

COATING PROPERTIES

Table 1 – Minimum Average Coating Thickness Grade by Material Category

Material Category	All Specimens Tested Steel Thickness Range (Measured), mm (in.)				
	< 1/16 (<1.6)	1/16 to < 1/8 (1.6 to < 3.2)	1/8 to < 3/16 (3.2 to 4.8)	> 3/16 to < 1/4 (> 4.8 to < 6.4)	≥ 1/4 (≥ 6.4)
Structural Shapes & Plate	45	65	75	85	100
Strip and Bar	45	65	75	85	100
Pipe and Tubing	45	45	75	75	75
Wire	35	50	60	65	80

COATING THICKNESS

The average thickness of coating for all specimens tested shall conform to the requirements of Table 1 for the categories and thickness of the material being galvanized. Minimum average thickness of coating for any individual specimen is one coating grade less than that required in Table 1. Where products consisting of various material thicknesses or categories are galvanized, the coating thickness grades of each thickness range and material category of material shall be shown in Table 1. The specification of coating thickness heavier than those required by Table 1 shall be subject to mutual agreement between the galvanizer and Engineer.

For articles whose surface area is greater than 100,000 mm² (160 in.²) (multi-specimen articles), each test article in the sample must meet the appropriate minimum average coating thickness grade requirements of Table 1. Each specimen coating thickness grade comprising that overall average for each test article shall average not less than one coating grade below that required in Table 1.

For articles whose surface area is equal to or less than 100,000 mm² (160 in.²) (single-specimen articles), the average of all test articles in the sample must meet the appropriate minimum average coating thickness grade requirements of Table 1. For each test article, its specimen coating thickness shall not be less than one coating grade below that required in Table 1.

No individual measurement or cluster of measurements at the same general location on a test specimen shall be cause for rejection under this specification provided that when those measurements are averaged with the other dispersed measurements to determine the specimen coating thickness grade for that specimen, the requirements of the above specifications as appropriate are met.

The coating thickness grades in Table 1 represent the minimum value obtainable with a high level of confidence for the ranges typically found in each material category. While most coating thicknesses will be in excess of those values, some materials in each category may be less reactive (for example, because of chemistry or surface condition) than other materials of the steel category spectrum. Therefore, some articles may have a coating grade at or close to the minimum requirements shown in Table 1. In such cases, the precision and accuracy of the coating thickness measuring technique should be taken into consideration when rejecting such articles for coating thickness below that is required by this specification.

FINISH

The coating shall be continuous (except as provided below), and as reasonably smooth and uniform in thickness as the weight size and shape of the item. Except for local excess coating thickness which would interfere with the use of the product or make it dangerous to handle (edge tears or spikes), rejection for non-uniform coating shall be made only for plainly visible excess coating not related to design factors such as holes, joints, or special drainage problems. Since surface smoothness is a relative term, minor roughness that does not interfere with the intended use of the product, or roughness that is related to the as-received (un-galvanized) surface condition, steel chemistry to zinc shall not be grounds for rejection.

Surfaces that remain uncoated after galvanizing may be renovated in accordance with the methods in ASTM Practice A 780 provided that the following conditions are met:

1. Each area subject to renovation shall be 25mm (1 in.) or less in its narrowest dimension.
2. The total area subject to renovation on each article shall be no more than $\frac{1}{2}$ of 1% of the accessible surface area to be coated on that article, or 22,500mm² (36 in.²) per ton of piece weight, whichever is less. Inaccessible surface areas are those which cannot be reached for appropriate surface preparation and application of repair materials as described in ASTM Practice A 780.
3. The thickness of renovation shall be that is required by the thickness grade for the appropriate material category and thickness range in Table 1 in accordance with the coating thickness requirements, except that for renovation using zinc paints, the thickness of renovation shall be 50% higher than that required by table 1, but not greater than 0.0254mm (4.0 mils).
4. When areas requiring renovation exceed the criteria previously provide, or are inaccessible for repair, the coating shall be rejected.

THREADED COMPONENTS IN ASSEMBLIES

The zinc coating on external threads shall not be subjected to a cutting, rolling or finishing tool operation, unless specifically authorized by the purchaser. Internal threads may be tapped or retapped after galvanizing. Coatings shall conform to the requirements of ASTM Specification A 153/A 153 M.

APPEARANCE

Upon shipment from the galvanizing facility, galvanized articles shall be free from uncoated areas, blisters, flux deposits and gross dross inclusions. Lumps, projections, globules or heavy deposits of zinc which will interfere with the intended use of the material will not be permitted. Plain holes of 12.5mm (1/2 in.) diameter or more shall be clean and reasonably free from excess zinc. Marks in the zinc coating caused by tongs or other items used in handling the article during the galvanizing operation shall not be cause for rejection unless such marks have exposed the base metal, and the bare metal areas exceed the criteria provided in number 1 and 2 of Subsection "Finish".

Whenever dross is present in a form other than finely dispersed pimples in the coating and is present in such amount as to be susceptible to mechanical damage, it will be considered as "gross".

ADHERENCE

The zinc coating shall withstand handling consistent with the nature and thickness of the coating and the normal use of the article, without peeling or flaking. Although some material may be formed after galvanizing, in general the zinc coating on the articles covered by this specification is too heavy to permit severe bending without damaging the coating.

SAMPLING

A lot is a unit of production or shipment from which a sample may be taken for testing. Unless otherwise agreed upon between the galvanizer and the purchaser, or established within this specification, the lot shall be as follows:

1. For testing at a galvanizer's facility, a lot is one or more articles of the same type and size comprising a single order or a single delivery load, whichever is smaller, or any number of articles identified as a lot by the galvanizer, when these have been galvanized within a single production shift and in the same bath.
2. For test by the purchaser after delivery, the lot consists of the single order or the single delivery load, whichever is smaller, unless the lot identify, established in accordance with the above, is maintained and clearly indicated in the shipment by the galvanizer.

The method of selection and number of test specimens shall be agreed upon between the galvanizer and the purchaser. Otherwise, the test specimens shall be selected random from each lot. In this case, the minimum number of specimens from each lot shall be as follows:

Number of Pieces in Lot	Number of Specimens
3 or less	All
4 to 500	3
501 to 1,200	5
1,201 to 3,200	8
3,201 to 10,000	13
10,001 and over	20

A test specimen which fails to conform to any requirement of this specifications shall not be used to determine the conformance to other requirements.

TEST REQUIREMENTS

Magnetic Thickness Measurements:

The thickness of the coating shall be determined by magnetic thickness gauge measurements in accordance with ASTM Practice E 376. For each specimen, five or more measurements shall be made at points widely dispersed throughout the volume occupied by the specimen so as to represent as much as practical, the entire surface area of the test specimen. The average of the five or more measurements thus made for each specimen is the specimen coating thickness.

For articles whose surface area is greater than 100,000 mm² (160 in²), in the average of the three specimen coating thickness grades comprising each test article is the average coating thickness for that test article. A specimen must be evaluated for each steel category and material thickness within the requirements for each specimen of the test article

For articles whose surface area is equal to or less than 100,000 mm² (160 in²), the average of all specimen coating thickness grades is the average coating thickness for the sample.

The use of magnetic measurement method is appropriate for larger articles, and may be appropriate for smaller articles when such is practical using ASTM Practice E 376.

Stripping Method

The average weight of coating may be determined by stripping a test article, a specimen removed from a test article, or group of test articles in the case of very small items such as nails, etc., in accordance with Test method ASTM A 90/A 90m. The weight of coating per unit area thus determined is converted to equivalent coating thickness values in accordance with Table 2, Coating Thickness Grade (rounding up or down as appropriate). The thickness of coating thus obtained is the test article coating thickness, or in the case of a specimen removed from a test article, is the specimen average coating thickness.

Table 2 – Coating Thickness Grade ^A

Coating Grade	mils	oz/ft ²	μm	g/m ²
35	1.4	0.8	35	245
40	1.4	1.0	45	320
50	2.0	1.2	50	355
55	2.2	1.3	55	390
60	2.4	1.4	60	425
65	2.6	1.5	65	460
75	3.0	1.7	75	530
80	3.1	1.9	80	565
85	3.3	2.0	85	600
100	3.9	2.3	100	705

^A Conversions in Table 2 are based on the metric thickness value equivalents from the next earlier version, using conversion factors consistent with Table X 2.1 in Specification A 653/A 653M, rounded to the nearest 5 μm (0.0002 in.). The conversion factors used are: mils = μm x 0.03937; oz/ft² = μm x 0.002316; g/m² = μm x 7.067.

Weighing Before or After Galvanizing

The average of coating may be determined by weighing articles before and after galvanizing, subtracting the first weigh from the second and dividing the result by the surface area. The first weigh shall be determined after pickling and drying, and the second after cooling to ambient temperature. The weight of coating per unit area thus determined is converted to equivalent coating thickness values according to Table 2 (rounding up or down as appropriate). The thickness of coating thus obtained is the test article coating thickness.

Microscopy

The thickness of coating may be determined by cross-sectional and optical measurement in accordance with ASTM Test Method B 487. The thickness thus determined is a point value. No less than five such measurements shall be made at locations on the test article which are as widely dispersed as practical, so as to be representative of the whole surface of the test article. The average of no less than five such measurement is the specimen coating thickness.

Adhesion

Determine adhesion of the zinc coating to the surface of the base metal by cutting or prying with the point of a stout knife, applied with considerable pressure in a manner tending to remove a portion of the coating. The adhesion shall be considered inadequate if the coating flakes off in the form of a layer of the coating so as to expose the base metal in advance of the knife point. Do not use testing carried out at edges or corners (points of lowest coating adhesion) to determine adhesion of the coating. Likewise, do not use removal of small particles of the coating by paring or whittling to determine failure.

Embrittlement

Test for embrittlement may be made in accordance with ASTM Practice A 143

The galvanized article should withstand a degree of bending substantially the same as the ungalvanized article. Flaking or spalling of the galvanized coating is not be constructed as an embrittlement failure.

Inspection, Rejection and Retest

The material shall be inspected at the galvanizer's plant prior to shipment. However, by agreement the purchaser may make the tests which govern the acceptance or rejection of the materials in his own laboratory or elsewhere.

When inspection of materials to determine conformity with the visual requirements of Subsection "Finish" warrants rejection of a lot, the galvanizer may sort the lot and submit it once again for acceptance after he has removed any nonconforming articles and replace them with conforming articles.

Materials have been rejected for reasons other than embrittlement may be stripped and re-galvanized, and again submitted for inspection and test at which time they shall conform to the requirements of this inspection.

Transport and Storage

Galvanized components shall, wherever possible, be transported and stored under dry, well-ventilated conditions to prevent the formation of wet storage staining.

Either zinc phosphate or chromate passivation treatment after galvanizing may be used to minimize the wet storage staining which may occur on articles unable to be stored in dry, well-ventilated conditions.

Provided the coating thickness complies with the requirements of Subsection "Coating Thickness", no further remedial action is required to the stained areas.

ITEM 16 : CONSTRUCTION JOINTS

SCOPE OF WORK

This item shall consist of the manufacturing and installation of construction joints / expansion joints in accordance with the details, and at the locations, lines, grades and dimensions shown in the drawings.

MATERIAL REQUIREMENTS

1. All construction joints / expansion joints shall be hot-dipped galvanized inside and out in accordance with international standards for galvanizing BS EN1460.
2. Painted finish shall be rejected.
3. All steel gratings and angle bars for construction joints / expansion joints shall be hot-dipped galvanized except for the nuts, washers and bolts which shall be stainless steel.
4. Welding shall be in accordance with the AWS Code and as herein specified or any other welding standard, approved by the Engineer.

The Contractor shall be required to submit test certificates for steel materials for the construction / expansion joints used in its manufacture; and for hot-dip galvanizing which shall meet or exceed the specifications under "Zinc Coating".

EXECUTION

DELIVERY, STORAGE AND INSTALLATION

1. Upon delivery at site, the hot-dipped galvanized construction joints / expansion joints shall not be subjected to the following activities:
 - a. Re-fabrication
 - b. Cutting
 - c. Grinding
 - d. Welding
 - e. Sawing
 - f. Any hot works or similar activities
2. Stainless steel nuts and bolts may be tack welded using stainless steel welding rods.
3. The construction joints / expansion joints shall not be exposed to sea water and other corrosive chemicals or substances prior to installation.

ITEM 17 : MOORING AND FENDERING SYSTEM

SCOPE OF WORK

1. The work includes furnishing of all labor, materials and equipment to complete the installation of mooring bollards and fenders in piers/wharves.
2. The work shall include the supply, transport, handling, storage and installation of fenders systems in the newly constructed piers.
3. The Contractor shall furnish and install the necessary fittings as shown on the drawings and/or specified.

Supplementary parts necessary to complete and install each item of works shall be included whether or not shown or specified. The Contractor shall furnish to relevant trades all anchors, fastenings, inserts, fittings, fixtures or the like to be installed on or required for securing the works.

The Contractor shall submit shop drawings of all fitting works prior to placing orders and commencement of any fabrication.

MATERIAL REQUIREMENTS

MOORING SYSTEM

Designated load capacity of mooring bollards shall be as shown in the drawings, and shall be referred to as the maximum load capacity. The mooring bollards shall be at rupture stage upon reaching the maximum load capacity.

Mooring bollards shall be of the dimensions, weights, capacities and designs as shown in the drawings and shall be fabricated by approved manufacturer with cast steel conforming to the requirements indicated in the plan/drawings, or approved equivalent.

The size of the bolts, nuts and washers shall be in accordance with the specifications provided in the plans/drawings. The anchor plate shall be connected to the holding down bolt as shown in the plans/drawings. All bolts, nuts, washers etc., that are exposed shall be hot-dip galvanized.

Samples of the bolts, nuts, washers and anchor plates shall be submitted to the Engineer for approval before being used in the Works.

The upper part of bollards and base plates which are not embedded in concrete shall be painted. The surface of bollards shall be cleaned thoroughly by wire brush or other means prior to painting to remove rust or any other contamination which may interfere with bond of paint to metal.

The exposed surface shall be coated with rust proof paint and finishing paint, which shall be coal-tar epoxy of 120m micron thickness in accordance with JIS K5623 or the approved standard.

Base Steel:

Chemical composition and mechanical properties of base metal to be used for fabrication of mooring bollard and its accessories shall comply with ASTM A36 and other required standard stated therein.

Concrete Foundation:

Concrete foundation for mooring bollards shall conform to the requirements of the Section concerning "Reinforced Concrete".

Visual Inspection:

All mooring bollards delivered to Site shall be inspected by the Engineer for any signs of flaws or defect inimical to usage.

Mill Test Certificates:

Two (2) copies of mill test reports shall be submitted certifying that materials meet the specified standards.

Test Inspection:

Inspection of all materials and methods of fabrication shall be carried out by the Contractor. However, the Engineer reserves the right to inspect all facilities at any time during the manufacture to ensure that the materials and workmanship are in accordance with Specifications and the best of workmanship.

FENDER SYSTEM

The rubber fenders should comply with the performance requirements specified in the table provided on the plan/drawings of Rubber Dock Fenders (RDF).

PHYSICAL PROPERTIES OF MATERIALS

The rubber for the fenders shall be of high quality natural rubber, synthetic rubber or mixed rubber blended with carbon black used in the rubber industry and shall have sufficient resilience and anti-ageing, weathering, abrasion, wear and oil resistant properties. The rubber dock fenders shall be free from bubbles, cracks and other harmful defects.

The physical properties of the rubber compound used for the fenders shall comply with the following requirements:

Physical Properties and Test Method

Test Item		Properties	Test Method	
Physical Test	Before Aging	Tensile Strength	Test piece: Dumbell No. 3	ASTM D412
		Elongation		ASTM D1456
		Hardness	Spring Type hardness test (Type A)	ASTM D2240
	After Aging	Tensile Strength	Aging by air heating: 70±1°C x 96 hours.	ASTM D412
		Elongation		ASTM D1456
		Hardness		ASTM D2240
	Compression Test		Heat treatment: 70±1°C x 22 hours.	ASTM D395

Note: Equivalent Standards are acceptable.

FITTINGS AND ANCHORAGE

Anchor bolts and connecting hardware shall be fabricated using type of steel specified and to the required shapes and sizes shown on the approved plan/drawings.

TESTING, SAMPLING, INSPECTION, ACCEPTANCE, MARKING AND PACKAGING

Testing

All rubber dock fenders shall be tested for performance. It shall pass the required energy absorption and reaction force at a certain deflection as indicated in the plan.

The Contractor shall be required to submit test certificates showing compliance to the above requirements. The test certificates shall be certified by an independent testing institute / organization recognized by the Authority.

The standard performance testing methodology shall be Method B, to wit:

1. Fender temperature shall be stabilized at 23 degrees plus or minus 5 degrees centigrade for at least 24 hours before compression testing.
2. Break-in of fender by deflecting 3 times to rated deflection.
3. Removed load from the RDF and allow recovering for a minimum of 1 hour.
4. Deflect RDF at speed of 2-8 cm/min once to rated deflection.

The testing apparatus shall be calibrated and certified within plus or minus 1% in accordance with ISO or equivalent JIS or ASTM requirements. Calibration shall be traceable to a national/international standard and shall be performed annually by an accredited third party organization. The RDF performance testing center shall be subjected to accreditation by PPA and notation and /or certification by DPWH-BRS prior to acceptance.

Inspection

All fenders of each type shall be inspected for compliance to specified dimensions and all fenders shall be inspected by the Engineer for any sign of flaw or defect inimical to its use.

All anchor bolts and fittings shall be inspected. The material used for the fabrication of bolts and fittings shall be covered by the manufacturer's certified mill certificate and shall be verified by the Authority.

All RDF items/units shall be clearly numbered and marked indicated the following:

Acceptance Tolerance

The acceptance tolerance shall be based on the following:

1. Fender Dimension

Length	:	-2% to +4%
Width	:	-2% to +4%
Height	:	-2% to +4%
Thickness	:	-2% to +8%
2. Anchor Bolt Holes in Fender

Diameter of the Hole	:	+2.0mm
Pitch of the Hole	:	+4.0mm
3. Acceptance tolerance for all fenders supplied shall be as follows:

E = Energy absorption,	E ≥ Specified E but not less than 10% of the specified E
R = Reaction force,	R ≤ Specified R but not more than 10% of the specified R

Marking

All fender units shall be clearly numbered and marked. Each fender shall have the following markings.

1. Fender type and manufacturer's name or trade mark
2. Production serial number
3. Date of manufacture or its abbreviation
4. Main dimensions
5. Project identification as follows:

Name of Port/Project: _____

Year supplied _____

Packaging

The fenders shall be packaged on wooden crate or wrapped individually with Polypropylene sheets except when shipped containerized. The bolts and fittings should be placed in crates and suitably treated for protection when transported by sea and stored in port areas.

EXECUTION

MOORING / FENDERING SYSTEM

All units shall be installed at the locations shown on the drawings and as directed by the Engineer.

ITEM 18 : ELECTRICAL WORKS

SCOPE OF WORK

The work to be done shall consist of furnishing, delivering and installing electrical materials/fixtures completed in accordance with all the details of the electrical works as shown on the drawings including materials, labor, tools and equipment and all incidental works as found necessary.

Refer to electrical plans/drawings for location and extent of work involved.

GENERAL REQUIREMENTS

- a) All works shall be done in accordance with the requirements of the publications and agencies having jurisdiction, as well as the requirements of the approved standards.
 1. National Fire Protection Association - (NFPA)
 2. National Electrical Manufacturer Association - (NEMA)
 3. Underwriter Laboratories, Inc. - (UL)
 4. Philippine Electrical Code - (PEC)
Philippine National Standard - (PNS)
 5. Federation Specification:
Circuit Breaker, Molded Case, Branch
Circuit and Service
 6. American National Standard Institute - (ANSI)
 7. American Society for Testing and Materials - (ASTM)
 8. Illuminating Engineering Society - (IES)
 9. Light Emitting Diode - (LED)
- b) The electrical power of the Port lighting system will be connected to the Main Disconnect Panel (MDP) located on the concrete pedestal post. While the supply voltage should be 230 volts, single phase (1Ø), and 60 hertz.
- c) The Contractor shall employ a licensed Registered Electrical Engineer or Master electrician to perform or to supervise and to conduct the continuous inspection of all electrical work.
- d) The Contractor shall first obtain approval from the Authority before procurement, fabrication or delivery of electrical materials to the site. Partial submittals will not be acceptable and will be returned without review. Submittals shall include the Manufacturer's Name, Trade Name, Place of Manufacture, Catalog Model or Number, Nameplate Data, Size, Layout Dimensions, Capacity, Project Specification and Paragraph Reference, Technical Society Publication References and other information necessary to establish contract compliance of each item to be furnished.
- e) All excavations fill and backfill and concrete works involved herein, shall be carried to the required elevations and shall conform to the provisions of specification under Earthwork and Concrete Construction of this tender document.

- f) The materials and equipment to be furnished shall be standard products of reputable manufacturer engaged in the reproduction of such materials and equipment.
- g) All permits and electrical fees required for this work shall be obtained at the expense of the Contractor. The Contractor shall furnish the Engineer-in-Charge, the final Certificates of Inspections and approval from the proper government authorities after the completion of work. The Contractor shall prepare all as-built plans and all other paper works as required by the enforcing authorities.
- h) The Contractor shall furnish and install electrical materials as shown in the drawings. A licensed Electrical Engineer or Master Electrician is required to implement the installation of the electrical system.
- i) Electrical installation shall conform to the requirements of Philippine Electrical Code (PEC) and the other approved standards.
- j) The contractor shall install all electrical works with the supervision of the qualified Registered Electrical Engineer (REE) or Master Electrician. All electrical installation applications regardless of capacity and voltage whether new, addition or revision shall be accompanied by electrical plans signed and sealed by a duly licensed Professional Electrical Engineer (PEE).

MATERIAL REQUIREMENTS

All materials shall be brand new and shall be of the approved type meeting all the requirements of the Philippine Electrical Code and bearing the Philippine Standard Agency (PSA) mark.

PRODUCTS

WIRES AND CABLES

The conductor material to be furnished and installed shall be copper wire Heat-Resistant Thermoplastic (THHN/THWN-2). All conductors shall be rated 600 volts insulation and shall be standard for all sizes.

CONDUIT AND FITTINGS

Underground PVC conduit shall be polyvinyl chloride with concrete covered. It shall be manufactured to schedule 40 outside diameter. All fittings and bends shall be solvent bonded using manufacturers recommended product.

LED FLOODLIGHT FIXTURE 200 WATT

Specifications:

Rated	: 200 watt LED Floodlight Fixture or equivalent
Input Voltage	: AC 85-265 / 50-60 HZ
Luminous Flux	: 30000 LM
Color Temperature	: 5500-6500k / Daylight
Light Source	: 4 layer of High Brightness LED Module
Material	: Die Cast Aluminum Alloy Housing
Beam Angle	: 120 degrees
Lifetime	: > 50,000 hours
IP Rating	: IP 66 outdoor (water resistant, excellent for outdoor use)

Switches:

Weatherproof die cast aluminum toggle switch (NEMA-3R) attached to Single Angle Bar Floodlight Steel Tapered Lamp Post.

SINGLE ANGLE BAR FLOODLIGHT STEEL TAPERED LAMP POST

Lamp Post shall be 10.0 m ht. Single Angle Bar Floodlight steel tapered lamp post, furnished installed and tested as shown on the approved plans. The post/s shall be dimensioned for a wind velocity of 185 km/hr. It shall be locally fabricated or manufactured. The post shall be Hot – Dipped Galvanized, prime-coated with red lead and shall be painted at site with the final coating preferably aluminum paint to be approved by the Engineer.

LED FLOODLIGHT FIXTURE 300 WATT

Specifications:

Rated	: 300 watt LED or equivalent
Luminous Flux	: 42000 lm
Light Source	: High Brightness SMD LED
Color Temperature	: 5500K - 6500K / daylight
Color Temperature	: 3000K - 6000K / optional
Input Voltage	: AC 90-305 / 50-60 HZ
Material	: Aluminum Housing + Acrylic Cover
Beam Angle	: 140 degrees
Lifetime	: > 50,000 hours
IP Rating	: IP 65 outdoor

CONCRETE DUCT BANK

The contractor shall construct concrete duct bank as shown in the approved plan.

Panel Board:

Weatherproof control panel board (NEMA-3R) attached to floodlight pole.

FLOODLIGHT POLE (12.00 meter height)

Floodlight pole is to be hot-dip galvanized steel, designated as complete system with anchor bolts, steel ladder, hot-dip galvanized steel frame for mounting the number of floodlight fixtures are indicated on the approved plan.

A maintenance platform complete with safety rail should be provided as shown in the approved plan.

Anchor bolts are made of Stainless Steel to ensure that the floodlight pole assembly capacity can withstand all the stresses composed of wind, luminaires weight and live load of maintenance personnel.

LIGHTNING PROTECTION WITH ACCESSORIES

It consists of air terminals, down conductors, ground connections, grounding electrodes as shown in the plan.

PROTECTIVE COATING FOR FLOODLIGHT POLE

Hot Dipped Galvanizing

All mild steel parts exposed to weather shall be hot-dipped galvanized after fabrication as shown in the approved plan or directed by the Engineer in accordance with the requirements of JIS H8864.1. Prior to hot-dip galvanizing, the surface shall be cleaned of dirt, weld splatter, grease, slag, oil, paint or other deleterious matters. The steel surfaces shall be chemically descaled and cleaned with abrasive blast or other suitable method as approved by the Engineer.

PANEL BOARD

Panel board shall conform as shown on the approved plans with respect to supply characteristics, rating of main lugs or main circuit breaker, number and ratings and capacities of branch circuit breakers.

Panel board shall consist of a factory completed dead front assembly mounted in an enclosing NEMA-3R cabinet consisting of code gauge galvanized sheet steel box with trim and door.

Main and branch circuit breakers for panel board shall have the rating, capacity and number of poles as shown on the approved plans. Breakers shall be thermal magnetic type solid state-type with interrupting capacity of 10,000 amperes symmetrical minimum. Breaker terminal shall be UL listed as suitable for type of conductor provided. Breaker shall be the bolt-in type (that is, bolted to the current carrying bus). Plug-in circuit breakers are not acceptable.

EXECUTION

INSTALLATION

Floodlight Pole and Lamp Post shall be installed as shown on the approved plans.

Pole Setting: Depth as shown on the approved plans.

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

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

Concrete Pedestal shall be reinforced concrete with appropriate weatherproof fittings as constructed as shown in the approved plan. Reinforced concrete materials shall conform to the requirements of concrete. Concrete shall be of 21 Mpa (3000 psi) compressive strength.

Metering: the local utility company of Plaridel Port, Misamis Occidental, is responsible for the supply and installation of measuring equipment, and its accessories, but it is part of the contractor responsibility and expense to contact them about this.

WORKMANSHIP

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

TESTING OPERATIONS

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

GUARANTEE

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

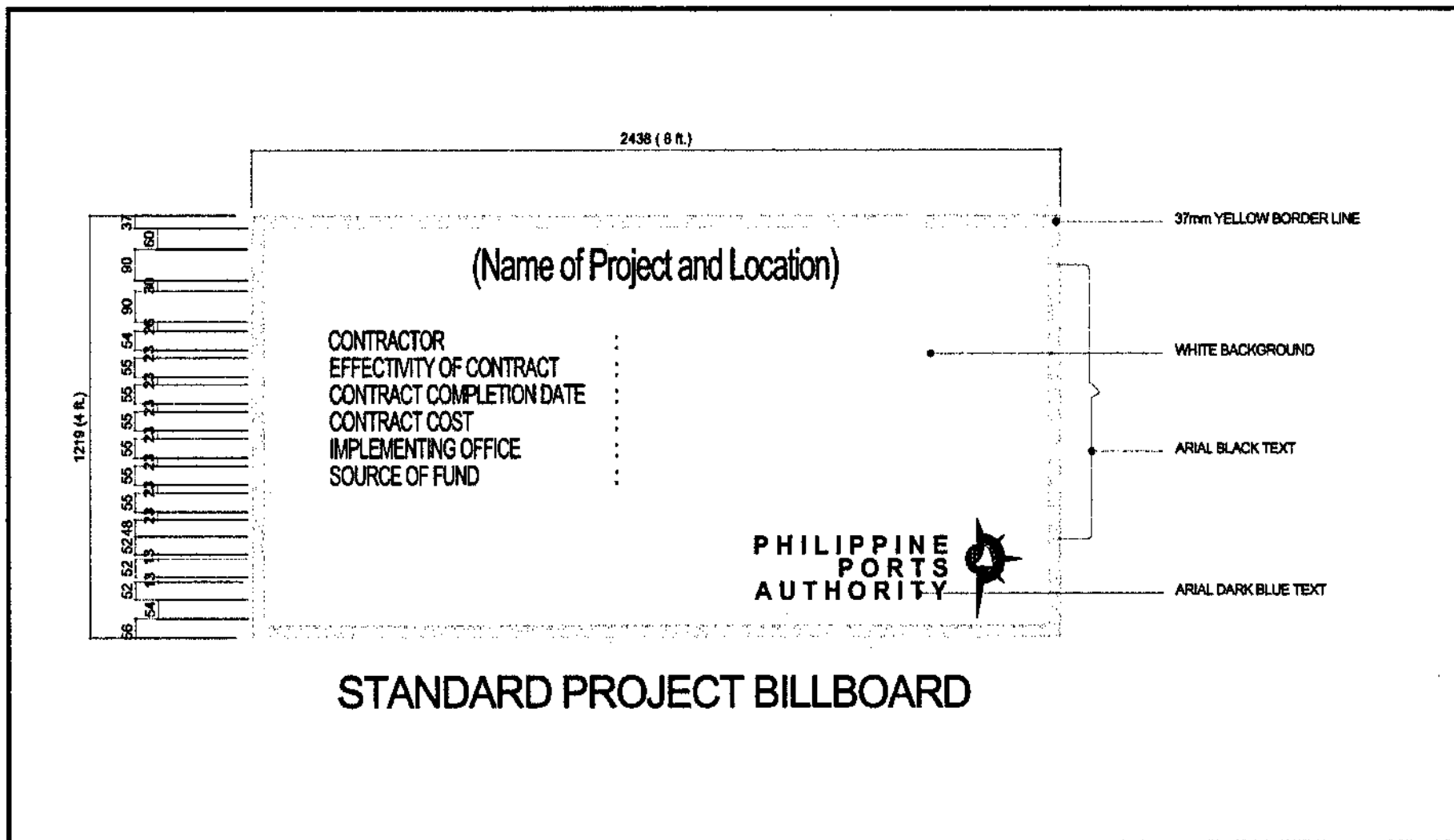
ITEM 19 : PROJECT BILLBOARD**SPECIFICATION**

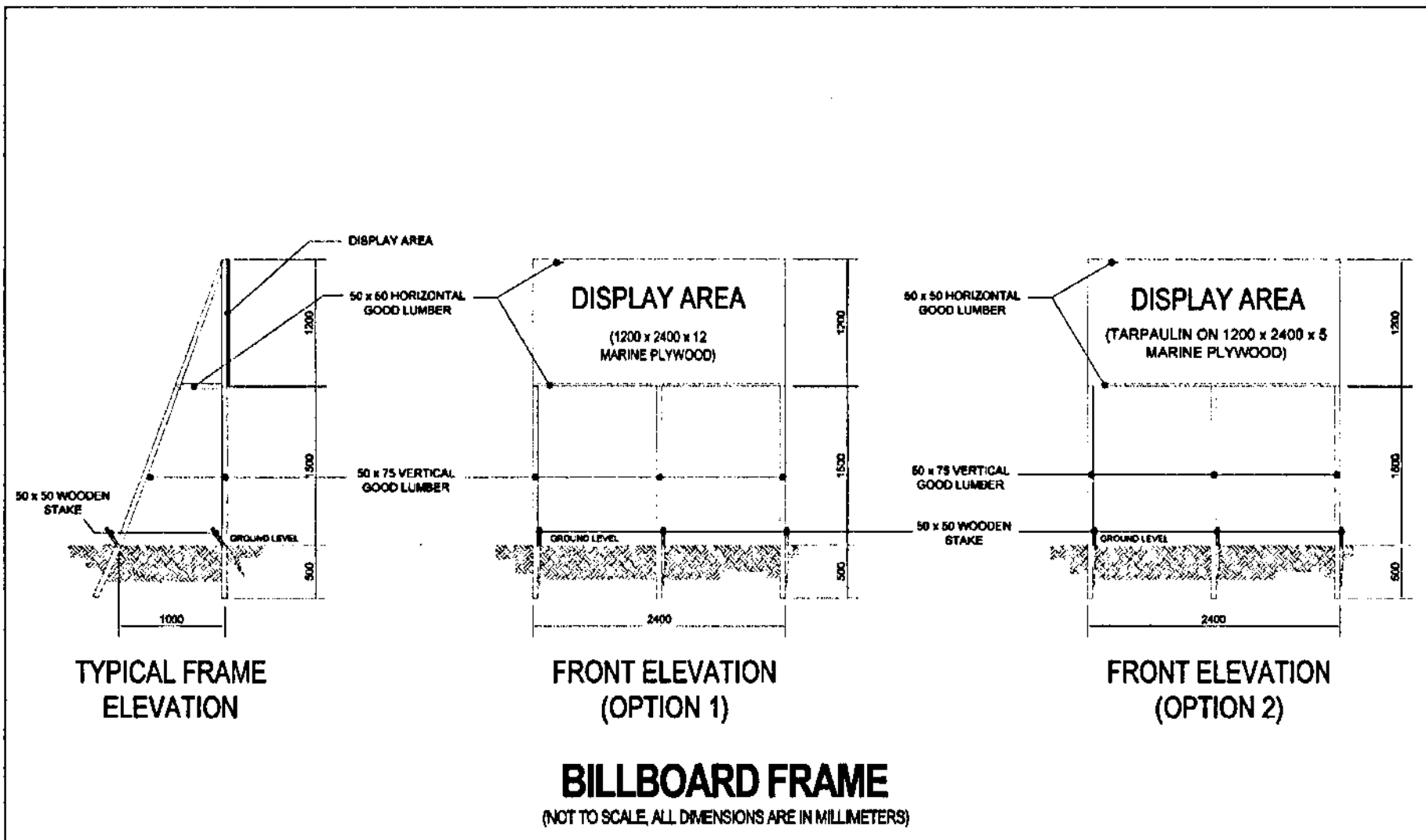
The Project Billboard shall be installed at location(s) designated by the Engineer.

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.





ITEM 20 : 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.

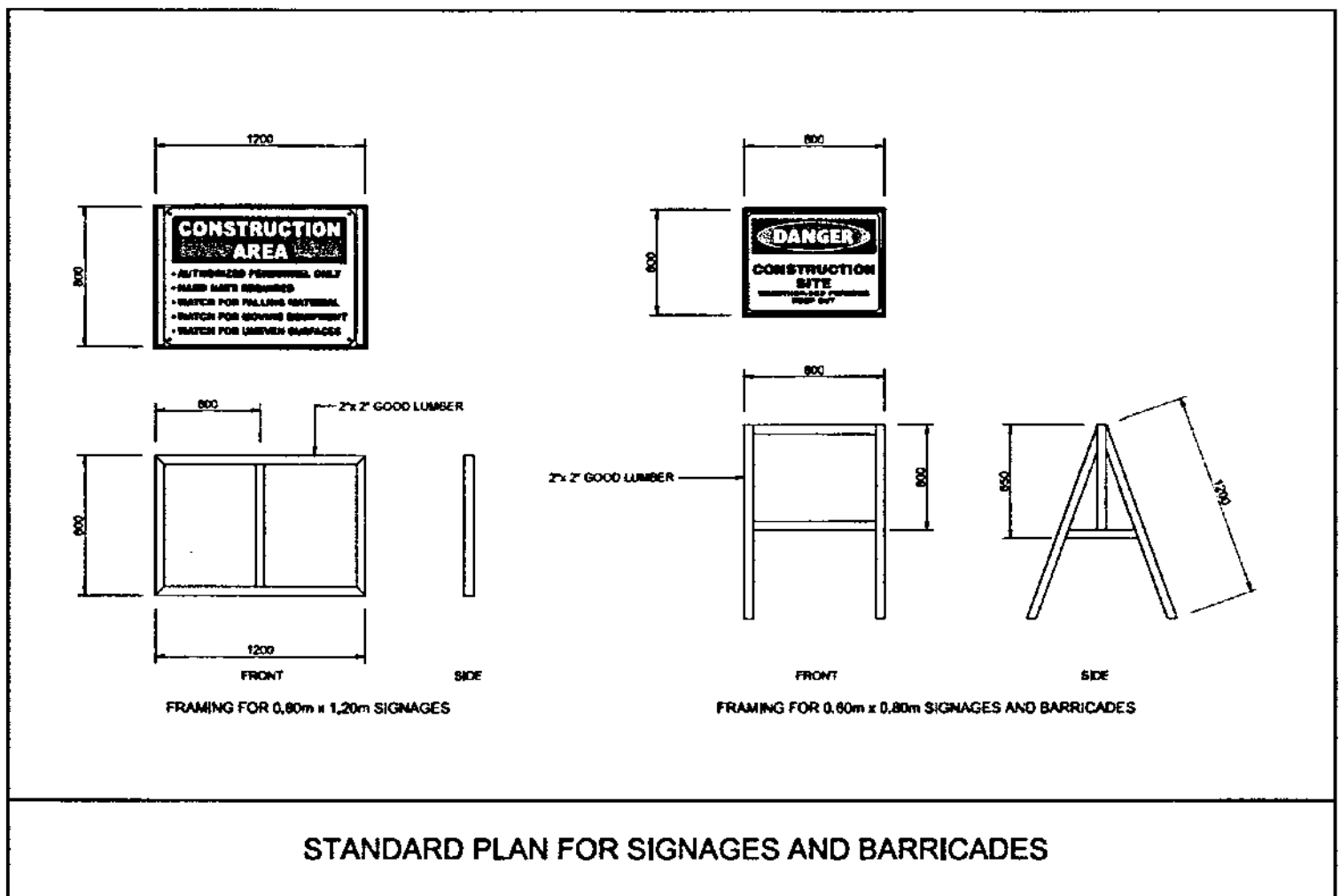
SPECIFICATION

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.



SECTION VII

DRAWINGS
(APPROVED PLANS)

SECTION VII

DRAWINGS AND APPROVED PLANS

(SEE ISSUED APPROVED PLANS)

LIST OF DRAWINGS:

1 of 43	Development Plan, Location Map, General Notes, Design Parameters and List of Drawings.
2 of 43	Demolition and Clearing Layout.
3 of 43	General Plan
4 of 43	Part Plan Showing R.C. Wharf with Roro Ramp and Breasting Dolphin.
5 of 43	Piling and Framing Layout of Wharf and Dolphins.
6 of 43	Pile Schedule of Wharf and Dolphins and Notes.
7 of 43	Wharf off-Shore Elevation, Ramp Side Elevation and Existing-Side Elevation.
8 of 43	Section A-A and Section B-B.
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10 of 43	Tubular Steel Pile Details for Wharf.
11 of 43	Pile Cap for Vertical Piles, Pile Cap for Couple Batter Piles/Vertical-Batter Piles, Detail of Curtain Wall, Detail of Construction Joint and Detail of Slab (Wharf and Roro Ramp).
12 of 43	Typical Transverse Beam Detail.
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14 of 43	Reinforcement Detail of Mooring/Fendering Block and Typical attachment of 600H X 1500L RDF and 50t Mooring Tee-Head.
15 of 43	Ramp Side Wall Reinforcement Detail, Reinforcement Detail of Mooring Block at Roro Ramp, Ramp Longitudinal Beam Detail, Section B7 and Section B6.
16 of 43	Ramp Transverse Beam Detail, Ramp Fendering Block Detail, Section B9 and Section B10.
17 of 43	Detail of Mooring/Breasting Dolphin.
18 of 51	Detail of 50-Ton Mooring Tee-Head and Detail of 35-Ton Mooring Tee-Head.
19 of 51	Detail of V-Type Rubber Dock Fender (V-600H X 1500L) and Detail of V-Type Rubber Dock Fender (V-500H X 1500L).
20 of 43	Part Plan Showing R.C. Platform.

21 of 43	Piling and Framing Layout of R.C. Platform.
22 of 43	Section E-E and Section F-F.
23 of 43	Details of 400mm x 400mm Pre-Stressed Concrete Pile, Notes and Specifications.
24 of 43	Pile Cap for Vertical Piles, Pile Cap for Couple-Batter Piles, Detail of Curtain Wall, Detail of Construction Joint and Detail of Slab.
25 of 43	Platform Beam Details.
26 of 43	Cyclone Wire Fence Detail and G.I. Post Foundation Detail.
27 of 43	Part Plan Showing On-Fill Portion and Transition Ramp.
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29 of 43	Section J-J, Section K-K, Detail of Retaining Wall - 1, Detail of Retaining Wall - 2, Detail of Retaining Wall - 3, Transition Ramp Wing Wall and Detail of Slotted R.C. Curb.
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33 of 43	Sections at Roro Ramp Conversion, Detail of Pile Caps and Detail of Curtain Wall.
34 of 43	Ramp Side Wall Reinforcement Detail at Existing Wharf, Ramp Longitudinal Beam Detail at Existing Wharf, Section B11 and Section B12.
35 of 43	Ramp Transverse Beam Detail at Existing Wharf, Ramp Longitudinal Beam Detail at Existing Wharf, Section B13 and Section B14.
36 of 43	Connection Detail of Existing Mooring Tee-Head to Existing Concrete Block and Detail of Slab Reinforcement at Ramp Conversion.
37 of 43	Storm Drainage Layout.
38 of 43	Detail of Catch Drain Manhole, Detail of Outfall and Typical Installation of R.C. Pipe Culvert.
39 of 43	Port Lighting Layout.
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43 of 43	Lamp Pedestal Detail, Detail of Lamp Foundation at RC Platform, Detail of Floodlight Foundation at RC Platform and Detail of Concrete Pedestal Post
Annex – 1	Hydrographical and topographical Survey Plan.
Annex – 2	Borehole Logs

SECTION VIII

BILL OF QUANTITIES
and
ATTACHMENTS

BID SUMMARY
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
Port of Plaridel, Plaridel, Misamis Occidental

NO.	DESCRIPTION OF WORK	AMOUNT (Pesos)
BILL NO. 1	GENERAL EXPENSES	
BILL NO. 2	REMOVAL AND DISPOSAL WORKS	
BILL NO. 3	CONSTRUCTION OF PORT OPERATIONAL AREA ON FILL	
BILL NO. 4	CONSTRUCTION OF PORT OPERATIONAL AREA ON PILES	
BILL NO. 5	CONSTRUCTION OF RC WHARF	
BILL NO. 6	CONSTRUCTION OF MOORING/BREASTING DOLPHIN	
TOTAL BID PRICE		

Name of Firm

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

Date

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
 Port of Plaridel, Plaridel, Misamis Occidental



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.	22		
1.03	Maintain temporary site office and residence for the Engineer and staff	mo.	22		
1.04	Provide Construction Safety and Health Program in the execution of the project	mo.	22		
TOTAL FOR BILL NO. 1					-

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
 Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO. 2	REMOVAL AND DISPOSAL WORKS				
2.01	Remove and turn-over to authority existing cyclone wire fence	l.m.	9		
2.02	Remove and dispose existing mooring/breasting dolphins	no.	2		
2.03	Existing RC curb to be chipped-off and smoothen with mortar	l.m.	14		
2.04	Remove and dispose existing seawall	cu.m.	156		
2.05	Cutting of existing 500mm diameter steel pipe piles up to required elevation and turn-over to authority excess piles	no.	15		
2.06	Remove and dispose existing concrete pavement	sq.m.	98		
2.07	Remove and turn-over to authority existing interlocking concrete block pavement (ICBP)	sq.m.	165		
2.08	Remove and dispose existing RC deck affected by conversion to roro ramp	sq.m.	126		
2.09	Cutting of existing concrete piles up to seabed elevation including disposal of debris	no.	14		
2.10	Remove and re-install existing mooring bollard(35T, tee head) including provision of new accessories (bots, nuts, washers, etc.)	set	3		
2.11	Remove and re-install existing RDF(V500H x 1500L RDF) including provision of new accessories (bolts, nuts, washers, etc.)	set	2		

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
2.12	Remove and turn-over to authority existing mooring bollard	set	2		
2.13	Remove and turn-over to authority existing RDF	set	6		
2.14	Remove and turn-over to authority existing lamp post	set	2		
2.15	Scrape/cut and dispose existing materials	cu.m.	53		
2.16	Subgrade preparation	sq.m.	264		
TOTAL FOR BILL NO. 2					-

Name of Bidder/Authorized Representative
Signatory's Legal Capacity

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO. 3	CONSTRUCTION OF PORT OPERATIONAL AREA ON FILL				
3.01	Supply & place 3,500 psi. concrete for retaining walls, rc curb, wing wall, shear key, outfall, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for roro ramp conversion	cu.m.	212		
3.02	Supply & install steel reinforcement for retaining walls, rc curb, wingwall, shear key, outfall, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for roro ramp conversion	kg.	22,745		
3.03	Supply and place 1,000 kg. Armour rocks	cu.m.	395		
3.04	Supply and place 50-100 kg. Core rocks	cu.m.	233		
3.05	Supply and install Geotextile Fabric	sq.m.	283		
3.06	Supply and place sand and gravel fill	cu.m.	472		
3.07	Supply, place and compact aggregate sub-base course	cu.m.	424		
3.08	Supply, place and compact gravel bedding	cu.m.	12		
3.09	Supply, spread and compact aggregate base course	cu.m.	103		
3.10	Supply and place portland cement concrete pavement (PCCP, 300mm thk.)	sq.m.	297		
3.11	Supply, spread and compact 10% cement treated base course (150mm)	cu.m.	39		

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
 Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
3.12	Supply and spread leveling sand cushion (50mm thk.)	cu.m.	13		
3.13	Supply and install Interlocking Concrete Blocks Pavement (100mm x 200mm x 125mm)	sq.m.	262		
3.14	Supply, fabricate and install various materials for security fence and gate	sq.m.	167		
3.15	Supply and apply epoxy primer and enamel paints for metal surfaces (2-coats)	sq.m.	68		
3.16	Supply and install 610mm diameter RCP for drainage	l.m.	48		
3.17	Construct catch drain manhole including cover	no.	4		
3.18	Excavate, backfill and compaction of existing fill materials prior to installation of drainage system	cu.m.	274		
3.19	Supply and install hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint including dowel bars	l.m.	42		
3.20	Supply and install electrical works for port lighting	lot	1		
TOTAL FOR BILL NO. 3					-

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO. 4	CONSTRUCTION OF PORT OPERATIONAL AREA ON PILES				
4.01	Supply, deliver and drive 400mm x 400mm x 44.00m (21m/23m) PSC test piles no.1	unit	2		
4.02	Supply, deliver and drive 400mm x 400mm x 38.00m (19m/19m) PSC test piles no.2	unit	2		
4.03	Supply and deliver to site 400mm x 400mm PSC Piles	l.m.	17,467		
4.04	Handle, pitch and drive 400mm x 400mm Vertical PSC Piles	l.m.	13,039		
4.05	Handle, pitch and drive 400mm x 400mm Batter PSC Piles	l.m.	4,428		
4.06	Splice 400mm x 400mm PSC piles as directed by the engineer	no.	444		
4.07	Chip/cut and dispose portion of newly driven PSC Piles	no.	444		
4.08	Supply and install steel reinforcements for the superstructure	kg.	225,619		
4.09	Supply and place 3,500 psi concrete for the superstructure	cu.m.	1,384		
4.10	Supply and install hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint including dowel bars	l.m.	398		
TOTAL FOR BILL NO. 4					

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
 Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO. 5	CONSTRUCTION OF RC WHARF				
5.01	Supply, deliver and drive(A252 Grade 2, 500mmØ x 10mm/13mm x 32m/32m) steel pipe test pile no.1 including reinforcing band at tip and application of protective eternal coating	unit	1		
5.02	Supply, deliver and drive(A252 Grade 2, 500mmØ x 10mm/13mm x 22m/22m) steel pipe test pile no.2 including reinforcing band at tip and application of protective eternal coating	unit	1		
5.03	Supply, deliver and drive(A252 Grade 2, 500mmØ x 10mm/13mm x 28m/30m) steel pipe test pile no.3 including reinforcing band at tip and application of protective eternal coating	unit	1		
5.04	Supply and deliver to site steel pipe piles (A252 Grade 2, 500mm Ø x 10mm/13mm thk.)	m.t.	1,489		
5.05	Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 32-10 @ 1,500 microns dry film thickness or equivalent)	sq.m.	4,584		
5.06	Splice 500mmØ steel pipe piles as directed by the engineer	no.	206		
5.07	Supply and install 9mm thk. reinforcing band tip for steel pipe piles	no.	203		
5.08	Handle, pitch and drive steel pipe vertical piles (500mm x 10mm/13mm thk)	l.m.	5,255		
5.09	Handle, pitch and drive steel pipe batter piles (500mm x 10mm/13mm thk)	l.m.	5,452		
5.10	Extract clogged materials from steel pipe piles	cu.m.	182		

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
5.11	Supply and place 3,500 psi concrete filler for steel pipe piles	cu.m.	582		
5.12	Supply and install reinforcing steel cage for steel pipe piles	kg	160,194		
5.13	Cutting of driven steel pipe piles up to cut-off elevation including turn-over to authority of excess piles	no.	206		
5.14	Supply and place 3,500 psi concrete for superstructure	cu.m	1,087		
5.15	Supply and install steel reinforcements for superstructure	kg	190,594		
5.16	Supply and install hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint including dowel bars	l.m.	115		
5.17	Supply and deliver to site rubber dock fender (V500H x 1500L) including accessories	set	4		
5.18	Supply and deliver to site rubber dock fender (V-600H x 1500L) including accessories	set	10		
5.19	Install rubber dock fender including accessories	set	14		
5.20	Supply and deliver to site mooring bollard (50 tons, T-head) including acc.	set	5		
5.21	Install mooring bollard including accessories	set	5		
TOTAL FOR BILL NO. 5					

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO. 6	CONSTRUCTION OF MOORING/BREASTING DOLPHIN				
6.01	Supply, deliver and drive(A252 Grade 2, 500mmØ x 10mm/13mm x 28m/30m) steel pipe test piles no.3 for breasting dolphin including reinforcing band at tip and application of protective external coating	unit	2		
6.02	Supply and deliver to site steel pipe piles (A252 Grade 2, 500mm Ø x 10mm/13mm thk.)	m.t.	177		
6.03	Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 32-10 @ 1,500 microns dry film thickness or equivalent)	sq.m.	507		
6.04	Splice steel pipe piles as directed by the engineer	no.	24		
6.05	Supply and install 9mm thk. reinforcing band tip for steel pipe piles	no.	22		
6.06	Handle, pitch and drive steel pipe vertical piles (500mm x 10mm/13mm thk)	l.m.	112		
6.07	Handle, pitch and drive steel pipe batter piles (500mm x 10mm/13mm thk)	l.m.	1,160		
6.08	Extract clogged materials from steel pipe piles	cu.m.	21		
6.09	Supply and place 3,500 psi concrete filler for steel pipe piles	cu.m.	68		
6.10	Supply and install reinforcing steel cage for steel pipe piles	kg	18,663		

APPROVED BUDGET FOR THE CONTRACT
PLARIDEL PORT EXPANSION AND IMPROVEMENT PROJECT
 Port of Plaridel, Plaridel, Misamis Occidental



NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
6.11	Cutting of driven steel pipe piles up to cut-off elevation including turn-over to authority of excess piles	no.	24		
6.12	Supply and place 3,500 psi concrete for breasting dolphin	cu.m	33		
6.13	Supply and install steel reinforcements for breasting dolphin	kg	1,003		
6.14	Supply and deliver to site rubber dock fender (V500H x 1500L) including accessories	set	2		
6.15	Install rubber dock fender including accessories	set	2		
6.16	Supply and deliver to site mooring bollard (35 tons, mooring pillars) including accessories	set	2		
6.17	Install mooring bollard including accessories	set	2		
TOTAL FOR BILL NO. 6					.

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 AND DISPOSAL WORKS

Item 2.01 Remove and turn-over to authority existing cyclone wire fence

The quantity to be paid for shall be the actual length in linear meter of existing cyclone wire fence, to be removed and turned over to 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 and dispose existing mooring/breasting dolphins

The quantity to be paid for shall be the actual number of existing mooring/breasting dolphins to be removed and properly 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 2.03 Existing RC curb to be chipped-off and smoothen with mortar

The quantity to be paid for shall be the actual length in linear meter of existing rc curb to be chipped off and smoothened 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 seawall

The quantity to be paid for shall be the actual volume in cubic meter of existing seawall 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 Cutting of existing 500mm diameter steel pipe piles up to required elevation and turn-over to authority of excess piles

The quantity to be paid for shall be the actual number existing 500mm diameter steel pipe piles to be cut off up to the required elevation including turn-over to authority of excess piles 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 pavement

The quantity to be paid for shall be the actual area in square meter of existing concrete pavement 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 and turn-over to authority existing interlocking concrete block pavement (ICBP)**
- The quantity to be paid for shall be the actual area in square meter of existing interlocking concrete block pavement (ICBP) to be removed and turned over to 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 Remove and dispose existing RC deck affected by conversion to ro-ro ramp**
- The quantity to be paid for shall be the actual area in square meter of existing RC deck affected by conversion to ro-ro ramp 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 2.09 Cutting of existing concrete piles up to seabed elevation including disposal of debris**
- The quantity to be paid for shall be the actual number of existing concrete piles to be cut of up to seabed elevation including disposal of debris in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.
- Item 2.10 Remove and re-install existing mooring bollard (35T, tee head) including provision of new accessories (bolts, nuts, washers, etc.)**
- The quantity to be paid for shall be the actual set of existing mooring bollard (35T, tee head) to be removed and reinstalled including provision of new accessories (bolts, nuts, washers, etc.) 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 2.11 Remove and re-install existing RDF (V500H x 1500L RDF) including provision of new accessories (bolts, nuts, washers, etc.)**
- The quantity to be paid for shall be the actual set of existing RDF (V500H x 1500L RDF) to be removed and reinstalled including provision of new accessories (bolts, nuts, washers, etc.) 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 2.12 Remove and turn-over to authority existing mooring bollard**
- The quantity to be paid for shall be the actual area in square meter of existing mooring bollard to be removed and turned over to 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 2.13 Remove and turn-over to authority existing RDF**
- The quantity to be paid for shall be the actual area in square meter of existing RDF to be removed and turned over to 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 2.14 Remove and turn-over to authority existing lamp post

The quantity to be paid for shall be the actual area in square meter of existing lamp post to be removed and turned over to 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 2.15 Scrape/cut and dispose existing materials

The quantity to be paid for shall be the actual volume in cubic meter of existing lamp post to be removed and turned over to 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 2.16 Subgrade preparation

The quantity to be paid for shall be the actual area in square meter of subgrade to be prepared 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 PORT OPERATIONAL AREA ON FILL

Item 3.01 Supply & place 3,500 psi. concrete for retaining walls, rc curb, wing wall, shear key, outfall, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for ro-ro ramp conversion

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi. concrete to be supplied and set-in-place for retaining walls, rc curb, wing wall, shear key, outfall, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for ro-ro ramp conversion 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 install steel reinforcements for retaining walls, rc curb, wing wall, shear key, outfall, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for ro-ro ramp conversion

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars to be supplied and installed for retaining walls, rc curb, wing wall, shear key, outfall, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for ro-ro ramp conversion in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 3.03 Supply and place 1,000 kg. armour rocks

The quantity to be paid for shall be the actual volume in cubic meter of 1,000 kg. armour rocks, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of armour rocks shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 3.04 Supply and place 50-100 kg. core rocks

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

Item 3.05 Supply and install geotextile fabric

The quantity to be paid for shall be the actual area in square meter of geotextile fabric, 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 3.06 Supply and place sand and gravel fill

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

Item 3.07 Supply, place and compact aggregate subbase course

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

Item 3.08 Supply, place and compact gravel bedding

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

Item 3.09 Supply, spread and compact aggregate base course

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

Item 3.10 Supply and place Portland cement concrete pavement (PCCP, 300mm thick)

The quantity to be paid for shall be the actual area in square meter of Portland cement concrete pavement (PCCP, 300mm thick), 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, spread and compact 10% cement treated base course (150mm)

The quantity to be paid for shall be the actual volume in cubic meter of 10% cement treated base course (150mm) to be supplied, spread, and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 3.12 Suppl and spread leveling sand cushion (50mm thick)

The quantity to be paid for shall be the actual volume in cubic meter of leveling sand cushion (50mm thick) to be supplied and spread in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 3.13 Supply and install Interlocking Concrete Blocks Pavement (100mm x 200mm x 125mm)

The quantity to be paid for shall be the actual area in square meter of Interlocking Concrete Blocks Pavement (100mm x 200mm x 125mm), to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.14 Supply, fabricate and install various materials for security fence and gate

The quantity to be paid for shall be the actual area in square meter of various materials for security fence and gate, 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 3.15 Supply and apply epoxy primer and enamel paints for metal surfaces (2-coats)

The quantity to be paid for shall be the actual area in square meter of surfaces to be supplied and applied with epoxy primer and enamel paints for metal surfaces (2-coats) 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 610mm diameter RCP for drainage

The quantity to be paid for shall be the actual length in linear meter of 610mm diameter RCP supplied and installed for drainage 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 Construct catch drain manhole including cover

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

Item 3.18 Excavate, backfill and compaction of existing fill materials prior to installation of drainage system

The quantity to be paid for shall be the actual volume in cubic meter of existing fill materials to be excavated, backfilled, and compacted prior to installation of drainage system in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 3.19 Supply and install hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint including dowel bars

The quantity to be paid for shall be the actual length in linear meter of hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint 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 3.20 Supply and install electrical works for port lighting

The quantity to be paid for shall be the actual lot of electrical works for port lighting 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.

BILL NO. 4

CONSTRUCTION OF PORT OPERATIONAL AREA ON PILES

Item 4.01 Supply, deliver & drive 400mm x 400mm x 44.00m (21m/23m) PSC Test Piles no. 1

The quantity to be paid for shall be the actual number of 400mm x 400mm x 44.00m (21m/23m) PSC Test Piles no. 1 to be supplied, delivered, and driven in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.02 Supply, deliver & drive 400mm x 400mm x 38.00m (19m/19m) PSC Test Piles no. 2

The quantity to be paid for shall be the actual number of 400mm x 400mm x 38.00m (19m/19m) PSC Test Piles no. 2 to be supplied, delivered, and driven in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.03 Supply and deliver to site 400mm x 400mm PSC Piles

The quantity to be paid for shall be the actual length in linear meter of 400mm x 400mm PSC Piles to be supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.04 Handle, pitch, and drive 400mm x 400mm Vertical PSC Piles

The quantity to be paid for shall be the actual length in linear meter of 400mm x 400mm Vertical PSC Piles to be handled, pitched, and driven in accordance with the plans and specifications and accepted by the Engineers. 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 Handle, pitch, and drive 400mm x 400mm Batter PSC Piles

The quantity to be paid for shall be the actual length in linear meter of 400mm x 400mm Batter PSC Piles to be handled, pitched, and driven in accordance with the plans and specifications and accepted by the Engineers. 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 Splice 400mm x 400mm PSC piles as directed by the engineer

The quantity to be paid for shall be the actual number of newly driven PSC Piles to be spliced as directed by the engineer in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Item 4.07 Chip/cut and dispose portion of newly driven PSC Piles

The quantity to be paid for shall be the actual number of newly driven PSC Piles to be chipped/cut off 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 4.08 Supply and install steel reinforcements for the superstructure

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcements to be supplied and installed for the superstructure 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 Supply and place 3,500 psi concrete for the superstructure

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete to be supplied and set-in-place for the superstructure 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 install hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint including dowel bars

The quantity to be paid for shall be the actual length in linear meter of hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint 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.

BILL NO. 5

CONSTRUCTION OF RC WHARF

- Item 5.01 Supply, deliver and drive (A252 Grade 2, 500mmØ x 10mm/13mm x 32m/32m) steel pipe test pile no.1 including reinforcing band at tip and application of protective external coating**
- The quantity to be paid for shall be the actual unit of (A252 Grade 2, 500mmØ x 10mm/13mm x 32m/32m) steel pipe test pile no.1 to be supplied, delivered, and driven including reinforcing band at tip and application of protective external coating 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, deliver and drive (A252 Grade 2, 500mmØ x 10mm/13mm x 22m/22m) steel pipe test pile no.2 including reinforcing band at tip and application of protective external coating**
- The quantity to be paid for shall be the actual unit of (A252 Grade 2, 500mmØ x 10mm/13mm x 22m/22m) steel pipe test pile no.2 to be supplied, delivered, and driven including reinforcing band at tip and application of protective external coating 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, deliver and drive (A252 Grade 2, 500mmØ x 10mm/13mm x 28m/30m) steel pipe test pile no.3 including reinforcing band at tip and application of protective external coating**
- The quantity to be paid for shall be the actual unit of (A252 Grade 2, 500mmØ x 10mm/13mm x 28m/30m) steel pipe test pile no.3 to be supplied, delivered, and driven including reinforcing band at tip and application of protective external coating 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 and deliver to site steel pipe piles (A252 Grade 2, 500mm Ø x 10mm/13mm thick)**
- The quantity to be paid for shall be the actual weight in metric ton of steel pipe piles (A252 Grade 2, 500mm Ø x 10mm/13mm thick) 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 5.05 Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent)**
- The quantity to be paid for shall be the actual area in square meter of surfaces applied with polyurethane external coating and mastic filler for steel pipe piles (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent) 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 Splice 500mmø steel pipe piles as directed by the engineer

The quantity to be paid for shall be the actual number of 500mmø steel pipe piles to be spliced as directed by the engineer in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 5.07 Supply and install 9mm thick reinforcing band tip for steel pipe piles

The quantity to be paid for shall be the actual number of 9mm thick reinforcing band tip 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 5.08 Handle, pitch, and drive steel pipe vertical piles (500mm x 10mm/13mm thick)

The quantity to be paid for shall be the actual length in linear meter of steel pipe vertical piles (500mm x 10mm/13mm thick) to be handled, pitched, and driven in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. 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 Handle, pitch, and drive steel pipe batter piles (500mm x 10mm/13mm thick)

The quantity to be paid for shall be the actual length in linear meter of steel pipe batter piles (500mm x 10mm/13mm thick) 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 5.10 Extract clogged materials from steel pipe piles

The quantity to be paid for shall be the actual volume in cubic meter of clogged materials extracted from steel pipe piles 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 5.11 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 5.12 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 5.13 Cutting of driven steel pipe piles up to cut-off elevation including turn-over to authority of excess piles

The quantity to be paid for shall be the actual number of driven steel pipe piles to be cut off up to required elevation including turn-over to authority of excess piles 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 5.14 Supply and place 3,500 psi concrete for structure

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete supplied and set-in-place for superstructure 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 5.15 Supply and install steel reinforcements for superstructure

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars to be supplied and installed for superstructure 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 5.16 Supply and install hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint including dowel bars

The quantity to be paid for shall be the actual length in linear meter of hot-dipped galvanized 100mm x 100mm x 10mm angle bar for construction joint 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 5.17 Supply and deliver to site rubber dock fender (V500H x 1500L) including accessories

The quantity to be paid for shall be the actual set of rubber dock fenders (V500H x 1500L) including accessories, 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 5.18 Supply and deliver to site rubber dock fender (V600H x 1500L) including accessories

The quantity to be paid for shall be the actual set of rubber dock fenders (V600H x 1500L) including accessories, 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 5.19 Install rubber dock fender and accessories

The quantity to be paid for shall be the actual set of rubber dock fenders and accessories, 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 5.20 Supply and deliver to site mooring bollard (50 Tons, T-head) including accessories

The quantity to be paid for shall be the actual set of mooring bollards (50 Tons, T-head) including accessories, 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 5.21 Install mooring bollards including accessories

The quantity to be paid for shall be the actual set of mooring bollards including accessories, 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. 6

CONSTRUCTION OF MOORING/BREASTING DOLPHIN

- Item 6.01 Supply, deliver and drive (A252 Grade 2, 500mmØ x 10mm/13mm x 28m/30m) steel pipe test pile no.3 for breasting dolphin including reinforcing band at tip and application of protective external coating**

The quantity to be paid for shall be the actual unit of (A252 Grade 2, 500mmØ x 10mm/13mm x 28m/30m) steel pipe test pile no.3 for breasting dolphin to be supplied, delivered, and driven including reinforcing band at tip and application of protective external coating 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 6.02 Supply and deliver to site steel pipe piles (A252 Grade 2, 500mm Ø x 10mm/13mm thick)**

The quantity to be paid for shall be the actual weight in metric ton of steel pipe piles (A252 Grade 2, 500mm Ø x 10mm/13mm thick) 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 6.03 Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent)**

The quantity to be paid for shall be the actual area in square meter of surfaces applied with polyurethane external coating and mastic filler for steel pipe piles (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent) 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 6.04 Splice steel pipe piles as directed by the engineer**

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

- Item 6.05 Supply and install 9mm thick reinforcing band tip for steel pipe piles**

The quantity to be paid for shall be the actual number of 9mm thick reinforcing band tip 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 6.06 Handle, pitch, and drive steel pipe vertical piles (500mm x 10mm/13mm thick)**

The quantity to be paid for shall be the actual length in linear meter of steel pipe vertical piles (500mm x 10mm/13mm thick) to be handled, pitched, and driven in accordance with the plans and specifications and accepted by the Engineers. The

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

Item 6.07 Handle, pitch, and drive steel pipe batter piles (500mm x 10mm/13mm thick)

The quantity to be paid for shall be the actual length in linear meter of steel pipe batter piles (500mm x 10mm/13mm thick) 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 6.08 Extract clogged materials from steel pipe piles

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi clogged materials extracted from steel pipe piles 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 6.09 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 6.10 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 6.11 Cutting of driven steel pipe piles up to cut-off elevation including turn-over to authority of excess piles

The quantity to be paid for shall be the actual number of driven steel pipe piles to be cut off up to required elevation including turn-over to authority of excess piles 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 6.12 Supply and place 3,500 psi concrete for structure for breasting dolphin

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete supplied and set-in-place for superstructure for breasting dolphin 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 6.13 Supply and install steel reinforcements for superstructure for breasting dolphin

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars for breasting dolphin to be supplied and installed for superstructure 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 6.14 Supply and deliver to site rubber dock fender (V500H x 1500L) including accessories

The quantity to be paid for shall be the actual set of rubber dock fenders (V500H x 1500L) including accessories, 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 6.15 Install rubber dock fender and accessories

The quantity to be paid for shall be the actual set of rubber dock fenders and accessories, 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 6.16 Supply and deliver to site mooring bollard (35 Tons, mooring pillars) including accessories

The quantity to be paid for shall be the actual set of mooring bollards (35 Tons, mooring pillars) including accessories, 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 6.17 Install mooring bollards including accessories

The quantity to be paid for shall be the actual set of mooring bollards including accessories, 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.

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

1	unit/s	Air Compressor (250 cfm, minimum), owned ✓
1	unit/s	Backhoe (0.40 cu.m., 94.30hp, minimum), owned ✓
2	unit/s	Centrifugal Trash pumps, owned/leased ✓
1	unit/s	Clamshell, owned ✓
1	unit/s	Concrete cutter, owned ✓
2	unit/s	Concrete Mixer (1 bagger, minimum), owned ✓
2	unit/s	Concrete bucket, owned ✓
1	unit/s	Concrete Screeder, owned ✓
2	unit/s	Concrete Vibrator (3.5 hp, minimum), owned ✓
2	unit/s	Crane Barge (319 GW, minimum) with 60T crane, 1 owned, 1 owned/leased ✓
2	unit/s	Crawler Crane (30T, minimum), 1 owned, 1 owned/leased ✓
1	unit/s	Pile Hammer (Diesel, 7,500 kg.m.), owned ✓
1	unit/s	Pile Hammer (Diesel, 13,500 kg.m.), owned ✓
2	unit/s	Drop Hammer (2T, minimum), owned ✓
2	unit/s	Dump Truck (8 cu.m., minimum), owned ✓
2	unit/s	Bar Bender (electric, 25mm dia min.), owned ✓
2	unit/s	Bar Cutter (electric, 25mm dia min.), owned ✓
1	unit/s	Forklift (1.36T, minimum), owned/leased ✓
2	unit/s	Jackhammer, owned ✓
1	unit/s	Jackhammer (U/W), owned/leased ✓
2	unit/s	Oxy/Acetylene cutting outfit, owned ✓
1	unit/s	Payloader (80 hp, minimum), 1 owned, 1 owned/leased ✓
2	unit/s	Plate Compactor (5 hp, minimum), owned ✓
1	unit/s	Road Grader (125 hp, minimum), owned/leased ✓
1	unit/s	Road Roller (12.05T, vibratory, minimum), owned/leased ✓
2	unit/s	Transit Mixer (5-6 cu.m. cap., minimum), owned/leased ✓
2	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 (5T, minimum), owned ✓

CONSTRUCTION SAFETY AND HEALTH REQUIREMENT

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

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

The Contractor shall provide the following minimum requirements:

LABOR

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

EQUIPMENT / MATERIALS

Personnel Protective Equipment

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

Safety Devices

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

Medical and First Aid System	-	Twenty-two (22) 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

<i>Materials/Items of Work</i>	<i>Required Tests</i>	<i>Minimum Incremental Frequency of Tests</i>
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	Mil 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

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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) <ul style="list-style-type: none"> - Under 14" (355.60mm) Outside Diameter - 14" to 36" (355.6 to 914mm) Outside Dia - Over 36" (914mm) Outside Diameter Mechanical/Tensile	2 from 200 pipe or fraction thereof 2 from 100 pipe or fraction thereof 2 from 3000ft (914m) or fraction thereof 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 Performance Test for Energy Absorption and Reaction Force	All units All units
Accessories Washer and Fixing Bolt, Anchor Bolt	Physical Test Quality Test for Chemical Composition and Mechanical Properties	All units One per fabrication

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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 Coarse 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 MIL 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

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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) Flexural Test	Same frequency as SC (F) 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 Coating Thickness Magnetic Thickness Measurement	All units 1 set (3 specimen) for every 100,000 sq mm or fraction thereof

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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 Density Test	For every 1,500 cubic meter or fraction thereof 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 Density Test	For every 1,500 cubic meter or fraction thereof 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

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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

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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

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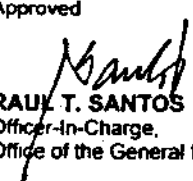
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Materials/Items of Work	Required Tests	Minimum Incremental Frequency of Tests
Fixtures	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Pipe Culverts	Compression Strength Inspection and Evaluation Report from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

NOTES

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

Approved


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



SECTION IX

CHECKLIST OF TECHNICAL AND FINANCIAL DOCUMENTS

Checklist of Technical and Financial Documents

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

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

Technical Documents

- ☐ (b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and
- ☐ (c) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; and
- ☐ (d) Special PCAB License in case of Joint Ventures; and registration for the type and cost of the contract to be bid; and
- ☐ (e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; and
- ☐ (f) Project Requirements, which shall include the following:
 - ☐ a. Organizational chart for the contract to be bid;
 - ☐ b. List of contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
 - ☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; and
- ☐ (g) Original duly signed Omnibus Sworn Statement (OSS); and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

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

Class "B" Documents

- ☐ (i) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence;
or
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

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

Other documentary requirements under RA No. 9184

- ☐ (k) Original of duly signed Bid Prices in the Bill of Quantities; and
☐ (l) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; and
☐ (m) Cash Flow by Quarter.

SECTION X
BIDDING FORM

Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____
Project Identification No. : _____

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

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers _____, the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: **Plaridel Port Expansion and Improvement Project, Port of Plaridel, Plaridel, Misamis Occidental**;
- 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 guidelines¹ for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof

¹ currently based on GPPB Resolution No. 09-2020

included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the **Plaridel Port Expansion and Improvement Project, Port of Plaridel, Plaridel, Misamis Occidental 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	l.m.	14,946							
2. Reinforced Concrete Works	cu.m.	1,683							
3. Rockworks (50 to 1,000 kg/pc.)	cu.m.	314							
4. Placing of Fill Materials	cu.m.	448							
5. Construction of Portland Cement Concrete Pavement	sq.m.	149							
6. Installation of interlocking concrete paving blocks	sq.m.	131							

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 " _ "
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

Materials Engineer – One (1) year

Project Engineer - Three (3) years

Materials Engineer I – for projects costing up to 100M

Foreman - Five (5) years

Materials Engineer II – for projects costing more than 100M

Construction Safety and Health Officer – One (1) year

Name of Firm

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

Date

Revised: September 2021

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

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

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

NOTE:

- 1] The unit of capacity of the pledged equipment shall be as indicated in the Proof of Ownership, i.e. GW (for crane barge), DWT (for deck barge and hopper barge), Ton (for crane, road roller and drop hammer), kg.-m/blow (for diesel hammer), 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

Revised: September 2021

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 **Plaridel Port Expansion and Improvement Project, Port of Plaridel, Plaridel, Misamis Occidental of the Philippine Ports Authority**, 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, 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 **Plaridel Port Expansion and Improvement Project, Port of Plaridel, Plaridel, Misamis Occidental** 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, 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 **Plaridel Port Expansion and Improvement Project, Port of Plaridel, Plaridel, Misamis Occidental**, 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, 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 AND DISPOSAL WORKS

1. Removal and disposal or turn-over of various items affected by the project, namely; cyclone wire fence (9 l.m.), mooring/breasting dolphins(2 set), rc curb (14 l.m.), seawall(156 cu.m.), steel pipe pipe (15 pcs), concrete pavement (98 sq.m.), interlocking concrete block pavement (165 sq.m.), rc deck(126 sq.m.), concrete piles (14 pcs), mooring bollard (2 pcs), RDF(6 pcs) and lamp post (2 pcs)
2. Remove and re-install existing mooring bollard (3 set) and existing RDF (2 sets), including provision of new accessories (bolts, nuts, washers, etc.)
3. Scrape/cut and dispose existing base materials (53 cu.m.) including subgrade preparation

B. CONSTRUCTION OF PORT OPERATIONAL AREA ON FILL

Area = 317.28 sq.m.

1. Construction of rock bulkhead (628 cu.m.), fill materials(896 cu.m), reinforced concrete for retaining wall, wing wall, rc curb, shear key, floodlight foundation, floodlight foundation at platform, edge wall, concrete pedestal post and concrete for roro ramp conversion (212 cu.m. of concrete and 22,745 kg of reinforcing steel bars of various sizes)
2. Construction of interlocking concrete block pavement (262 sq.m.) and PCCP (300mm thk., 297 sq.m.), including aggregate base course (103 cu.m.), cement treated base course (39 cu.m.), sand cushion (13 cu.m.) and construction joint (42 l.m.)
3. Construction of catch drain manhole (4 sets) and reinforced concrete pipe (610mmØ - 48 l.m.), including gravel bedding (12 cu.m.) and excavation/backfilling works (274 cu.m.)
4. Supply, fabricate and install various materials for security fence and gate (167 sq.m.), including painting (68 sq.m)

C. CONSTRUCTION OF PORT OPERATIONAL AREA ON PILES

Area = 3,420.00 sq.m.

1. Supply and drive 400mm x 400mm PSC Piles (17,635 l.m.), including splicing and chipping/cutting to required elevation (444 pcs)
2. Supply and place 3,500 psi concrete (1,384 cu.m.) and reinforcing steel bars (225,619 kg of various sizes) for superstructure, including construction joint (398 l.m.)

D. CONSTRUCTION OF RC WHARF

Area = 2,250.00 sq.m.

1. Supply and drive A252 Grade 2, 500mmØ x 10mm/13mm thk. Steel Pipe Piles (1.512 m.t equivalent to 10,873 l.m.), including application of polyurethane external coating (4,650 sq.m.), supply and place concrete filler (582 cu.m.), installation of reinforcing steel cage bar (160,194 kg of various sizes), extraction of clogged materials (182 cu.m.), splicing, cutting of piles up to cut-off elevation and installation of reinforcing band tip (206 sets)
2. Supply and place 3,500 psi concrete (1,087 cu.m.) and reinforcing steel bars (190,594 kg of various sizes) for superstructure, including construction joint (115 l.m.)
3. Supply and installation of rubber dock fender (V-500H x 1500L- 4 sets and V-600H x 1500L - 10 sets) including accessories
4. Supply and installation of mooring bollard (50T, T-Head - 5 sets) including accessories

E. CONSTRUCTION OF MOORING/BREASTING DOLPHIN

Number = 2 units

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)																							
	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
Project Manager																								
Project Engineer																								
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 : _____

[illegible]

**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

for:

Philippine Ports Authority

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

for:

Contractor

Acknowledgment

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