be pulled into any conduit until the conduit system is completed in all details, in the case of concealed work until all rough plastering masonry has been completed, and in the case of exposed work until the conduit work has been completed in every detail.

d. The ends of all conduits shall have tightly plugged to exclude plaster, dust and moisture while the construction of the building is in progress. All conduits shall be reamed to remove all burrs.

OUTLETS, BOXES AND FITTINGS

a. At all outlets whatever kind, for all system, there shall be provided a suitable fitting, which shall be either a box or other device especially designed to receive the type of fitting to be mounted thereon.

b. The Contractor shall consult with the Engineer as to the nature of the various fittings to be used before installing his outlet fittings, and shall conform strictly in the use of fittings, to the nature of the appliance to be mounted on them, so that the work, when the completed will be a finished design.

c. All outlets on concealed conduit work provide galvanized pressed steel outlet boxes on standard make. These boxes shall be in all cases standard and where such boxes are not available on the market, special boxes shall be secured by the Contractor at his own expense. In general outlet boxes shall be at least 100mm diameter, 53mm deep and No. 16 minimum gauge.

JUNCTION AND PULL BOXES

a. Junction and pull boxes, of code gauge steel, galvanized shall be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes as finished places shall be located and installed with the permission and to the satisfaction of the Engineer.

b. All junction and pull boxes on exposed conduit work shall be provided with hubs for threaded pipe entry and covers provided with neoprene gaskets.

DEVICE PLATES

Provide UL listed, one piece device plates for outlets and fittings to suit the devices installed. Plates on unfinished walls and on fittings shall be of zinc-coated sheet steel or cast metal having round or beveled edges. Plates on finished walls shall be satin finish stainless steel or brushed –finished aluminum, minimum 0.03 inch thick. Screws shall be machine type with countersunk heads in a color to match the finish of the plate. The use of sectional type device plates will not be permitted. Plates installed in wet locations shall be sealed in gasket. Device plates for telephone and intercommunication outlets shall have a 3/8 inch bushed opening in center.

WALL SWITCHES AND PLATES

Wall switches in general shall be rated 10 amperes at 230 volts or with ampere and voltage ratings as required. Switches shall be flush mounting and of the rocker type, spring operated. The type of switches shall be tumbler operation and the color, plating and appearance of wall plates shall be as selected by the Engineer. Appropriate samples shall be submitted prior to purchase of wall switches and face plates.

WALL RECEPTACLE AND PLATES

a. Receptacle outlets shall be 15 amperes, 230 volts, 2 pole, 3 wire parallel slot, grounding type. Parallel slot outlet rated 15 amps. 125 v grounded type shall be acceptable for use with 230v system. Locking type and other special purpose outlets shall be as indicated in the plans.

b. Provide weather proof receptacle plate cover for each convenience receptacle outlet indicated as weatherproof.

BUSBAR GUTTER NEMA-4X

A busbar gutter is an electrical junction used for collecting electric power from the incoming feeders and distributes them to the outgoing feeders. The main purpose of a busbar gutter is to carry electricity and distribute it. Busbar gutter are used to make the systems more efficient.

WIRE GUTTER NEMA-3R

Wiring troughs like reefer racks are special for wires that keep them safe and neat. It also call them wire ways, wire troughs, or wire gutter. These wire troughs offer flexible cable protection that keeps electrical wires safe, neat and working well. Wire troughs are easy to manage and have several key functions.

KILO WATT HOUR METER

Kilowatt – hour meter shall be 3 phase, 4 wire , required specified in the approved plan.

REEFER SOCKETS/ PLUG

Reefer container plugs and sockets are IP67 watertight designed for container use in accordance with IEC 60309-2.

Reefer container plugs are rated at 32A amps and are heavy duty type including plugs, connectors, and sockets and switched interlocked sockets.

- 32amp 480V 60Hz 3 Pole + Earth (4 Pin)
- 3P + Earth with the earth contact in the 3 hour earth clocking position

A refrigerator (or reefer) ship is a type of ship typically used to transport perishable commodities which require temperature-controlled transportation - mostly fruits, meat, fish, vegetables, dairy products and other foodstuffs.

Reefer Socket/ Plug is kept at a terminal, it must be plugged into a specialized electrical power outlet of 32 amperes and 480/240 volts. It's also provide power, terminals install what is known as reefer plugs (sockets) within their yards, which are combined into outlets supplying several outlets. Reefer Sockets are the type of panel-mounted sockets that are used in reefer containers and can be mounted easily because of their design. Reefer Sockets are only available in 32 amp 4Pin 3h specification. Reefer Sockets are often used in port, containers, railways, etc.

ELECTRICAL REQUIREMENTS

- Reefer containers operate on 240/480 volts (V), 3 phases.
- The units can run on 50 or 60Hz.
- The power supply should be grounded with a 30 amp minimum circuit breaker. The 480V machinery main circuit breaker will trip at 30 /50 amps.

INDIVIDUAL BREAKERS

a. Provide individual circuit breakers where indicated on plans. Voltage ratings shall be suitable in each case of service application. Enclosures shall be General Purpose, NEMA -3R, except where specifically noted on plans or assembled on panel cabinets.

   All protective devices shall meet NEMA and U.L specifications. Short circuit rating shall be as indicated on the plan.

b. Circuit breakers shall consist of a quick-make, quick -break type entirely trip-free operating mechanism with contacts, arc-interrupter, and thermal magnetic trip unit for each pole, all enclosed in a molded-phenolic case. The thermal magnetic trip unit shall provide time-delayed overload protection, and in case of overload or short circuit current

in any one pole the circuit trips instantaneously. Circuit breaker shall be trip indicating, when tripped position of breaker handle midway between "ON" and "OFF" positions.

c. All circuit breakers shall be bolt-on type unless noted otherwise.

d. All circuit breakers rated above 225 amps shall have interchangeable trip units. Unless otherwise specified, minimum interrupting rating for 230 volts circuit breakers shall be 10,000 amperes.

PANEL BOARD BUSES

All buses shall be copper support bus bars on bases independent of circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or lapping. Provide separate ground bus per UL 67 for connecting grounding conductors; bond to steel cabinet.

EXECUTION

INSTALLATION

The electrical installation of interior lighting and interior wiring devices shall conform to the requirements of the approved plan.

GROUNDING

Ground non-current-carrying parts of equipment as specified in "Interior Wiring Systems." Where the copper grounding conductor is connected to a metal other than copper, provide specially treated or lined connectors suitable for this purpose.

FIELD TESTS

The Contractor will provide electric power and apparatus / instruments required and carry out the field tests.

a. Operating Test

Upon completion of the installation, conduct an operating test to show that the equipment operate in accordance with the requirements of this section.

b. Insulation Resistance Test

Perform as specified in "Interior Wiring Systems", both before and after connection of fixtures and equipment.

c. Ground Resistance Tests
Perform as specified in "Interior Wiring System."

ITEM 18 : PROJECT BILLBOARD

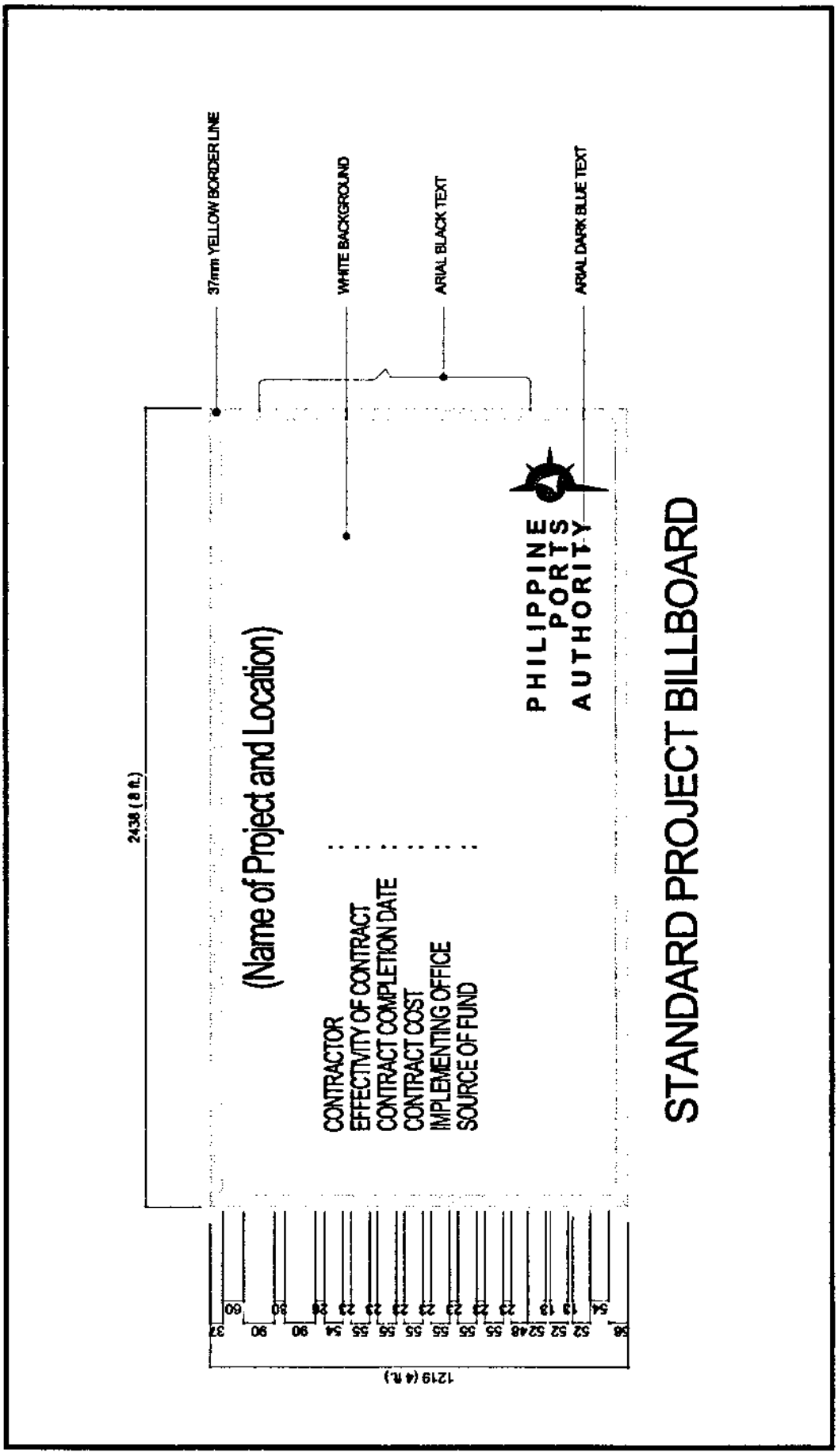
SPECIFICATION

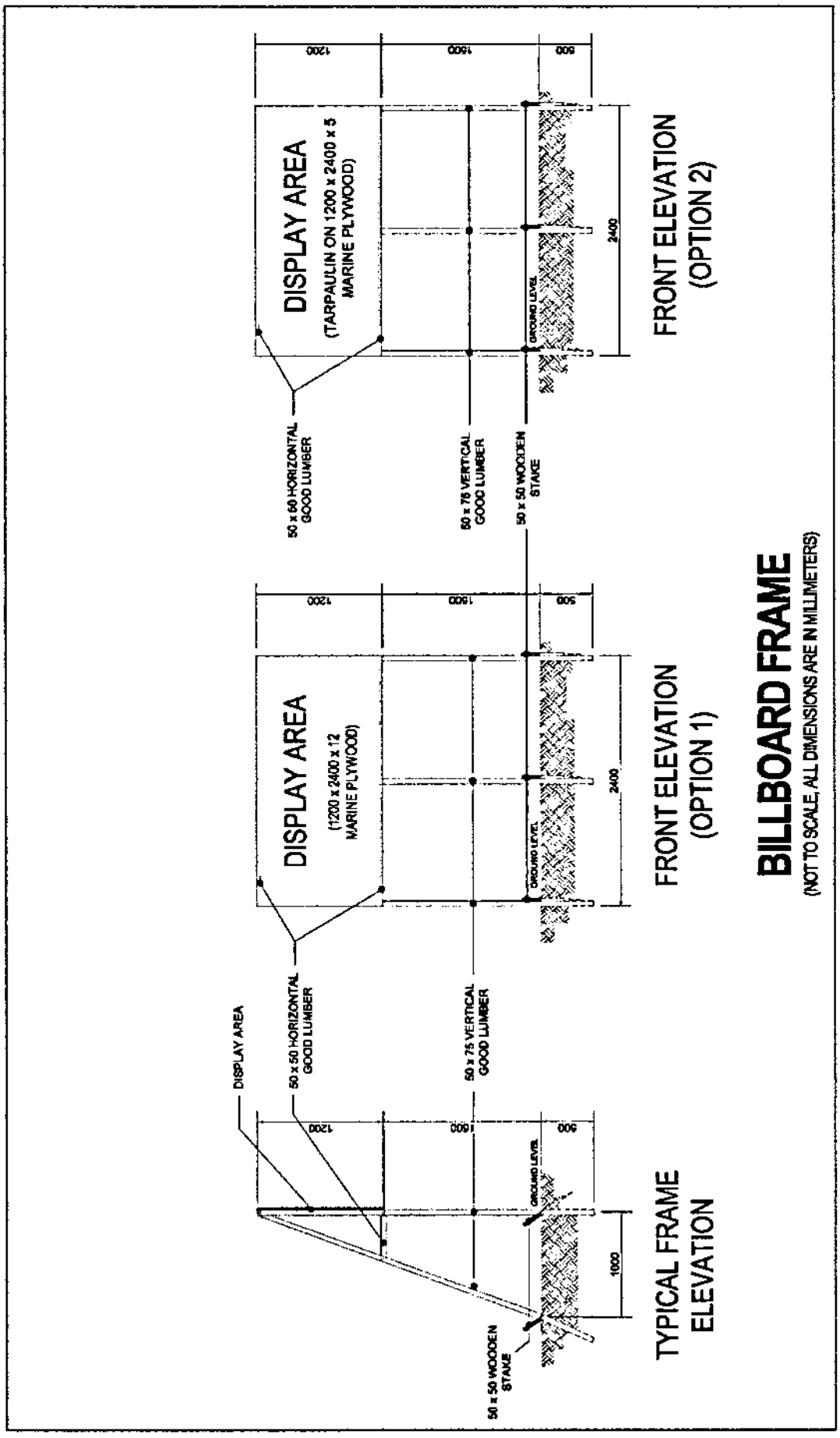
The Project Billboard shall be installed at location(s) designated by the Engineer.

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.


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


BILLBOARD FRAME
(NOT TO SCALE, ALL DIMENSIONS ARE IN MILLIMETERS)
FRONT ELEVATION
(OPTION 2)
DISPLAY AREA
(TARPAULIN ON 1200 x 2400 x 5
MARINE PLYWOOD)
50 x 50 HORIZONTAL
GOOD LUMBER
50 x 75 VERTICAL
GOOD LUMBER
50 x 50 WOODEN
STAKE
GROUND LEVEL
2400
1200
1600
500
FRONT ELEVATION
(OPTION 1)
DISPLAY AREA
(1200 x 2400 x 12
MARINE PLYWOOD)
TYPICAL FRAME
ELEVATION
DISPLAY AREA
1000

ITEM 19 : 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.

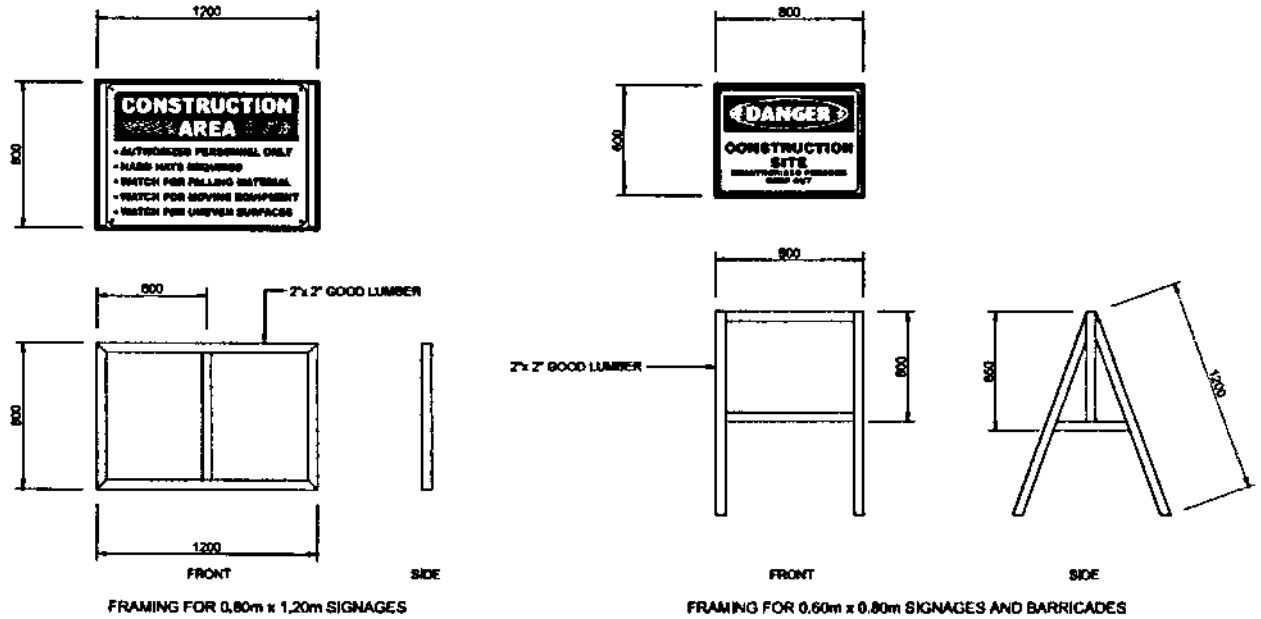
SPECIFICATION

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:

CONTINUOUS RORO RAMP, RC PLATFORM AND UPGRADING/ IMPROVEMENT OF PORT OPERATIONAL AREA:

S-01 of 18	-	Development Plan, Vicinity Map, General Notes, Table of Contents, Legend
S-02 of 18	-	General Plan (Proposed Continuous Roro Ramp and RC Platform)
S-03 of 18	-	Plan (Continuous Roro Ramp), Piling Plan, Pile Schedule
S-04 of 18	-	Front Elevation, Side Elevation
S-05 of 18	-	Typical Reinforcement of RC Deck (Continuous Roro Ramp)
S-06 of 18	-	Section Detailed Continuous Roro Ramp
S-07 of 18	-	Section Detailed Continuous Roro Ramp, Typical Detail of Mooring Block, Detail of Pile Cap
S-08 of 18	-	Piling Plan (RC Platform), Pile Schedule, Detail Showing Slab Reinforcement RC Platform
S-09 of 18	-	Detail Of Pile Cap (RC Platform), Detail of Catch Drain Manhole Cover, Installation Detail of Steel Ramp Connection
S-10 of 18	-	Section Detailed (RC Platform)
S-11 of 18	-	Detail of Rubber Dock Fender, Detail of 50 Ton Mooring Bollard
S-12 of 18	-	Typical Section Of 550mmø X 13 Mm. thick tubular steel piles
S-13 of 18	-	Detail Of 450mm X 450mm Pre-Stressed Concrete Pile
S-14 of 18	-	General Plan (Proposed Upgrading/Improvement of Port Operational Area)
S-15 of 18	-	Storm Drainage Layout
S-16 of 18	-	Section A-A
S-17 of 18	-	Section B-B
S-18 Of 18	-	Section C-C, Section D-D

REEFER RACK:

R-01 of 08	-	Typical Floor Framing Plan- Reefer Rack Structure, Longitudinal Section, Foundation Plan, Footing/Pedestal Details, MS Base Plate Detail, Detail A, Detail B
R-02 of 08	-	Typical Longitudinal Elevation, Typical Tubular Railing Detail, Handrail Detail, Typical Ladder Detail, Ladder Footing Detail, Section A, Section B, Section C
R-03 of 08	-	Detailed Elevation of Load Center, Detail of Beam, Detail of Footing - 1
R-04 of 08	-	Development Plan, Detail of Manhole, Concrete Duct Line Open Trench Detail
R-05 of 08	-	Power and Lighting Layout, Load Center Side View
R-06 of 08	-	Schedule of Loads, Riser Diagram, Single Line Diagram
R-07 of 08	-	Concrete Pedestal Post, Detail of Handhole
R-08 of 08	-	Reefer Rack and Service Entrance Layout Plan, General Notes, Legend

GATE AND GUARD HOUSE:

G-01 of 09	-	Perspectives, Site Development Plan
G-02 of 09	-	Floor Plan, Elevation A, Elevation B, Schedule Of Gate, Signage and Logo Details
G-03 of 09	-	Floor Plan, Roof Plan, Reflected Ceiling Plan, Front Elevation, Rear Elevation, Right Side Elevation, Left Side Elevation, Section Thru F-F', Section Thru G-G', Section Thru H-H'
G-04 of 09	-	Schedule of Doors and Window, Blow-Up Detail 03, Blow-Up Detail 04, Drip Mold Plan, Drip Mold Section
G-05 of 09	-	General Notes
G-06 of 09	-	Framing Elevation, Step-Up Section, Wall Footing, Foundation Plan (Guard House), Framing Plan, Roof Layout Plan
G-07 of 09	-	Typical Plan of CHB Fence, Typical Elevation Of CHB Fence, Footing Plan, Tie Beam Detail, Detail Of Column, Detail Of CHB Fence
G-08 of 09	-	Guard House Light and Power Layout Plan, Reflected Ceiling Lighting Layout Plan, Legend, Load Schedule, Remarks
G-09 of 09	-	Site Plumbing System/Storm Drainage Layout Plan, Sewer and Storm Water Drainage Layout Plans, Cold Water Supply Layout Plans, Details of Catch Basin, Detail of Trenching, Bedding & Backfilling of Pipes, Schedule of Pipe (Sewer Line), Schedule of Pipe (Water Line), General Notes and Specifications, Material Specifications

POWERHOUSE:

PH-01 of 12 -	Perspective, Site Development Plan, Blow-Up Site Development Plan
PH-02 of 12 -	Floor Plan, Roof Plan, Floor Pattern Layout, Reflected Ceiling Plan
PH-03 of 12 -	Front Elevation, Rear Elevation, Right Side Elevation, Left Side Elevation, Longitudinal Section, Cross Section
PH-04 of 12 -	Schedule of Doors and Windows
PH-05 of 12 -	General Notes
PH-06 of 12 -	Foundation Plan, Roof Framing Plan
PH-07 of 12 -	Detail of Column/ Column Footing, Detail of Footing Tie Beam (Ftb1), Detail of Reinforcement Bars, Slab on Grade Details, Footing Tie Beam Schedule, Ramp Detail, Typical Detail of Set-up, Conc. Duct Line Open Trench Detail, Detail of CHB Wall at Tie Beam
PH-08 of 12 -	Beam Schedule, Typ. Beam Reinforcement at Column Support, Lintel Beam Details, Beam Details @ Roll-Up Doors, Truss Diagram, Sag rod Detail, Purlins Connection Details, Truss-Beam Connection Details
PH-09 of 12 -	Genset Pad Details, Sections Details, Blow-Up Details, Transformer Pad Details
PH-10 of 12 -	Typical Plan of CHB Fence, Reinforcement Details of Perimeter Fence, Typical Elevation of CHB Fence, Detail of Column
PH-11 of 12 -	Lighting / Power Layout Plan, General Notes, Legend
PH-12 of 12 -	Site Storm Drainage Layout Plan, Storm Water Drainage Layout Plan, Storm Water Drainage Isometric Layout Plan, Typical Detail of Downspout, Details of Catch Basin

SECTION VIII

BILL OF QUANTITIES and ATTACHMENTS

BID SUMMARY

DUMAGUETE PORT EXPANSION PROJECT

Port of Dumaguete, Dumaguete, Negros Oriental

NO.		DESCRIPTION OF WORK	AMOUNT (Pesos)
BILL NO.	1	GENERAL EXPENSES	
BILL NO.	2	REMOVAL, EXCAVATION AND DISPOSAL WORKS	
BILL NO.	3	CONSTRUCTION OF R.C. PLATFORM & CONTINUOUS RORO RAMP	
BILL NO.	4	POWERHOUSE, GUARDHOUSE, FENCE AND GATE	
BILL NO.	5	UPGRADING/IMPROVEMENT OF PORT OPERATIONAL AREA	
		BID PRICE	

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

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
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**2 REMOVAL, EXCAVATION AND DISPOSAL WORKS**				
2.01	Remove existing fender and turn over to the authority as directed by the Engineer	no.	30		
2.02	Remove existing mooring bollard and turn over to the authority as directed by the Engineer	no.	10		
2.03	Chip-off portion of existing R.C. Curb, flush to required elevation and smoothen with mortar	l.m.	142		
2.04	Remove and dispose existing RC deck	sq.m.	99		
2.05	Cut and dispose existing PSC Piles up to seabed elevation	no.	18		
2.06	Remove and dispose existing concrete edging	cu.m.	266		
2.07	Remove existing interlocking paving blocks and turn over to the authority as directed by the Engineer	sq.m.	14,526		
2.08	Scrape and dispose existing fill materials	cu.m.	5,226		
2.09	Excavate and backfill existing fill materials prior for power house foundation, reefer, genset pad, electrical works, and catch basin	cu.m.	132		
	TOTAL FOR BILL NO. 2				

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**3 CONSTRUCTION OF R.C. PLATFORM & CONTINUOUS RORO RAMP**				
3.01	Supply and deliver to site tubular steel pipe piles	m.t.	828		
3.02	Supply and place polyurethane external coating for steel pipe pipes	sq.m.	2,758		
3.03	Supply, fabricate and install reinforcing cylinder plate for steel pipe piles	no.	147		
3.04	Handle, pitch and drive 550mm dia. vertical steel pipe piles	l.m.	651		
3.05	Handle, pitch and drive 550mm dia. batter steel pipe piles	l.m.	4,158		
3.06	Splicing of steel pipe piles	no.	147		
3.07	Cutting of newly driven steel pipe piles	no.	147		
3.08	Extraction of clogged materials inside the steel pipe piles	cu.m.	87		
3.09	Supply and install reinforcing steel cage for steel pipe piles	kg.	109,972		
3.10	Supply and place 3,500 psi concrete filler for steel pipe piles	cu.m.	439		
3.11	Supply and deliver to site 450mm x 450mmm PSC Piles	l.m.	7,152		
3.12	Handle, pitch and drive 450mm x 450mm Vertical PSC Piles	l.m.	5,180		
3.13	Handle, pitch and drive 450mm x 450mm Batter PSC Piles	l.m.	1,972		

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
3.14	Chip/cut & dispose portion of newly driven PSC Piles up to required elevation	no.	253		
3.15	Supply and place 3,500 psi concrete for superstructure	cu.m.	1,471		
3.16	Supply and instal steel reinforcement for superstructure	kg.	452,157		
3.17	Suppy and install construction joints (100mm x 100mm x 10mm) angle bar, hot-dipped galvanized including dowel bars	l.m.	439		
3.18	Supply and deliver to site rubber dock fender (V-type, 500H x 1500L) including accessories	set	21		
3.19	Install rubber dock fender and accessories	set	21		
3.20	Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories	set	7		
3.21	Install mooring bollards (T-head type) and accessories	set	7		
3.22	Supply, fabricate and install 20mm thk. ASTM A572 Grade Plate Machine bended including dowel bars and accessories	set	45		
	TOTAL FOR BILL NO. 3				

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**4 POWERHOUSE, GUARDHOUSE, FENCE AND GATE**				
4.01	Supply and apply soil treatment	sq.m.	189		
4.02	Supply, place and compact gravel bedding	cu.m.	19		
4.03	Supply, spread and compact aggregate sub-base course	cu.m.	76		
4.04	Supply & place 4,000 psi. concrete for building structure	cu.m.	40		
4.05	Supply & install steel reinforcement for building structure	kg.	7,643		
4.06	Construct 4,000 psi. concrete slab and ramp-up including reinforcement	sq.m.	121		
4.07	Supply, fabricate & install structural steel members for trusses and roofing system including base plates, bolts, purlins, painting for metal surfaces and other accessories	lot	1		
4.08	Supply, fabricate & install roofing works including long span roofing, ridge roll, gutter, parapet cladding and other accessories	lot	1		
4.09	Construct 150mm thick CHB wall including reinforcement	sq.m.	307		
4.10	Supply and place 13mm thick cement Plaster finish	sq.m.	399		
4.11	Supply and apply Elastomeric paint (2-coats)	sq.m.	399		

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
4.12	Supply and place plain cement finish	sq.m.	117		
4.13	Suppy and place Non-skid / Rough Cement Floor Finish	sq.m.	22		
4.14	Supply and install 0.4mm thk. Pre-formed/Pre-painted ribbed type spandrel metal ceiling including accessories	sq.m.	52		
4.15	Supply and install fixed metal louver window (2.5m x 2.0m) including ga.16 channel window and other accessories	set	3		
4.16	Supply and install fabricated Roll-up door and 2 leaf Metal door including fixed metal louver and other accessories	lot	1		
4.17	Supply and install drainage pipes and fittings including accessories	lot	1		
4.18	Construct Catch basin including accessories	no.	9		
4.19	Supply, deliver and install wires and cables of various sizes	lot	1		
4.20	Supply, deliver and install conduit pipe including fittings of various sizes	lot	1		
4.21	Supply, deliver and install wiring devices	lot	1		
4.22	Supply, deliver and install protective devices	lot	1		
4.23	Supply, deliver and install lighting fixtures	lot	1		

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
4.24	Supply, deliver and install lightning protection and accessories	lot	1		
4.25	Supply, deliver and install ventilation units including accessories	lot	1		
4.26	Supply, deliver and install genset including accessories and other incidental expenses	lot	1		
4.27	Supply, deliver and install distribution transformer including accessories and other incidental expenses	lot	1		
4.28	Construct cyclone fence located at power house including accessories	l.m.	20		
4.29	Construct guardhouse, fence, and gate including PPA logo and other accessories	lot	1		
	TOTAL FOR BILL NO. 4				

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

BILL OF QUANTITIES
DUMAGUETE PORT EXPANSION PROJECT
Port of Dumaguete, Dumaguete, Negros Oriental

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**5 UPGRADING/IMPROVEMENT OF PORT OPERATIONAL AREA**				
5.01	Supply and place 3,500 psi concrete for the manhole cover, pedestal post, duct bank and handhole	cu.m.	19		
5.02	Supply and install steel reinforcement for the manhole cover, pedestal post, duct bank and handhole	kg.	3,704		
5.03	Supply and place gravel bedding	cu.m.	8		
5.04	Supply, spread and compact aggregate base course	cu.m.	3,016		
5.05	Construct portland cement concrete pavement (300mm thk) including dowel bars and construction joint	sq.m.	15,078		
5.06	Supply, fabricate and install reefer rack including foundation and other accessories	lot	1		
5.07	Construct 150mm thick CHB wall including reinforcement for load center structure	sq.m.	12		
5.08	Construct manhole including accessories	no.	3		
5.09	Construct cable trench including accessories	l.m.	34		
	TOTAL FOR BILL NO. 5				

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, EXCAVATION AND DISPOSAL 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 turnover 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 2.02 **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 turnover 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 2.03 **Chip-off portion of 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 portion and flushed to required elevation and smoothen with mortar 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 RC deck**

The quantity to be paid for shall be the actual area in square meter of existing RC deck 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.

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 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.

Item 2.06 **Remove and dispose existing concrete edging**

The quantity to be paid for shall be the actual volume in cubic meter of existing concrete edging 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.

Item 2.07 Remove existing interlocking paving blocks and turn over to the authority as directed by the Engineer

The quantity to be paid for shall be the actual area in square meters of existing interlocking paving blocks to be removed and turn 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 2.08 Scrape and dispose existing fill materials

The quantity to be paid for shall be the actual volume in cubic meter of existing fill materials to be scraped 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.

Item 2.09 Excavate and backfill existing fill materials prior for powerhouse foundation, reefer, genset pad, electrical works, and catch basin

The quantity to be paid for shall be the actual volume in cubic meter of existing fill materials prior for powerhouse foundation, reefer, genset pad, electrical works, and catch basin to be excavated and backfilled 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

CONSTRUCTION OF R.C PLATFORM & CONTINUOUS RORO RAMP

Item 3.01 Supply and deliver to site tubular steel pipe piles

The quantity to be paid for shall be the actual weight in metric ton of tubular steel pipe 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 3.02 Supply and place polyurethane external coating for steel pipe piles

The quantity to be paid for shall be the actual area in square meters of polyurethane external coating for steel pipe piles 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 3.03 Supply, fabricate and install reinforcing cylinder plate for steel pipe piles

The quantity to be paid for shall be the actual number of reinforcing cylinder plate 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 3.04 Handle, pitch and drive 550mm dia. vertical steel pipe piles

The quantity to be paid for shall be the actual length in linear meter of 550mm dia. vertical steel pipe 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 3.05 Handle, pitch and drive 550mm dia. batter steel pipe piles

The quantity to be paid for shall be the actual length in linear meter of 550mm dia. batter steel pipe 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 3.06 Splicing of steel pipe piles

The quantity to be paid for shall be the actual number of steel pipe piles to be spliced 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 Cutting of newly driven steel pipe piles

The quantity to be paid for shall be the actual number of newly driven steel pipe piles to be cut 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 Extraction of clogged materials inside the steel pipe piles

The quantity to be paid for shall be the actual volume in cubic meters of clogged 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 3.09 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 3.10 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 3.11 Supply and deliver to site 450mm x 450mmm PSC Piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mmm 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 3.12 Handle, pitch and drive 450mm x 450mm Vertical PSC Piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm Vertical 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 3.13 Handle, pitch and drive 450mm x 450mm Batter PSC Piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm Batter 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 3.14 Chip/cut & dispose portion of newly driven PSC Piles up to required elevation

The quantity to be paid for shall be the actual number of newly driven PSC Piles to be chipped/ cut and disposed portion up to required elevation 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 3,500 psi concrete for superstructure

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete for superstructure 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 3.16 Supply and install steel reinforcement for superstructure

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement for superstructure 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 3.17 Supply and install construction joints (100mm x 100mm x 10mm) angle bar, hot-dipped galvanized including dowel bars

The quantity to be paid for shall be the actual length in linear meter of construction joints (100mm x 100mm x 10mm) angle bar, hot-dipped galvanized including dowel bars 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 deliver to site rubber dock fender (V-type, 500H x 1500L) including accessories

The quantity to be paid for shall be the actual set of rubber dock fender (V-type, 500H x 1500L) 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 3.19 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 3.20 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 3.21 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 3.22 Supply, fabricate and install 20mm thick ASTM A572 Grade Plate Machine bended including dowel bars and accessories

The quantity to be paid for shall be the actual set of 20mm thick ASTM A572 Grade Plate Machine bended including dowel bars and accessories 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.

BILL NO. 4

POWERHOUSE, GUARDHOUSE, FENCE AND GATE

Item 4.01 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 4.02 Supply, place and compact gravel bedding

The quantity to be paid for shall be the actual volume in cubic meters 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 4.03 Supply, spread and compact aggregate sub-base course

The quantity to be paid for shall be the actual volume in cubic meters 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 4.04 Supply & place 4,000 psi. concrete for building structure

The quantity to be paid for shall be the actual volume in cubic meters of 4,000 psi. concrete for building structure 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 4.05 Supply & install steel reinforcement for building structure

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement for the 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 4.06 Construct 4,000 psi. concrete slab and ramp-up including reinforcement

The quantity to be paid for shall be the actual area in square meters of 4,000 psi. concrete slab and ramp-up 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 4.07 Supply, fabricate & install structural steel members for trusses and roofing system including base plates, bolts, purlins, painting for metal surfaces and other accessories

The quantity to be paid for shall be the actual lot of structural steel members for trusses and roofing system including base plates, bolts, purlins, painting for metal surfaces and other accessories 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 4.08 Supply, fabricate & install roofing works including long span roofing, ridge roll, gutter, parapet cladding and other accessories

The quantity to be paid for shall be the actual lot of roofing works including long span roofing, ridge roll, gutter, parapet cladding and other accessories 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 4.09 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 4.10 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 4.11 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 4.12 Supply and place plain cement finish

The quantity to be paid for shall be the actual area in square meter of plain cement 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 4.13 Supply and place Non-skid / Rough Cement Floor Finish

The quantity to be paid for shall be the actual area in square meter of Non-skid / Rough Cement Floor 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 install 0.4mm thick Pre-formed/Pre-painted ribbed type spandrel metal ceiling including accessories

The quantity to be paid for shall be the actual area in square meter of 0.4mm thick Pre-formed/Pre-painted ribbed type spandrel metal ceiling 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 4.15 Supply and install fixed metal louver window (2.5m x 2.0m) including ga.16 channel window and other accessories

The quantity to be paid for shall be the actual set of fixed metal louver windows (2.5m x 2.0m) including ga.16 channel window 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 4.16 Supply and install fabricated Roll-up door and 2 leaf Metal door including fixed metal louver and other accessories

The quantity to be paid for shall be the actual lot of fabricated Roll-up door and 2 leaf Metal door including fixed metal louver 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 4.17 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 4.18 Construct Catch basin including accessories

The quantity to be paid for shall be the actual number of Catch basin 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 4.19 Supply, deliver and install wires and cables of various sizes

The quantity to be paid for shall be the actual lot of wires and cables of various sizes 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 4.20 Supply, deliver and install conduit pipe including fittings of various sizes

The quantity to be paid for shall be the actual lot of conduit pipe including fittings of various sizes 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 4.21 Supply, deliver and install wiring devices

The quantity to be paid for shall be the actual lot of wiring devices 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 4.22 Supply, deliver and install protective devices

The quantity to be paid for shall be the actual lot of protective devices 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 4.23 Supply, deliver and install lighting fixtures

The quantity to be paid for shall be the actual lot of lighting fixtures 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 4.24 Supply, deliver and install lightning protection and accessories

The quantity to be paid for shall be the actual lot of lightning protection and 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 4.25 Supply, deliver and install ventilation units including accessories

The quantity to be paid for shall be the actual lot of ventilation units 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 4.26 Supply, deliver and install genset including accessories and other incidental expenses

The quantity to be paid for shall be the actual lot of genset including accessories and other incidental expenses 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 4.27 Supply, deliver and install distribution transformer including accessories and other incidental expenses

The quantity to be paid for shall be the actual lot of distribution transformer including accessories and other incidental expenses 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 4.28 Construct cyclone fence located at powerhouse including accessories

The quantity to be paid for shall be the actual length in linear meter of cyclone fence located at powerhouse 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 4.29 Construct guardhouse, fence, and gate including PPA logo and other accessories

The quantity to be paid for shall be the actual lot of guardhouse, fence, and gate including PPA logo and other 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.

BILL NO. 5

UPGRADING/ IMPROVEMENT OF PORT OPERATIONAL AREA

Item 5.01 Supply and place 3,500 psi concrete for the manhole cover, pedestal post, duct bank and handhole

The quantity to be paid for shall be the actual volume in cubic meters of 3,500 psi concrete for the manhole cover, pedestal post, duct bank and handhole 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 5.02 Supply and install steel reinforcement for the manhole cover, pedestal post, duct bank and handhole

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement for the manhole cover, pedestal post, duct bank and handhole 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 5.03 Supply and place gravel bedding

The quantity to be paid for shall be the actual volume in cubic meters 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 5.04 Supply, spread and compact aggregate base course

The quantity to be paid for shall be the actual volume in cubic meters 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 5.05 Construct portland cement concrete pavement (300mm thick) including dowel bars and construction joint

The quantity to be paid for shall be the actual area in square meters of portland cement concrete pavement (300mm thick) including dowel bars and construction joint 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 5.06 Supply, fabricate and install reefer rack including foundation and other accessories

The quantity to be paid for shall be the actual lot of reefer rack including foundation and other accessories 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 5.07 Construct 150mm thick CHB wall including reinforcement for load center structure

The quantity to be paid for shall be the actual area in square meter of 150mm thick CHB wall including reinforcement for load center structure 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 5.08 Construct manhole including accessories

The quantity to be paid for shall be the actual number of manholes 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 5.09 Construct cable trench including accessories

The quantity to be paid for shall be the actual length in linear meter of cable trench 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.

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.

MINIMUM MAJOR EQUIPMENT REQUIREMENTS

2	unit/s	Air Compressor (250 cfm, minimum), owned
1	unit/s	Backhoe (0.40 cu.m., 94.30hp, minimum), owned
1	unit/s	Centrifugal Trash pumps, owned/leased
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
2	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	Pile Hammer (Diesel, 4,500 kg.m. min. - 10,500 kg.m. max. or Hydraulic equivalent), owned
1	unit/s	Pile Hammer (Diesel, 13,500 kg.m. min. – 21,600 kg.m. max. or Hydraulic equivalent), owned/ leased
1	unit/s	Diving equipment (complete), owned/leased
1	unit/s	Drop Hammer (2T, minimum), owned
1	unit/s	Dump Truck (10 tons 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
1	unit/s	Jackhammer (U/W), owned/leased
1	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 (10 tons, vibratory, minimum), owned/leased
2	unit/s	Transit Mixer (6 cu.m. cap., minimum), owned/leased
1	unit/s	Tugboat (500hp, minimum), owned/leased
1	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 (2 tons, minimum), owned
1	unit/s	Pavement Breaker (Backhoe Attachment), owned/leased

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

45	pcs.	Hard Hats
45	pcs.	Gloves (rubberized)
45	pcs.	Safety Glasses/Goggles (clear)
90	pcs.	Long sleeve T-shirt
8	pcs.	Aprons
4	pcs.	Safety Belts
45	pairs	Safety Shoes
4	pcs.	Life lines

Safety Devices

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

Medical and First Aid System	-	Twenty-four (24) mos.
Temporary shelter for workers	-	1 lot

NOTE:

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

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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)

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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)

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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

PPA MEMORANDUM CIRCULAR
No 02
Series of 2016
Attachment

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	Physical Test (Dimensions and Coatings)	One per Batch
B Concrete Post	Refer to Superstructure (SC)	Refer to Superstructure (SC)
Lamp Post A Structural Steel	Physical Test (Dimensions) Same test as for SC (E)	All units
B Zinc (Hot Dip Galvanizing) Coatings	Same test as for CJ (C)	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: **Dumaguete Port Expansion Project, Port of Dumaguete, Dumaguete, Negros Oriental**;

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 included

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

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 **Dumaguete Port Expansion Project, Port of Dumaguete, Dumaguete, Negros Oriental** 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	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	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. Pile Driving Works (Offshore)	l.m.	5,981						
2. Reinforced Concrete Works	cu.m.	955						
3. Construction of Portland cement concrete pavement	sq.m.	7,539						
4. Construction of Building	sq.m.	100						

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 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

Construction Safety and Health Officer – One (1) year
Materials Engineer II – for projects costing more than 100M

_____
Name of Firm

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

_____
Date

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), cu.m. (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/Leased 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 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 purchased agreement, submit certification of availability of equipment from the equipment lessor/vendor for the duration of the project, and duly Notarized copy of leased contract/purchased agreement.

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 leased 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

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 **Dumaguete Port Expansion Project, Port of Dumaguete, Dumaguete, Negros Oriental** 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 **Dumaguete Port Expansion Project, Port of Dumaguete, Dumaguete, Negros Oriental** 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 **Dumaguete Port Expansion Project, Port of Dumaguete, Dumaguete, Negros Oriental**, 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, EXCAVATION AND DISPOSAL WORKS

1. Removal of existing rubber dock fender and mooring bollard
2. Chipping & disposal of existing RC curb
3. Removal & disposal of existing RC deck including piles
4. Removal & disposal of concrete edging
5. Removal of existing interlocking paving blocks
6. Scraping & disposal of fill materials
7. Excavation & backfilling works

B. CONSTRUCTION OF R.C. PLATFORM & CONTINUOUS RORO RAMP

1. Supply & delivery of Steel Pipe Piles including polyurethane coating
2. Handling, pitching & driving of Steel Pipe piles
3. Supply, fabrication of band tip and splicing for the steel pipe piles
4. Cutting & disposal of newly driven Steel Pipe piles
5. Extraction of clogged materials inside the SPP
6. Supply & placing of concrete filler for SPP
7. Supply & installation of reinforcing steel cage for SPP
8. Supply & delivery of PSC Piles
9. Handling, pitching & driving of PSC piles
10. Supply & installation of reinforcing steel bars for the superstructure
11. Supply & placing of concrete for the superstructure
12. Supply & installation of rubber dock fenders
13. Supply & installation of mooring bollards
14. Supply, fabricate & installation of steel ramp protection

C. POWERHOUSE, GUARDHOUSE, FENCE AND GATE

1. Construction of power house, complete with architectural finishes, structural, electrical, plumbing, painting etc.
2. Supply & installation of genset & transformer
3. Construction of guard house, fence and gate, complete with finishes, PPA logo etc.

D. UPGRADING/IMPROVEMENT OF PORT OPERATIONAL AREA

1. Supply & placing of concrete
2. Supply & installation of reinforcing steel bars
3. Supply & placing of gravel bedding
4. Supply & placing of aggregate base course
5. Construction of PCC Pavement
6. Supply, fabrication & installation of reefer rack
7. Construction of CHB wall for load center structure
8. Construction of manhole & accessories
9. Construction of cable trench & accessories

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 Representative
(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-curb.
- 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]