

- c. Tenalith Salts - 0.34 kg. dry chemical per cubic foot of wood

The Contractor shall submit an affidavit signed by an official of the preservative treatment company to the Engineer. This affidavit shall indicate the net retention of solid preservatives obtained and shall certify that pressure treated lumbers have a moisture content that does not exceed 17 percent upon shipment from the treatment plant.

Where it is necessary to cut or bore pressure-treated lumber on the job, two coats of prepared concentrated preservatives solution shall be applied to the end-cut or bored surfaces.

ROUGH CARPENTRY

All work shall be well fitted, accurately set, and rigidly secured in place. Anchors and bolts (with nuts and washers) straps and tie rods shall be provided as required.

a. Cutting and Fitting

Cutting and fitting to accommodate other work shall be done in the required manner, and cut or damaged work shall be patched and made good.

b. Framing and Structural

Framing and structural lumber shall be well-seasoned, straight, square-edge stocks, and free from loose or unsound knots, bark edges or other defects that will impair its strength.

c. Plates for Walls and Partitions

Plates for walls and partitions shall be of the same width as the studs and shall form continuous horizontal ties.

Structural members shall not be cut, bored or notched for the passage of pipes or conduits without prior approval of the Engineer. All members damaged by such cutting or boring shall be reinforced by means of specially formed and approved sheet metal or steel shapes or remove or replaced with new member as directed.

Anchors, connectors and fastenings not indicated or specified otherwise shall be of the size and types necessary to suit the conditions encountered. Size, type and spacing of nails, screws or bolts for installation of manufactured building materials shall be as recommended by the product manufacturer unless indicated or specified otherwise.

Rough hardware, exposed to weather or in contact with exterior walls or masonry or slabs shall be zinc-coated except as specified otherwise.

All lumber surfaces in contact with concrete or masonry shall be given a brush coat of bituminous paint before installation.

JOINERY WORK

All lumber used for the joinery work shall be of the kinds and grades specified and shall be of the contours, patterns and profiles indicated.

All joints shall be made, installed tight and securely fastened in a manner approved by the Engineer. Exterior joints shall be mitered and interior angles coped. Panels shall be fitted to allow for shrinkage, avoid swelling, and insure that the work remain in place without warping, splitting and opening of joints.

Interior trims shall be approved standard stock moldings, except where special patterns or profiles are indicated.

Joints for cabinet work shall be glued in addition to nails or other fastening device required. Nailing shall be concealed where practicable. Where face nailing is used, nails shall be set for putty stopping.

All exposed surfaces shall be machined or hand sanded finished to an even smooth surface. No hammer marks or other unsightly marks shall be allowed on any wood panel or veneer.

WOOD LAMINATES AND WOOD PLASTIC COMPOSITE PANELS

INTRODUCTION

a. Wood Laminate

A wood laminate is a thin sheet of material used to cover the core of a wood project in order to change the appearance of the material. Laminates may be any material, but typically they are made veneers, which are thin sheets of wood.

High-pressure decorative laminates are characterized by their qualities, durability, and functional performance. High-pressure laminate sheets are available in a wide variety of colours, patterns and surface finishes. They are resistant to wear, scratching, impact, moisture, heat, and staining; and possess good hygienic and anti-static properties, being easy to clean and maintain.

b. Wood-plastic composite

Wood-Plastic Composite architectural products are a sustainable timber alternative with added benefits such as durability and strength.

SCOPE OF WORK

This item shall consist of furnishing all wood laminates and wood composite panels materials, labor, tools and equipment required in undertaking the proper installation as shown on the Plans and in accordance with this specifications.

SPECIFICATIONS

- a. Wood Laminates: 6mm THK substrate laminated on HPL Accent Matte Finish for Interior Cladding or any approved equivalent by the designing Architect.
- b. Wood Composite Panels: Supply and Installation of Wood-Plastic Composite panels in sizes: 500mm X 45mm X 50mm including angle bracket support or any approved equivalent by the designing Architect.

SUBMITTALS

a. Product Data

Manufacturer's printed product literature, specifications, and data sheets

b. Shop Drawings

Indicate project layout; dimensions and thickness of panels; connections; details and locations of joints and sealant; methods of anchorage; number of anchors; supports; reinforcement; flashings; accessories; materials; and finishes.

c. **Samples**

1. Sample materials for selection and verification of finishes, colors, and textures.
2. Sample of panel assembly.

QUALITY ASSURANCE

- a. Fabricator / installer to be accepted by the manufacturer.
- b. Fabricator / installer to have work similar in scope and size to this project.
- c. Take field measurements prior to completion of shop manufacture or fabrication. Coordinate fabrication schedule with construction progress to avoid delay of work. Field fabrication should be allowed to ensure proper fit and keep it to minimum with majority of fabrication being done under controlled shop conditions.

PREPARATION

Ensure surfaces to receive wood laminates and wood-plastic composite panels are structurally leveled, even, smooth, clean, dry, and free from defects detrimental to work. Notify consultant thru writing of conditions unfavorable to proper and timely completion of work. Do not proceed with erection until unsatisfactory conditions have been corrected.

ACCESSORIES

Screws, nuts, washers, bolts, rivets, angle bars and other miscellaneous fastening devices shall be made of non-corrosive materials such as aluminum and stainless steel.

ITEMS 36 c: ALUMINUM PERFORATED CEILING PANEL

GENERAL

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORKS

This Item covers the use of aluminum panel as perforated ceiling panel and shall consist of furnishing and installing materials, tools, labor and equipment necessary for aesthetic purposes as indicated on the Plans and in accordance with this Specifications.

Material Requirements

Aluminum

The aluminum shall be high strength, heat-treatable alloy which provides good formability and weldability and good corrosion resistance. It shall be suitable for a wide variety of architectural applications and of commercial quality unless specified in the Plans. It shall conform to the applicable requirements of ASTM B 209M, Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.

Thickness

Thinner material perforate easier and faster. It shall have a gauge thickness tolerance of ± 0.2 mm.

Panel Shape and Size

Panel shape and sizes shall be as indicated in the Plans or as approved by the Engineer.

Aluminum panels shall be equipped with perimeter welded metal frames, return edges, borders mounting holes attachment brackets and clips. It shall be dimensioned as indicated on the Plans and as approved by the Engineer with a width and length tolerances of ± 2.0 mm and ± 4.0 mm respectively.

Perforations

Shape and Size

The shape of perforations shall be as indicated on the Plans using the standard shapes

| | |
|-----------------|--|
| Size : | 1200mm X 600mm & 600mm X 600mm, T = 0.70mm |
| Hole Diameter : | 2.0mm |
| Weight : | 1.94 kg/ sqm |

Powder Coated Finish : Bone White Color with Black tissue felt in- fill to prevent penetration of dust.

In any cases that a custom shape perforations is needed for functional requirement spacing and size of perforation shall be provided.

The hole diameter should not be less than the thickness of the aluminum panel.

Pattern

Staggered pattern perforations shall have an unfinished end pattern that appears incomplete at both ends of the sheet.

For staggered perforations both Round and Square the pattern stagger shall be in the short dimension of the sheet. Holes in a straight row pattern shall be parallel to long dimension of sheet.

Slotted Perforation - Slots shall be identified if to be furnished parallel with either the length or width of the sheet.

Margin

The "margin" on a perforated sheet or plate refers to the distance from the edge of the sheet to the first perforation along the same dimension. "No margin" refers to the last row or set of perforations extending off the sheet or plate.

The long side of a sheet shall be supplied with minimum margins. The short side of a sheet will have either minimum margins or no margins.

Construction Requirements

Installation

Install in accordance with manufacturer's installation instructions and approved shop drawings.

1. Level the ceiling height by the use of water level or laser beam.
2. Perimeter trims shall be installed using screw, nails or other applicable fasteners depending on wall type.
3. The ceiling shall be set out from the center to the perimeter wall. The center to center spacing for Triangle Keel shall be 600mm.
4. The maximum distance from the wall to first suspension part shall be 600mm.
5. The Suspension Part Twin Clamps (together with drop -in anchor installed at the concrete slab) shall be spaced 600mm on center

Note :

The end of the threaded bolt shall be spaced on the drop - in anchor and the other end shall be attached to the suspension Party Twin Clamps using nuts.

6. Triangle Keel shall be attached to the Suspension Part Twin Clamps.
7. When the accessories have been installed, adjustment shall be made to ensure that the whole suspension ceiling is leveled.

8. Slightly push the Aluminum Ceiling Panel upward the ends of the panel until it rest with the triangle keel.

Inspection

When items not meeting specification requirements are discovered, their existence shall be called to the attention of the manufacturer prior to installation. Possible use of such items may be adjudicated among the responsible parties involved, based on the nature of the deficiency and the effect on the performance of the ceiling.

When rejection occurs, the manufacturer shall have the right to examine the rejected material. After removal of the portion not conforming to the specification, resubmission of the lot shall be permitted.

The inspection of specific ceiling areas for acceptability shall be made with lighting conditions corresponding to that of final building occupancy. If temporary lighting must be used, care shall be taken to position lights such that temporary conditions will approximate the final lighting condition.

ITEM 36 d : SUPPLY AND INSTALL OF STAIR NOSING

GENERAL

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORK

The work covered by this section consist of furnishing all labor, materials, equipment, tools and incidentals necessary to undertake, complete supply and install of stair nosing for the buildings as indicated on the drawings and as specified herein.

STAIR NOSING

1. Supply and installation of 50mm x 10mm thick. Stair Nosing (Rigid Type)

SUBMITTAL

1. Shop drawings for all stair nosing for the building shall be submitted in advance to allow twenty eight days for review and approval. Shop drawings shall indicate materials and details of finishing works. The Contractor shall be responsible for all errors of detailing and fabrication, and for the correct finishing work items shown on the shop drawings.
2. The Contractor, before placing order for the finishing materials shall submit to the Engineer for approval representative samples of finishing materials. No placing of orders for material for finishing works shall be made without his approval.

ITEM 36 e : HANDRAILS, RAILINGS AND GUARDRAILS

GENERAL

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORK

The work covered by this section consist of furnishing all labor, materials, equipment, tools and incidentals necessary to undertake, complete the installation of handrails, railings and guardrails as indicated on the drawings and as specified herein.

SUBMITTAL

1. Manufacturer's technical data for products and processed used in handrails, railing, guardrails system, including finishes and grout.
2. Shop Drawings showing details of fabrication and installation for each type and of handrail, railing, and guardrails required including plans, elevations, sections, profiles of rails, fittings, connections, and anchors.
3. Prepare samples of each type of metal handrails & railings stainless steel hairline finish. Where finish involves normal color and texture variations, include sample sets composed of two or more units showing limits of such variations expected in completed works.
 - Include 6" long samples of each distinctly different railing member including guardrails, handrails, top rails, posts, and balusters. Include samples of fittings and brackets if requested by Architect.
 - Include sample of typical welded connection.

QUALITY ASSURANCE

Single Source Responsibility

Obtain handrails, guardrail and railing systems of each type and material from a single manufacturer.

STORAGE

Store handrails, guardrail and railing systems in clean, dry location, away from uncured concrete and masonry, protected against damage of any kind. Cover with waterproof paper, tarpaulin, or polyethylene sheeting; allow for air circulation inside the covering.

FABRICATION

General

Fabricate handrails and railing systems to design, dimensions and details shown. Provide handrail and railing members in sizes and profiles indicated, with supporting posts and brackets or size and spacing shown, but not less than required to comply with requirements indicated for structural performance.

Shop Assembly

Pre-assembled items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

Welded Connections

Fabricate handrails, guardrail and railing systems of materials for interconnections of members of welding. Use welding method, which is appropriate for metal and finish, indicated and develops strength required to comply with structural performance criteria. Finish exposed welds and surfaces smooth, flush, and blended to match adjoining surfaces.

Form changes in direction of railing members by bending members by metering, or as indicated on the drawing, as approved by the Architect.

Furnish inserts and other anchorage devices for connecting handrails, guardrail and railing systems to concrete or masonry work. Fabricate anchorage devices, which are capable of withstanding loading imposed by handrails, guardrails and railing systems.

Coordinate anchorage devices with supporting structure.

a. For railing, and guardrail posts set in concrete provide pre-chiseled openings and insert posts as indicated on drawings. Fill opening with non-shrink, non-metallic grout.

MATERIALS

General

Comply with standards indicated for forms and types of metals indicated or required for handrail and railing system components.

a. Stair Railings:

As indicated on plans.

b. Stair Handrail:

As indicated on plans.

c. Guardrail

As indicated on plans.

d. Glass Railings

As indicated on plans.

Refer to plans for the required dimension of various types of stainless steel railings and location.

Fastenings: commercial types, except where special types are shown or required.

Fastenings for all exterior work shall be non-ferrous, unless otherwise shown. Fastenings for steel and aluminum and for all other interior work, where exposed, shall match the fastened metal.

Miscellaneous materials or accessories not listed above shall be provided

as specified hereinafter the various items of work and/or indicated on the drawings, or in accordance with manufacturer's specifications.

GLASS FINISHES

All glass materials shall be delivered at jobsite with labels affixed indicating quality, make, type and thickness.

Material

Use 10mm (13/32") thick tempered glass of clear quality

Execution

PREPARATION

Ensure surfaces to receive panels are structurally sound, even, smooth, clean, dry, and free from defects detrimental to work.

INSTALLATION

- a. Safety precaution and procedure shall be observed in determining the sizes and in providing the required clearances by measuring the actual opening to receive the glass.
- b. Secure glass with stainless steel brackets.

METAL FINISHES

Comply with NAAMM "Metal Finishes Manual" for recommendations and designations of finishes, except as otherwise indicated.

EXECUTION

PREPARATION

a. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as sleeves, concrete inserts, anchor bolts, and miscellaneous items having integral anchors, which are to be embedded in concrete and masonry construction. Coordinate delivery of such items to project site.

b. Field Measurements

Take field measurements prior to fabrication.

INSTALLATION

GENERAL

- a. Fit exposed connections accurately together to form tight, hairline joints.
- b. Perform cutting, drilling, and fitting required for installation of handrails, guardrail and railing systems. Set work accurately in location, alignment, and elevation, plumb, level, true, and free of rack, measured from established lines and levels.
- c. Field Welding

Comply with applicable AWS specification for procedures of manual shielded metal-arc welding, for appearance and quality of welds made, and for methods used in correcting welding work. Weld connections that are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed welded joints smooth and restore finish to match finish of adjacent rail surfaces.

d. Prior to anchoring, adjust handrails and railing systems to ensure matching alignment at abutting joints. Space posts at interval indicated but not less than that required by design loading.

ANCHORING POSTS

a. Concrete-Anchored Posts: Provide chiseled opening on concrete base as indicated on the drawings to receive railing posts and required anchoring system, holes of all loose material, insert posts, and fill annular space between post and concrete with non-shrink, non-metallic epoxy grout, mixed and placed to comply with grout manufacturer's directions.

RAILING CONNECTIONS

a. Welded Connections: Use fully welded joints for permanently connecting railing components by welding. Cope or butt components to provide 100 percent contact or use manufacturer's standard fittings designed for this purpose.

ANCHORING RAILING ENDS

a. Anchor railing ends to metal surfaces with manufacturer's standard fittings using concealed fasteners, unless otherwise indicated.

b. Anchor Railing Ends to Concrete or Masonry, use drilled-in expansion shields and concealed hanger bolts, unless otherwise indicated.

PROTECTION

a. Protect finishes of railing, handrails and guardrails system from damage during construction period by use of temporary protective coverings approved by railing manufacturer. Remove protective covering at time of Substantial Completion.

b. Restore finishes damaged during installation and construction period so that no evidence remains of correction work. Return items which cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units as required.

ITEM 38 f : MODULARS, TABLES AND CHAIRS OF VARIOUS TYPE INCLUDING ACCESSORIES**GENERAL**

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORK

The work covered by this section consist of furnishing all labor, materials, equipment, tools and incidentals necessary to undertake, complete supply of gang chairs for the buildings as indicated on the drawings and as specified herein.

MODULARS

| <i>Modular System</i> | <i>Unit</i> | <i>Quantity</i> |
|----------------------------------|-------------|-----------------|
| Inspection Table | pc | 2.00 |
| Office Table (600mm x 1210mm) | pc | 2.00 |
| Office Table (800mm x 1600mm) | pc | 2.00 |
| Side Table | set | 1.00 |
| Foldable Diaper Changing Counter | set | 1.00 |

CHAIRS

| <i>Chairs</i> | <i>Unit</i> | <i>Quantity</i> |
|---------------------------------|-------------|-----------------|
| Mid back Chair / Clerical Chair | set | 5.00 |
| 2-Seaters Sofa | set | 1.00 |
| 3-Seater Gang Chair | set | 44.00 |

SUBMITTAL

1. Shop drawings for all gang chair for the building shall be submitted in advance to allow twenty eight days for review and approval. Shop drawings shall indicate materials and details of finishing works. The Contractor shall be responsible for all errors of detailing and fabrication, and for the correct finishing work items shown on the shop drawings.
2. The Contractor, before placing order for the supply shall submit to the Engineer for approval representative samples of finishing materials. No placing of orders for material for finishing works shall be made without his approval.

EXECUTION

All materials will be delivered and installed (if needed to be installed) on site.

ITEM 36 g : CONCRETE WATERPROOFING

GENERAL

General Requirements contain provisions and requirements essential to these specifications and apply to this Section, whether or not referred to herein.

SCOPE OF WORK

The work shall cover the waterproofing requirements for building as shown on the drawings.

The work shall consist of furnishing all labor, materials, equipment and other incidentals necessary for the integral waterproofing works where required as shown on the drawings and in accordance with the requirements of these specifications as directed by the Project - In -Charged.

SUBMITTAL

1. Material description and physical properties, application details, and recommendations regarding shelf life, application procedures, and precautions on flammability and toxicity.
2. Samples for each waterproofing type.

DELIVERY AND STORAGE

Deliver manufactured waterproofing materials in manufacturer's original, unopened containers, with labels intact and legible. Containers of materials covered by referenced specification number shall bear the specification number, type, and class of the contents. Store and protect materials in accordance with the manufacturer's instructions, and use within their indicated shelf life. Promptly remove from the site materials or incomplete work adversely affected by exposure to moisture. Use pallets and canvas tarpaulins to cover stored materials top to bottom.

PRODUCTS

I. DEEP PENETRATING SEALER

Deep Penetrating Sealer (DPS) is an environmentally friendly, non-toxic, odorless, clear, water-soluble liquid compound, which is safe and easy to use.

Deep Penetrating Sealer (DPS) penetrates below the surface and chemically reacts with the alkali and lime found in concrete. This reaction creates a silica gel membrane within the pores and capillaries of the concrete, permanently sealing it against the ingress of moisture yet allowing the concrete to breathe. Over a period of time, the silica gel membrane hydrates and

solidifies into a crystalline structure, increasing the hardness and strength of both new and old concrete while reducing moisture vapor emissions and permanently stopping the penetration and flow of water and water-borne contaminants such as chlorides and acids, both on the positive or negative side forging a waterproofed and preserved concrete structure.

EXECUTION

- All existing dirt and other surface contaminants adhering on the surface must be thoroughly removed. Apply Concrete Neutralizer using sufficient coats to completely neutralize the surface. Do not wash off. When sufficiently dry, dust lightly to remove crystalline deposits.
- Mix thoroughly the product mixture as per manufacturer's instruction. Any change from the recommended proportion will affect its quality. Scrape the bottoms, sides and corners of the container to ensure complete and full blending. Prepare only enough quantities that can be used within the pot-life period. Do not delay application. Apply DPS by brush or roller or by using an airless spray.
- Allow to cure overnight prior to application of topcoat.

II. FLEXIBLE MODIFIED CEMENTITIOUS

Flexible Modified Cementitious (FMC) is a two-component latex modified cementitious coating. It can be simply achieved by mixing the pre-packed dry-mixing powder with the formulated flexible latex admixture, and subsequent brushing the slurry on various substrates. It protects a wide range of buildings and structural concrete components with excellent resistance to water, aggressive chemicals, long-term weathering, and scratching. It is applicable for those structures subjected to long-term water immersion.

1. Free surfaces from dirt or foreign materials. For the waterproofing to work best, manufacturers recommend the surfaces be sand blasted, bush-hammered or acid-etched.
2. Apply 2 coats of the cementitious waterproofing. The first coat could include the manufacturer's materials only. The second coating will include a cement-sand mixture and also have chemical and metallic elements too. If supplementary waterproofing is required, then a third coat may be required. This typically includes sand and cement for that extra protection.

Methods of Application

Trowel

Application of the coating is done using the handheld trowel, by simply applying and spreading the coating using the trowel.

Spray

This method uses spraying equipment like the ones used in painting vehicles. It is preferred due to its precise finish and efficiency. It is also faster to use the spray than the trowel method.

Brush

Use a typical brush similar to roll brushes that are used in painting houses. It also has a uniform finish and is faster to use compared to the trowel.

It is good to note that different surfaces will dictate the method of application.

ITEM 36 h : PAINTING

GENERAL

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORK

This Section covers the surface preparation, coating materials and application of coatings systems required for the Works.

The work shall consist of furnishing of all labor, materials, equipment and other incidentals necessary for the supply of painting materials and the complete painting of surfaces as shown on the drawings in accordance with this Specification and as directed by the Engineer.

The term paint as hereinafter used includes emulsion paints, varnishes, oils, pigments, thinner and dryers.

All exposed metal surfaces, except metal surfaces embedded in concrete, shall be painted unless otherwise specified.

STANDARD

The following publications listed below, but referred to thereafter by basic designation only, forms a part of these Specifications to the extent indicated by the reference thereto:

Steel Structures Painting Council (SSPC) U.S. Specification JIS K 5628 Red-Lead Zinc Chromate Anti-Corrosive Paint.

SUBMITTAL

1. The Contractor shall submit work method statements with lists of materials to the Engineer for approval twenty eight days before the starting of works. This statement shall include following items:
 - a. Type of paint and manufacturer
 - b. Manufacturer's specifications
 - c. Storage and delivery of materials
 - d. Surface preparation
 - e. Finish painting and drying
 - f. Touch-up painting, if any
 - g. Equipment
2. The Contractor, before placing order for the painting materials, shall submit to the Engineer for approval samples of materials. No placing of orders for material shall be made without his approval.

STORAGE AND DELIVERY

1. The Contractor shall deliver all material to the site in the original labeled sealed cans and containers, with labels intact and seal unbroken.
 - a. Seals shall remain unbroken until after inspection and acceptance of material by the Engineer.

- b. The Contractor shall deliver materials in ample quantities sufficiently in advance of the need to avoid any delay or interruptions in the works.
2. Paint in thinner shall be stored in accordance with the approved manufacturer's instructions.
 - a. All regulations required for storage of paint shall be observed and all necessary safety signs required by governing codes shall be posted.
 - b. Any damage caused by failure to exercise proper precautions in paint storage shall be repaired.

MATERIAL REQUIREMENTS

PAINT

Paints for the protective coating system shall be the product of a manufacturer approved by the Engineer.

Paints for exterior finish must be with tile like durability and elegance, fast drying, solvent based acrylic, highly suitable for coastal or polluted areas with excellent anti-fungus properties and alkali resistance.

100% Acrylic, water based, quick-drying, easy to clean-up and environmentally friendly, resist dirt, stains, alkali, water, humidity, algae, mold and mildew growth and highly durable paint for interior finish.

An all-purpose synthetic quick dry paint for all types of wood and metal surfaces. It has high gloss, good color retention and outstanding durability.

For pipes, valves and equipment, galvanized and ungalvanized ferrous metal, use a 100% acrylic gloss paint, has excellent resistance to ultraviolet rays and resists chalking, cracking and color fading, dries fast and environmentally friendly.

SCHEDULE OF PAINTING

| | |
|-------------------------------------|--|
| Architectural Items | |
| a. Exterior Finishes | |
| 1. On Concrete Walls | |
| Three Coats, Concrete Masonry Paint | Elastomeric Paint or approved equal |
| 2. Unprimed Ferrous Metal | |
| First Coat | Red Oxide Primer, #310 or approved equal |
| Second & Third Coat | Quick Dry Enamel or approved equal |
| 3. On Concrete Block Wall | |
| Masonry Neutralizer | Masonry Neutralizer #44 or approved equal |

| | |
|---|--|
| Three Coats Concrete Masonry Paint | Elastomeric Paint or approved equal |
| 4. On Wood | |
| First Coat Exterior Wood Primer | Flatwall Enamel or approved equal |
| Second & Third Coat Exterior enamel | Quick Drying Enamel or approved equal |
| b. Interior Finishes Location of the various finishes are listed in the Finish Schedule on the drawings or else will be confirmed by PPA | |
| 1. On primer and coated metal two coats of interior semi-gloss enamel or as indicated in the Schedule finish | Red Oxide Primer #310, Quick Dry Enamel or approved equal |
| 2. On Plaster | |
| First Coat | Masonry Neutralizer #44 or approved equal |
| Three Coats | Elastomeric Paint or approved equal |
| 3. On Wood | |
| First Coat Enamel undercoater | Flatwall Enamel or approved equal |
| Second & Third Coat Exterior enamel | Quick Drying Enamel or approved equal |
| 4. Wood Stain Finish | |
| First Coat Second & Third Coats Fourth & Fifth Coats | Oil Wood Stain , Lacquer Sanding Sealer #1254 Clear Gloss Lacquer #1250 or approved equal |
| c. Non – Architectural Items (Piping, valves, equipment, etc.) | |
| 1. Piping, valves, equipment etc. in rooms are to be painted | |
| 2. Galvanized pipes and ducts | |
| Primer – one coat Finish – one coat | Red Oxide Primer, #310 or approved equal Quick Dry Enamel or approved equal |
| 3. Black steel pipes | |
| Primer – one coat Finish – one coat | Red Oxide Primer, #310 or approved equal Quick Dry Enamel or approved equal |
| 4. Mechanical Items | |
| a. Ungalvanized ferrous metal Primer – one coat | Red Oxide Primer, #310 or approved equal |

| | |
|---|---|
| Finish – one coat | Quick Dry Enamel or approved equal or approved equal |
| b. Galvanized ferrous metal Primer – one coat Finish – one coat | Red Oxide Primer, #310 or approved equal Quick Dry Enamel or approved equal or approved equal |
| c. Submerged galvanized ferrous metal Primer – one coat | Red Oxide Primer, #310 or approved equal |
| d. Buried miscellaneous ferrous surface valves, & flanged joints (excl. pipe) Primer – one coat | Red Oxide Primer, #310 or approved equal |

EXECUTION

SURFACE PREPARATION OF STEEL

1. Steel surfaces shall be cleaned as follows:
 - a. All round welds, burrs and sharp surface projections shall be ground smooth and all weld splatter shall be removed prior to blast cleaning.
 - b. Sand abrasives, if used, shall be clean, and free from salt and extraneous matter. The sand shall pass through a 2.0mm test sieve, and be substantially retained on a 0.18mm test sieve, with at least 25 percent retained on a 0.355mm test sieve.
 - c. Metallic abrasive, if used, shall be sharp, hard and free from dust, and shall pass through a 1.8 mm test sieve.
 - d. Blast cleaning operations shall not be conducted on surfaces that will be wet after blasting and before coating, or when the surfaces are less than 10°C above degree points, or when the relative humidity of the air is greater than 95 percent.
 - e. Any oil, grease, soil, dust or other foreign matter deposited on the cleaned surfaces shall be removed prior to painting. In the event that rusting occurs after completion of the surface preparation, the surfaces shall be cleaned again in accordance with the specified method.
 - f. Particular care shall be taken to prevent the contamination of other corrosive chemicals before the application of the paint. Such contamination shall be removed from the cleaned surface by flash blasting and the paint applied immediately.
 - g. Care shall be taken to prevent contamination of cleaned and painted surfaces by cleaning operations in an adjacent area.
 - h. Surfaces not to be painted shall be suitably protected from the effects of cleaning and painting operations.

SURFACE PREPARATION OF WOOD

1. Wood surfaces shall be sanded to a fresh surface. Surface mould where present, shall

be removed by washing, rubbing down and burning off as necessary. Resinous exudation and large knots shall be removed and replaced with filler or other materials approved by the Engineer.

2. Parts of timber to be enclosed in walls shall always be primed unless already impregnated. Priming shall be brushed on and a minimum of two coats applied to end grain. When the priming paint is hard, all cracks, holds, open joints, etc. shall be made good with hard stopping and rubbed down with fine abrasive paper. Priming of joinery shall be applied only on site after the Engineer has approved such joinery and before it is fixed. For internal surfaces primer coats shall be carefully flatted.

SURFACE PREPARATION OF CONCRETE AND PLASTER

Concrete and cement plaster surfaces to be painted shall be prepared by removing efflorescence, dust, dirt, grease, oil, asphalt, tar, excessive mortar and mortar dropping and by roughening to remove glaze. A zinc sulfate solution shall be applied before prime coat.

SURFACE PREPARATION FOR FIBER CEMENT SURFACES

Shall be dry and clean prior to application of the specified first-coat material. Oil, grease, or rust stains shall be carefully removed by the use of suitable solvent. Wire brushing will not be permitted. After the first coat has become dry and prior to application of finish coats, touch-up coats shall be applied to suction spots.

ALUMINUM FRAMES FOR DOORS AND WINDOWS

All metal surfaces shall undergo pre-treatment process which includes: desmutting, water-rinsing, degreasing/etching, water rinsing, zinc phosphating, water rinsing and acid rinsing.

Powder coating application, shall be factory applied and shall be done in one operation using an electro-static powder gun. The materials to be coated should be well connected to earth. Coating thickness should be kept to a minimum of 60 microns for exposed areas. On details which are to be treated mechanically after coating (drilling, sawing, etc.), the coating film must not exceed 100 microns.

The powder coating shall be oven cured in the range of 20 minutes at 220° C (metal temperature measured on the area with greatest metal thickness). The temperature variation in the oven should not exceed +/- 10° C.

Handling

Coated items should be cooled to no less than 40° Centigrade before handling. Precautions should be taken to avoid damages on the finished coating during stacking, storing and transportation.

Storage and Delivery

Inspect materials delivered to the site for damage. Unload and store with minimum handling. Provide storage space in dry location with adequate ventilation, free from dust or water and easily accessible for inspection and handling. Store materials neatly on the floor, properly stacked on non-absorptive strips or wood platforms. Protect finished surfaces during shipping and handling using manufacturer's standard method.

WOOD REPAIR

Badly decayed areas shall be removed and repaired. Areas and pieces decayed beyond repair shall be replaced with new pieces that match originals in all respects. Moderately decayed areas, weathered, or gouged wood shall be patched with approved patching compounds, and shall be sanded smooth. The source or cause of wood decay shall be identified and corrected prior to application of patching materials. Wet wood shall be completely dried to a moisture content not exceeding 12 percent, as measured by a moisture meter, to its full depth before patching, unless otherwise authorized. Wood that is to be patched shall be clean of dust, grease, and loose paint.

1. Epoxy Wood Repair

Epoxy wood repair materials shall be applied in accordance with manufacturer's written instructions. Health and safety instructions shall be followed in accordance with the manufacturer's instructions. Clean mixing equipment shall be used to avoid contamination. Mix and proportions shall be as directed by the manufacturer. Batches shall be only large enough to complete the specific job intended. Patching materials shall be completely cured before painting or reinstallation of patched pieces.

2. Epoxy Consolidant and Epoxy Paste

Epoxy liquid wood consolidant shall be used:

1. To penetrate and impregnate deteriorated wood sections in order to reinforce wood fibers that have become softened or absorbent.
2. As a primer for areas that are to receive epoxy paste filler. Epoxy paste shall be used to fill areas where portions of wood are missing such as holes, cracks, gaps, gouges, and other voids.

MIXING AND THINNING

Mixing and thinning of paint shall be done in accordance with the approved manufacturer's printed instructions. The pot life of each paint as stated by the manufacturer shall not be exceeded.

WEATHER CONDITION

The paint shall not be applied when the relative humidity is above 85 percent. The paint shall not be applied in rain, wind, fog, dust or mist.

APPLICATION

Workmanship shall be first class in every respect. All work shall be done in a workmanship manner so that the finished surfaces shall be free from runs, chop, ridges, waves, laps and unnecessary brush marks. All coats shall be applied in such manner as to produce an even film of uniform thickness. Edges, corners, crevices, welds and rivets shall receive special attention to ensure that they receive an adequate thickness of paint.

All painting shall be done by thoroughly experienced workmen.

Safety regulations shall be adhered to at all times, including the wearing of respirators by persons engaged on assisting in spray painting. Adjacent areas and installation shall be protected by the use of cloths or other approved precautionary measures.

Plain enamel and varnish shall be applied carefully with good clean brushes or approved spraying equipment, except that the initial coat on any surface shall be applied with brush. Sufficient time shall be allowed between coats to assure thorough drying and each coat shall be in proper condition before receiving the next coat.

Sanding and dusting as required shall be performed between coats in varnishing work. Finish coat shall be smooth and free from runs, sags, and other defects. Exterior paint shall not be applied during rainy days.

All paint when applied shall provide a satisfactory film and smooth, even surface. Paint shall be thoroughly stirred and kept at a uniform consistency during application. Powdered metallic pigments added at the time of use shall be mixed by adding the powder in small increments to about one-third of the base paint or vehicle, with thorough mixing to obtain a smooth paste. The remainder of the base paint shall then be thoroughly stirred in.

Different brands of emulsion paints shall not be mixed prior to application of the materials.

Where necessary to suit conditions of surface temperature, weather and method of application, the package paint may be thinned immediately prior to application in accordance with the approved manufacturer's directions, but not in excess of 125 cc of suitable thinner per liter (one pint per gallon). Before using, the paint shall be mixed to a uniform consistency and shall be stirred frequently during application.

Paints other than water-thinned paints shall be applied only to surfaces which are completely free of moisture as determined by sight or touch and only such combinations of humidity to be painted as will cause evaporation rather than condensation.

Surfaces which have been cleaned, pretreated and/or otherwise been prepared for painting shall be primed or painted with one coat of finish paint as soon as practicable after such preparation has been completed, but in any event prior to any deterioration of the prepared surfaces.

The first coat of paint on all exterior surfaces shall be applied by brush. Interior prime coats and all other subsequent coats on either exterior or interior surfaces may be applied by brush or spray. Whenever spraying is permitted all areas inaccessible to spray painting shall be coated by brushing or other suitable means. Brushes to be used for application of water-emulsions shall be soaked in water for a period of 2 hours prior to use.

All cloths and cotton waste which might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each day.

Upon completion of the work, all staging, scaffolding, and containers shall be removed from the site or destroyed in a manner approved by the Engineer. Paint spots, or stains upon adjacent surfaces shall be removed and the entire job left clean and acceptable to the Engineer.

No smoking shall be permitted in the vicinity where painting is going on.

TOUCH-UP PAINTING

Touch-up painting shall be done with the same paint as used for the original coat. The resulting minimum dry film shall be the same as for the original coat.

Touch-up painting shall include cleaning and painting of field connections, welds and all damaged or defective paint and rusted areas.

During touch-up painting, only loose, cracked, brittle or non-adherent paint shall be removed during cleaning. All exposed edges shall be feathered. Touch-up painting shall be performed in a manner which will minimize damage to sound paint. Rust spots shall be thoroughly cleaned and edges of the existing paint shall be scraped back to sound material.

DRYING

1. No primer or paint shall be forced to be dried under conditions which will cause cracking, wrinkling, blistering, formation of pores which would detrimentally affect the condition of the paint.
2. No drier shall be added to the paint unless specified in the approved manufacturer's instructions.
3. Painted surfaces shall be protected from dust, dirt, and the elements of the weather until dry to the fullest extent practicable.
4. After drying, any areas of paint damaged from any cause shall be removed, the surface again prepared and then touched-up with the same paint and to the same thickness as the undamaged areas as specified in sub-section 4.14.3.7 above.

HANDLING

1. Precautions shall be taken to minimize damage to paint films resulting from stacking for drying.
2. Paint which is damaged in handling shall be scraped off and touched-up with the same paint and in the same thickness as was previously applied to the damaged area at Contractor's expense.

INSPECTION

1. All works and materials supplied under this Specification shall be subject to inspection by the Engineer.
2. The Contractor shall correct such works or replace such materials found defective under these Specifications at his own expense.

ITEM 36 i : FACILITIES AND DEVICE FOR PERSONS WITH DISABILITY**SCOPE OF WORK**

The work shall consist of furnishing materials, tools, labor and incidentals necessary for the construction/installation of facilities and device for disabled persons as shown on the Drawings and in accordance with the Implementing Rules and Regulations of Batas Pambansa Bilang 344 and this Specification.

MATERIAL REQUIREMENTS**GRAPHIC SIGNS**

Graphic signs like the International Symbol of Access shall be fabricated from plastic materials, white color with either dark blue background. Letters and symbols shall be laminated and raised from the background.

HANDRAILS

Handrail for ramp shall be 50mmØ tubular stainless steel buff finished. It shall be provided with a small hole as of a Braille system.

GRABRAIL

Grabrail shall be manufactured from gauge 18 tubular stainless steel 25mmØ and provided with safety grip finish.

CONCRETE MATERIALS FOR RAMPS

1. Portland cement shall conform with the requirement of "Reinforced Concrete".
2. Aggregates shall conform with the requirements of "Reinforced Concrete".
3. Temperature bars shall have diameter of 10mm conforming with the requirements of "Concrete Works".

EXECUTION**GRAPHIC SIGNS**

1. Directional and information signs, indicating the location of the ramp for physically handicapped persons, shall be installed / placed at the front of the main entrance of the Building. The signed board size and dimensions shall be based on DOTr approved Standard Design, schedule 40, sign post and the text and arrow shall be in accordance with the International Symbol of Access "B". Manual (See attached drawings and tabulation).
2. Signs shall be placed at the entrance and exits of the ramps and toilets, installed at conspicuous locations. The signboards shall be based on DOTr approved Standard Design Manual (See attached drawings and tabulation).

RAMP

The ramp shall be constructed as shown on the drawings and with a nonskid surface and tactile strips.

ITEM 36 j : TERMITE PROOFING, BUKBOK PROOFING

GENERAL

General Requirements contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

SCOPE OF WORK

The Contractor shall hire the services of an approved or accredited pesticide company to furnish all labor, materials, equipment, tools, plant, and services to complete the termite and "bukbok" proofing work hereinafter described.

EXAMINATION OF SITE

Inspect the site of work and examine the premises to fully understand existing conditions with respect to the work involved. Prior to soil stripping, excavation or filling all termite mounds within the area should be demolished, removed and treated.

MATERIAL REQUIREMENTS

CHEMICALS AND EQUIPMENT

For termite proofing, use Termiticide Concentrate acceptable to the PPA and should have license from Fertilizer and Pesticide Authority.

For "bukbok" proofing of kiln dried wood and for untreated wood, use chemical name accredited name/or acceptable to the PPA and should have valid license from Fertilizer and Pesticide Authority (FPA).

The pest control Contractor shall submit the specified chemicals in their original manufacturer sealed containers to the Project Inspector of inspection, sampling and safekeeping. Containers with broken seal shall not be accepted.

Dilution ratings (for Termiticide Concentrate):

1 part Termiticide Concentrate TC to 50 parts water

Pesticides - 1 : 100 concentration

Dilutions shall be done only at the jobsite in the presence of the Project Inspector. The strength of the mixture or solutions shall be made uniform by thorough stirring. All solutions prepared for termite proofing shall be used within 24 hours.

EXECUTION

CONTRACTOR LICENSE AND CERTIFICATION REQUIREMENT

The pesticide company should have a valid license from Fertilizer and Pesticide Authority of the Department of Agriculture.

All pesticide shall be applied by or under the direct supervision of a certified pesticide applicator.

ENVIRONMENTAL AND SAFETY CONDITIONS

Formulation, treatment, storage and disposal of pesticide shall be in accordance with label directions. Water for formulation shall be drawn only from site(s) designated by the Project Inspector, and the filling hose shall be fitted with a backflow preventor meeting local plumbing codes/standards. The filling operation shall be under the direct and continuous observation of the Project Inspector to prevent overflow.

APPLICATION

1. Termite Control

Application of solution shall be done by means of power sprayers fitted with flow meters for accurate monitoring of actual quantity used. At the time of soil treatment application, the soil shall be preferably in a friable condition with low moisture content to allow uniform distribution of the treatment solution throughout the soil. Do not apply pesticide during or immediately following heavy rains, or when conditions will cause runoff and create an environmental hazard. Cover treated area with waterproof sheeting if concrete is not poured on the same day as the soil treatment. Take precautions to prevent disturbance of the pesticide barrier. Before the placement of structural components, re-treatment where soil or fill is disturbed after treatment. Apply pesticide prior to placement of gravel base, vapor barrier or waterproof membrane.

a. Slab on Grade Construction

Establish a horizontal pesticide barrier over areas intended for covering by floors, porches, attached entryways, garages, carports and terraces. Apply treatment solution with a low pressure coarse spray at the rate of four (4) liters solution per square meter. Apply at the rate of seven (7) liters solution per square meter if the fill is washed gravel or other coarse material. Establish a continuous chemical barrier in the voids of hollow block foundation or voids of masonry. Apply treatment at the rate of seven (7) liters per 3 linear meter. Make pesticide band at least 15 cm wide the pesticide evenly distributed throughout. Treat buildings constructed with basement slabs in the same manner.

b. Crawl Space Construction

Establish a vertical pesticide barrier inside of foundation walls, both sides of interior partition walls, around piers, plumbing, and rodding and utility conduits. Apply treatment solution by rodding or rodding and trenching the fill at the rate of 15 liters solution per 3 linear meter, and 30 cm deep from grade to bottom of foundation. Treat both sides of foundation and around all piers and pipes. Make treated barrier of fill at least 15 cm wide with the pesticide evenly distributed throughout.

c. Dry Pipes and Conduits

Establish pesticide barrier on various dry pipes and conduits such as electrical service entrance, raceways, pipe chase, vents. Use powder type termiticide by injecting it inside the pipe.

d. Termite Mounds

Demolish and treat all termite mounds within the property found after the construction.

2. "Bulbok" Proofing

Kiln-dried wood, plywood, tanguile, apitong, cabinets, dividers, and paneling shall be brushed generously with Pesticides before painting or varnishing.

3. Sun-Dried Wood Treatment

Sun-dried lumber to be used for ceiling joint runners, nailer, etc. shall be brushed with Pesticides before installation of plywood or ceiling panels.

ENGINEERS

The Contractor shall submit to the Engineer for approval, a copy of the pest control company's proposal and chemical application, method/procedure including the description of the equipment to be used before start of work.

INSPECTION AND TEST

Sampling shall be done only in the presence of the Project Inspector.

Amount of sample to be taken: 50 cc each.

CONTRACTOR'S GUARANTEE

Upon completion of work, and on a condition for final acceptance, the Contractor shall submit to PPA a written guarantee from the pesticide company which shall provide that:

1. The soil poisoning treatment shall prevent subterranean termites from attacking the building on its contents for a period of not less than five (5) years.
2. The Contractor shall thereby warrant all works in pest control that all materials and workmanship applied under the contract are of good quality in every respect and will remain as such for not less than five (5) years.

Should there be termite and "Bukbok" infestation within the one (1) year period the Contractor thereby agrees to do all necessary repairs on the damaged portions of the buildings caused by termite infestation to the satisfaction of PPA, at the Contractor's expense. Retreatment shall also be done by the Contractor after completion of the repairs and at his expense. Such repairs and corrective works shall be done within five days after a written notice from the Owner has been received by the Contractor.

Should there be infestation after the one (1) year period up until the five (5) year guarantee, the pesticide company agrees to do all the necessary repairs at their expense. The pesticide company shall conduct annual inspection of the building and surrounding to check any infestation during the guarantee period. Notice shall be given by the pesticide company to PPA in case there is presence of termites in the surroundings.

ITEM 36 k : TOILET PARTITION

GENERAL

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORK

Furnish and install toilet partitions as shown on drawings and as specified herein.

SUBMITTALS

1. Submit shop drawings indicating elevations of partitions, full scale sections, thickness and gauges of metal, fastenings, proposed method of anchoring, the size and spacing of anchors, details of construction, hardware, fittings, mountings, and other related items and installation details.

2. Submit sample one of each item of hardware, fittings, fastening, and each type of panel. The panel sample shall be cross-sectioned not less than 150 mm by 150 mm in size and shall show finish on base material and core of the panel.

3. Submit manufacturer's data literature for each item of hardware, fitting, fastening and each type of panel, complete with description of materials, finishes, and anchoring devices, and appurtenances.

4. Submit one sample of each color of partition for verification that products match the color indicated. Where colors are not indicated, submit the manufacturer's standard color samples for selection by the Architect.

DELIVERY AND STORAGE

Deliver materials to the site in original sealed containers or packages, bearing the manufacturer's name, brand designation, specification number, type, style and finish as applicable. Store and handle materials in a manner to protect them from damage.

MATERIALS

Toilet compartments/cubicles - comprising 20mm thk intermediate panels, doors, and partitions/compartments (compact laminated phenolic board) including door frame system urinal divider, cubicle divider, hardware and accessories in stainless finish and all other incidentals to complete.

Sizes, dimensions of doors, cubicles and dividers as shown on plans. Color shall be as selected by Architect.

All the accessories shall be of heat chemical and bacteria resistant.

All edges of doors and pilasters are chamfered and finish without any metal trimming.

EXECUTION**INSTALLATION**

Installation of toilet partitions and urinal screens shall be in accordance with approved shop drawings and manufacturer's installation and directions.

ITEMS 361: SUPPLY AND INSTALL OF PHOTOLUMINESCENT SIGNS AND MARKINGS**GENERAL**

General Requirements contain provisions and requirements essential to these Specifications; and apply to this section, whether or not referred to herein.

SCOPE OF WORK

The work covered by this section consist of furnishing all labor, materials, equipment, tools and incidentals necessary to undertake, complete supply and install of photoluminescent signs and markers for the buildings as indicated on the drawings and as specified herein.

PHOTOLUMINESCENT SIGNS AND PATH MARKERS

Signs and markers are designed to be used in and about buildings to identify and ensure visibility escape routes for compliance with the performance based on Codes (Building & Fire Codes). The signs will be clearly visible and readily understandable under all conditions of foreseeable use, including emergency conditions.

SUBMITTAL

1. Shop drawings shall be submitted in advance to allow twenty eight days for review and approval. Shop drawings shall indicate materials and details of finishing works. The Contractor shall be responsible for all errors of detailing and fabrication, and for the correct finishing work items shown on the shop drawings.
2. The Contractor, before placing order for the finishing materials shall submit to the Project-In - Charged for approval representative samples of finishing materials. No placing of orders for material for finishing works shall be made without approval.

MATERIALS

Pictogram (290mm X 162mm) /(420mm X 230mm)

Bracket: Ceiling Mount (420mm X 230mm)

Bracket: Flag Mount (230mm X 133mm)

Double Sided Pictogram Directional (420mm X 230mm)

Pictogram W/ Protective Clear coat(420mm X 230mm)

Evacuation Map

Path Marker

Guidance Strip

Handrail Strip

Step Nosing - 75.2mm x 33.2mm - 3060mm, loose insert for hidden fixers.

EXECUTION

INSTALLATION

For versatility the signs and markers can be installed using fixers (screws) or adhesive tape.

The installation method used should be determined by the condition of installation surface
screws should be used if there is any doubt about adhesion.

ITEM 36 m : SIGNAGES AND LOGO**SCOPE OF WORK**

Furnish materials and perform labor to include miscellaneous works required for the installation of room identification for the toilets and port office.

SAMPLE AND SHOP DRAWINGS

The Contractor shall submit samples for approval by the Architect. Notify the Architect for any changes, clarifications and discrepancies.

For the room I.D. full size lettering layout and installation method shall be submitted to the Architect for approval before start of work.

MATERIAL REQUIREMENTS**1. PORT TERMINAL NAME**

- Hot dipped cut out 4.5 mm thick Metal sheet screwed at the back.

2. ROOM MARKERS

Black acrylic letters, 38mm (1-1/2") high on white acrylic background, 63mm (2-1/2") high, with clear acrylic cover. Lengths shall be as required by the full notation therein.

EXECUTION**WORKMANSHIP**

Workmanship shall be executed in high quality comparable with artworks.

MOUNTING

For all mounted assemblies, appropriate mounting hardware and connectors which are concealed shall be sufficiently used.

Assemblies shall be mounted plumb, straight, level, and at prescribed heights.

INSTALLATION

Installation shall be done in a secure and permanent manner at prescribed heights and/or layout. The backwall shall not be mutilated. After the dowels are positioned, fill with expanding grout, or other approved fillers, and retouch, flashed to the backwall surface.

ITEM 36 n: ROOFING AND TINSMITHRY

SCOPE OF WORK

The work shall include but not limited to all labor, materials, tools, equipment and incidentals necessary to furnish and install the roofing sheets including fittings, flashing caps, ridge rolls, gutters and construction of concrete eaves and canopy excluding waterproofing, to provide completely sound water tight roof for the buildings as shown on the Drawings and specified herein.

MATERIAL REQUIREMENTS

POLYCARBONATE SOLID SHEET

Standard Polycarbonate roof panel system, made of thermoplastic materials capable of handling both extremely low and high temperatures.

| | | |
|----------------------------|---|---|
| Base Solid Sheet thickness | : | 2 mm, 3mm, 4.5mm, 6mm, 8mm, 10mm |
| Length | : | 1.22 m x 2.44m , 1.22m x 4.88m, 1.22m x 30.48m (roll) |
| Color | : | Blue |
| Material Finish | : | hard coating applied to give a harder finish and improve resistant to impact and fracture that demand high reliability and performance. The polymer has density 1.2 – 1.22 g/cm ³ , maintains toughness up to 140°C and down to -20°C. |

EXECUTION

POLYCARBONATE SOLID SHEET

1. Standard Polycarbonate Roofing panel

Spacing of purlins safe at 1.0m to 1.2m.

At least 28 days before laying of roofing sheet start, the Contractor shall submit for approval of the Engineer, shop drawings indicating materials and method of installation. No roofing sheets laying work shall commence without the Engineer's approval of the shop drawings and work method.

Laying shall start from the end opposite the side from where the prevailing monsoon is coming from. The first sheet shall be laid and installed with the turned-down edge towards the outside of the area to be covered. The next sheet shall be overlapped to the previous sheet in such a manner that the exposed edge is turned down and the covered edge is turned up. The overlapped edge in the side shall be with the rib having the anti-capillary groove. End and side laps including flashing shall be as approved by the Engineer.

The straps shall be fixed and fastened with the fastener and washer as shown on the Drawings.

HANDLING AND STORAGE

Sheet shall be lifted directly and shall not be dragged over the other sheets or over rough surfaces.

When working on a roof, the workers shall wear flat rubber soled shoes.

Tool shall be handled carefully to prevent them from sliding over the coated surface.

When installation work is completed, all metal off-cuts, used nails and other metallic scrap shall be removed from roof area.

When using drills, hacksaws, or files in the roof area, care shall be taken that metal particles and fillings are swept off the roof immediately.

If not required for immediate use, sheets or bundles shall be staked and clear off the ground. If left in the open, sheets shall be protected by loose tarpaulin or similar covers.

Bundles shall not be left expose to the weather.

FLAT STEEL BAR

Flat bar is a type of steel product displaying rectangle section. Flat bar has uses in many industries and is often an ideal choice due to its non-corrosive properties and structural strength. Flat bar is considerably less expensive than wood, is lighter in weight, insect resistant, and resists warping and cracking from water damage.

Flat bar

Grade 43A

Thickness: 3- 12mm

Minimum length : 8 ft (2400mm)

Maximum length : 20 ft(6100mm)

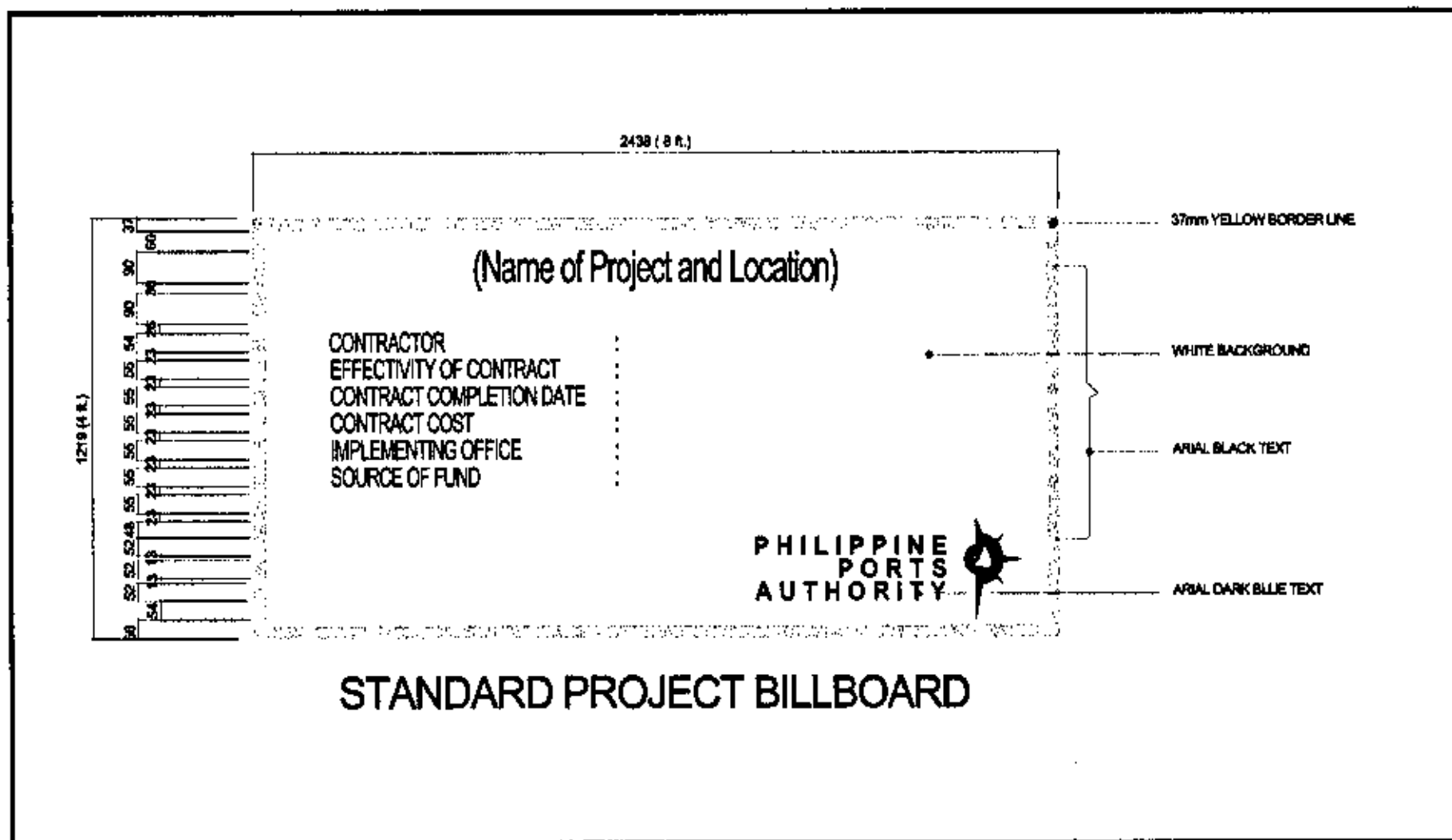
ITEM 37 : PROJECT BILLBOARD**SPECIFICATION**

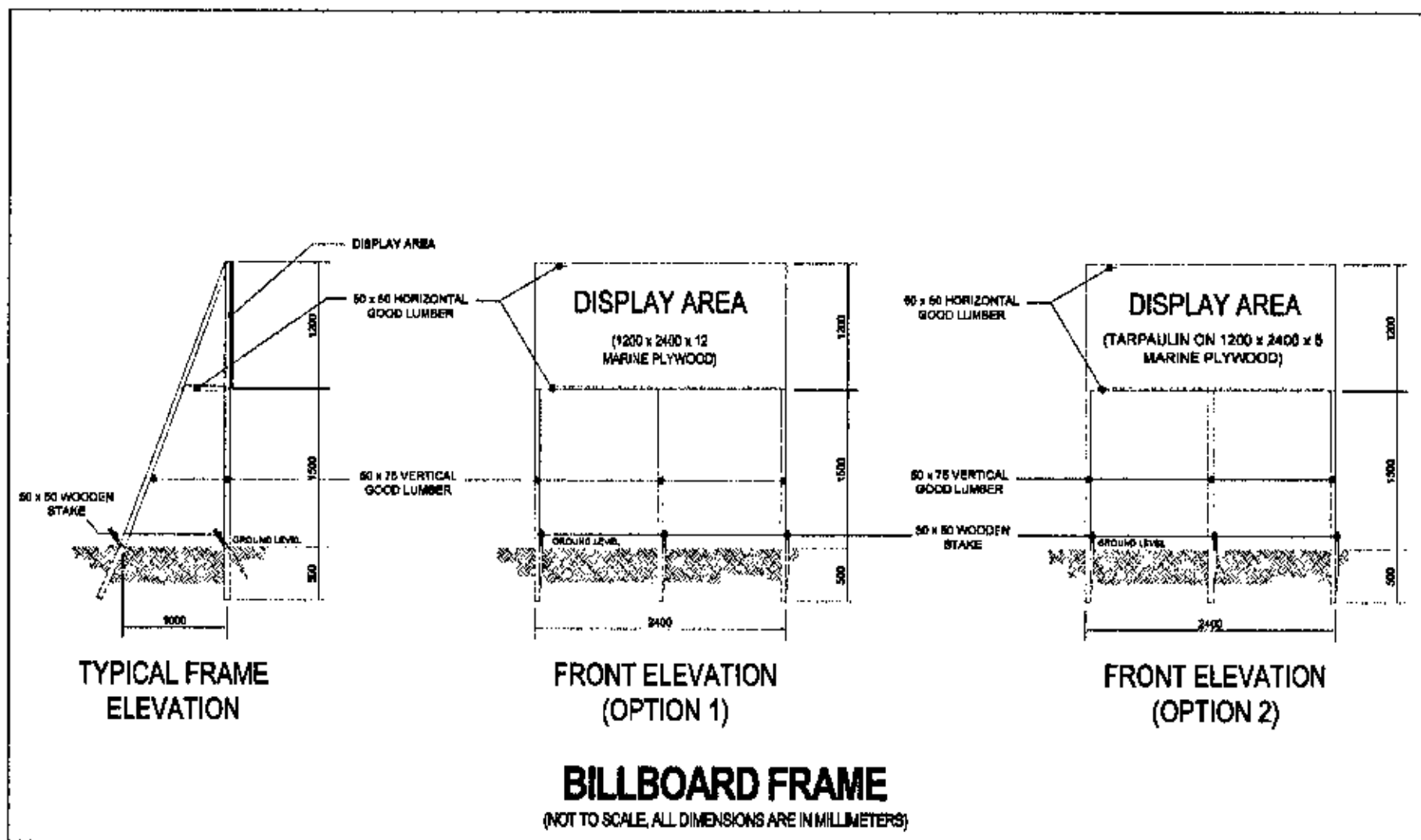
The Project Billboard shall be installed at location(s) designated by the Engineer.

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.





“To all our contractors, suppliers, and service providers, all we ask is for you to

SPEED UP

your contracts and **FINISH**

AHEAD of schedule,

WITHOUT SACRIFICING

QUALITY

of work, and **REASONABLENESS OF COST** agreed upon. Gawin niyo ‘yan at hindi tayo maghihiwalay ng landas (Do that and we will not part ways).”

A Message from
DOTr Secretary Arthur Tugade



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ITEM 38 : 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.

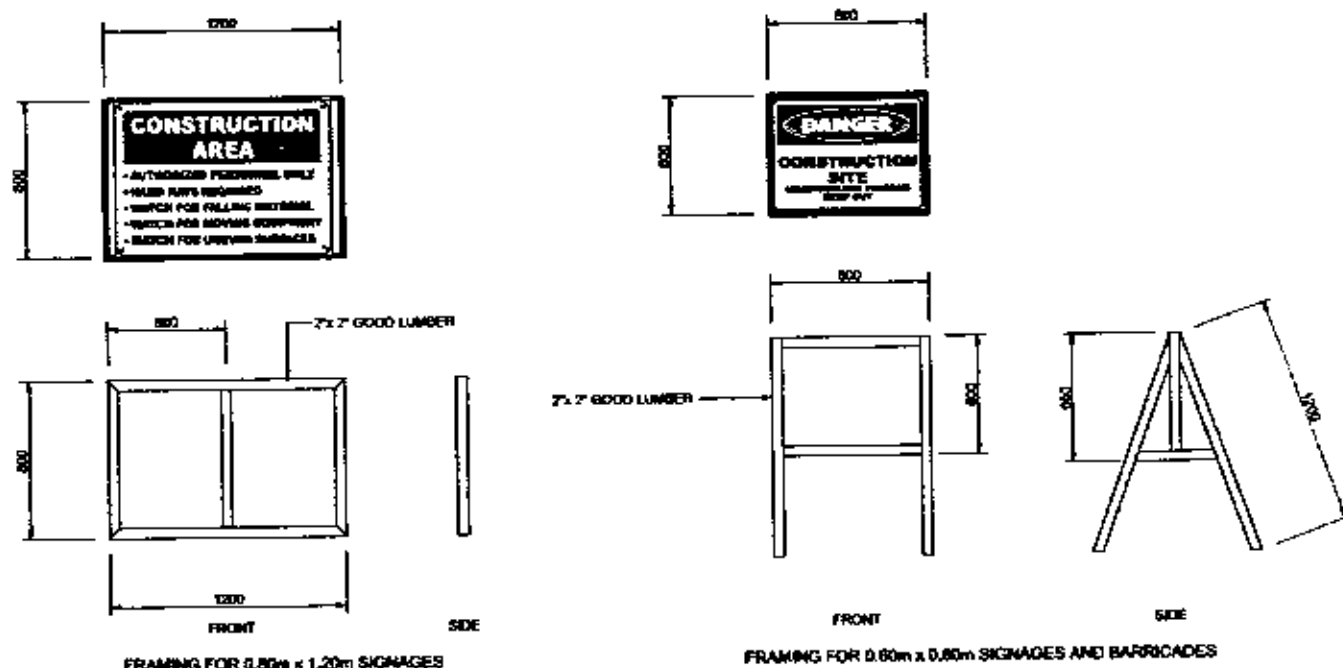
SPECIFICATION

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 1/2 inch (12mm) marine plywood or tarpaulin poster on 2" x 2" (50mm x 50mm) good lumber frame (see drawing below).

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



STANDARD PLAN FOR SIGNAGES AND BARRICADES

SECTION VII

DRAWINGS
(APPROVED PLANS)

SECTION VII

DRAWINGS AND APPROVED PLANS

(SEE ISSUED APPROVED PLANS)

LIST OF DRAWINGS:

| | |
|----------|---|
| 1 OF 29 | DEVELOPMENT PLAN, VICINITY MAP, GENERAL NOTES, LIST OF DRAWINGS |
| 2 OF 29 | GENERAL PLAN |
| 3 OF 29 | SECTIONAL ELEVATION @ STA. 0+000, SECTIONAL ELEVATION @ STA. 0+010, SECTIONAL ELEVATION @ STA. 0+020, SECTIONAL ELEVATION @ STA. 0+030 |
| 4 OF 29 | SECTIONAL ELEVATION @ STA. 0+040, SECTIONAL ELEVATION @ STA. 0+050, SECTIONAL ELEVATION @ STA. 0+060, SECTIONAL ELEVATION @ STA. 0+070 |
| 5 OF 29 | SECTIONAL ELEVATION @ STA. 0+080, SECTIONAL ELEVATION @ STA. 0+090, SECTIONAL ELEVATION @ STA. 0+100, SECTIONAL ELEVATION @ STA. 0+112.50 |
| 6 OF 29 | SECTIONAL ELEVATION A-A, SECTIONAL ELEVATION B-B (LEFT) SECTIONAL ELEVATION B-B (RIGHT) |
| 7 OF 29 | PAVEMENT LAYOUT |
| 8 OF 29 | DRAINAGE PLAN |
| 9 OF 29 | TYPICAL SECTION @ OUTFALL, DETAIL OF CATCH DRAIN MANHOLE |
| 10 OF 29 | RC DITCH DETAIL, DETAIL OF PAVEMENT JOINT, STAIRLANDING DETAIL, U-STAPLE @ GEOTEXTILE FABRIC, RAILING DETAIL |
| 11 OF 29 | TYPICAL REINFORCEMENT OF MOORING CLEAT, DETAIL OF ZOCALO WALL, DETAIL OF RETAINING WALL 1, DETAIL OF RETAINING WALL 2, DETAIL OF RC CURB @ ROCK BULWHEAD |
| 12 OF 29 | DETAIL OF STEEL MAIN GATE, COLUMN FOOTING DETAIL OF STEEL GATE DETAIL W, DETAIL X, DETAIL Y |
| 13 OF 29 | TYPICAL PLAN OF CHB FENCE, TYPICAL ELEVATION OF CHB FENCE, DETAIL CONNECTION OF COLUMN, DETAIL CONNECTION OF CHB FENCE, DETAIL J, DETAIL M, DETAIL P |
| 14 OF 29 | PILE SCHEDULE, PILING PLAN @ FASTCRAFT BERTH, SCHEDULE OF RUBBER DOCK FENDERS SCHEDULE OF MOORING BOLLARD, GENERAL PLAN @ FASTCRAFT BERTH |
| 15 OF 29 | SECTION A'-A', SECTION B'-B', SECTION C'-C' |
| 16 OF 29 | OFFSHORE ELEVATION, SECTIONAL ELEVATION |
| 17 OF 29 | REINFORCEMENT DETAIL OF MOORING/FENDER BLOCK, TYPICAL ATTACHMENT OF 500V X 1500L V TYPE AND 25 TONS MOORING BOLLARD |
| 18 OF 29 | TYPICAL DETAIL OF PILE CAP FOR COUPLE BATTER PILE, TYPICAL DETAIL OF PILE CAP FOR VERTICAL PILE, PILE CAP FOR COUPLE PILES, DETAIL OF CURTAIN WALL 1 & 2, DETAIL OF CONSTRUCTION JOINT |
| 19 OF 29 | TYPICAL TRANSVERSE BEAM REINFORCEMENT OF FASTCRAFT BERTH, TYPICAL LONGITUDINAL BEAM REINFORCEMENT OF FAST CRAFT BERTH, TYPICAL SECTION OF BEAM, TYPICAL SECTION OF CANTILEVER BEAM |
| 20 OF 29 | DETAIL OF ANCHOR BOLT (NORMAL), DETAIL OF RUBBER DOCK FENDER V-500H X 1500L DETAIL OF 25-TONS MOORING BOLLARD (TEE-HEAD) |
| 21 OF 29 | PILE ELEVATION SHOWING H.T.S. and SPIRALS, PILE ELEVATION SHOWING STIRRIPS and CAGE BARS DETAIL OF 400mm x 400mm PRE-STRESSED CONCRETE PILE |
| 22 OF 29 | ROOF FRAMING PLAN, SIDE ELEVATION, FRONT ELEVATION, DETAIL OF TRUSS "1", SECTION "A" DETAIL OF TRUSS "2", DETAIL OF PEDESTAL POST, GIRT DETAIL |
| 23 OF 29 | GENERAL PLAN OF RO-RO RAMP, PILE LAYOUT PLAN, RO-RO RAMP ELEVATION, SIDE ELEVATION SCHEDULE OF 400mm x 400mm P.S.C. PILES |
| 24 OF 29 | SECTION A-1, SECTION A-2, SECTION A-3, SECTION A-4, SECTION A-5, TYPICAL A, TYPICAL B, TYPICAL C, TYPICAL D, PILE CONNECTION DETAIL @ RAMP, PILE CAP PLAN |
| 25 OF 29 | PORT LIGHTING SITE DEVELOPMENT LAYOUT PLAN (PTB), GENERAL NOTES / LEGEND, RECOMMENDATION |
| 26 OF 29 | PORT LIGHTING SITE DEVELOPMENT LAYOUT PLAN (FP), GENERAL NOTES / LEGEND, RECOMMENDATION |
| 27 OF 29 | DETAIL OF DUCTBANK, DETAIL OF MANHOLE, CONCRETE PEDESTAL POST |
| 28 OF 29 | DETAIL LAMP POST FOUNDATION, 5.0 M. HT. LAMP POST INTEGRATED SOLAR LIGHT |
| 29 OF 29 | ROOF FRAMING LIGHTING PLAN, FRONT ELEVATION LIGHTING PLAN, SIDE ELEVATION LIGHTING PLAN |
| ANNEX 1 | HYDROGRAPHIC SURVEY |
| ANNEX 2 | BOREHOLE LOGS |

SECTION VIII

BILL OF QUANTITIES
and
ATTACHMENTS

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
 Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur

| 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 clearing | lot | 1 | | |
| 1.02 | Rental of temporary site office and residence for the Engineer and staff | mo. | 12 | | |
| 1.03 | Maintain temporary site office and residence for the Engineer and staff | mo. | 12 | | |
| 1.04 | Provide Construction Safety and Health Program in the execution of the project including stringent Covid-19 protocols per Engineering Circular No. 01-2020 and PCR testing of all project personnel (as indicated in the Bid Documents) | mo. | 12 | | |
| TOTAL FOR BILL NO. 1 | | | | | |

 Bidder's Authorized Signature

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
 Port of Marawi (MAA-Sector B), Marawi City, Lanao del Sur

| No. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Pesos) (5) | AMOUNT (Pesos) (4) x (5) |
|-------------------|---|-------------|-------------|------------------------------|--------------------------------|
| BILL NO. 2 | CONSTRUCTION OF BACK-UP AREA WITH STAIRLANDING | | | | |
| 2.01 | Excavation of seabed up to required elevation | cu.m. | 51 | | |
| 2.02 | Supply and place 2-layers of 1,000 kg. armour rocks | cu.m. | 3,172 | | |
| 2.03 | Supply and place 50-100 kg. core rocks | cu.m. | 10,134 | | |
| 2.04 | Supply and install geotextile filter (with overlaps) | sq.m. | 4,470 | | |
| 2.05 | Supply and place sand and gravel fill | cu.m. | 27,153 | | |
| 2.06 | Supply, spread and compact aggregate subbase course | cu.m. | 8,958 | | |
| 2.07 | Supply and place 3,500 psi. concrete for retaining wall, curb, stairlandling, mooring block, ditch, lamp post foundation, handhole, pedestal post and ductbank | cu.m. | 467 | | |
| 2.08 | Supply and install of steel reinforcement for retaining wall, curb, stairlandling, mooring block, ditch, lamp post foundation, handhole, pedestal post and ductbank | kg. | 34,425 | | |
| 2.09 | Supply, spread and compact aggregate base course (CBR >80) | cu.m. | 1,834 | | |
| 2.10 | Construct portland cement concrete pavement (300mm thk.) including asphalt binder and dowel bars | sq.m. | 8,772 | | |
| 2.11 | Supply and place gravel bedding | cu.m. | 20 | | |
| 2.12 | Supply and install mooring cleat including accessories | no. | 18 | | |
| 2.13 | Supply, deliver and install integrated solar street light | lot | 1 | | |
| 2.14 | Supply and install catch drain manhole | set | 4 | | |
| 2.15 | Construct steel main gate, perimeter fence and railings at stairlandling | lot | 1 | | |
| 2.16 | Construct covered walkway including painting and lighting | lot | 1 | | |
| 2.17 | Supply and lay reinforced concrete pipe (400mm diameter) for drainage system | l.m. | 73 | | |
| | TOTAL FOR BILL NO. 2 | | | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MARP - PORT FACILITIES (CIVIL WORKS)
 Port of Marawi (MAR-Geotex A), Marawi City, Lanao del Sur

| NO. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Peso) (5) | AMOUNT (Peso) (6) x (5) |
|------------|--|-------------|-------------|-----------------------------|-------------------------------|
| 3.01 | Excavation of all materials for column footing, footing tie-beam, sapio vault and catch basin and brookling therefor | cum. | 248 | | |
| 3.02 | Supply and apply soil treatment | sq.m. | 352 | | |
| 3.03 | Supply, place and compact gravel bedding | cum. | 33 | | |
| 3.04 | Supply and place 4,000 psi. concrete for footings, columns, beams, slab, stairs and ramps | cum. | 175 | | |
| 3.05 | Supply and install steel reinforcement for footings, columns, beams, slab, stairs and ramps | kg. | 22,046 | | |
| 3.06 | Supply and place 50mm thick lean concrete | cum. | 4 | | |
| 3.07 | Construct CHB wall and partitions including steel reinforcement a) 150mm thick b) 100mm thick | sq.m. | 368 | | |
| 3.08 | Supply and place 13mm thick plain cement plaster finish | sq.m. | 1,072 | | |
| 3.09 | Supply and apply two (2) coats of acrylic solvent base paint | sq.m. | 948 | | |
| 3.10 | Supply and apply membrane type waterproofing | sq.m. | 488 | | |
| 3.11 | Supply and install 0.50m x 0.50m unglazed ceramic floor tiles | sq.m. | 237 | | |
| 3.12 | Supply and install 0.50m x 0.50m non-slip ceramic floor tiles | sq.m. | 35 | | |
| 3.13 | Supply and install 0.30m x 0.30m toilet floor tiles | sq.m. | 2 | | |
| 3.14 | Supply and install 50mm x 10mm thick, steel nosing (rigid type) | l.m. | 52 | | |
| 3.15 | Supply and install 0.30m x 0.50m homogeneous ceramic wall tiles | sq.m. | 77 | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
Port of Marawi (MAA-Sector 6), Marawi City, Lanao del Sur

| No. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Peso) (5) | AMOUNT (Peso) (4) x (5) |
|------------|--|-------------|-------------|-----------------------------|-------------------------------|
| 3.16 | Supply and Install Aluminum Clip-In Perforated Panel including accessories (1.20 x 0.60 x 0.70mm) (C1) | sq.m. | 164 | | |
| 3.17 | Supply and Install Aluminum Clip-In Perforated Panel including accessories (0.60 x 0.60 x 0.70mm) (C2) | sq.m. | 48 | | |
| 3.18 | Supply and Install 50mm diameter tubular stainless steel buff finished handrail | lot | 1 | | |
| 3.19 | Supply and Install fabricated 1.5 mm thick Aluminum Framed Doors and Windows including reflective brown glass and accessories | lot | 1 | | |
| 3.20 | Supply, fabricate and install flush doors including accessories | lot | 1 | | |
| 3.21 | Supply, fabricate and install Phenolic anti-bacterial water proof Toilet partition 20mm thick, including stainless hinges, lock indicators, bottom support door knobs and coat hooks | lot | 1 | | |
| 3.22 | Supply and Install decorative canopy support, perforated aluminum panel | lot | 1 | | |
| 3.23 | Supply, fabricate and install office furniture including accessories | lot | 1 | | |
| 3.24 | Supply and Install toilet fixtures and accessories | lot | 1 | | |
| 3.25 | Supply and Install water line pipes and fittings including accessories | lot | 1 | | |
| 3.26 | Supply and Install sewerage pipes and fittings including accessories | lot | 1 | | |
| 3.27 | Supply and Install drainage pipes and fittings including accessories | lot | 1 | | |
| 3.28 | Supply, deliver and install wires and cables of various sizes | lot | 1 | | |
| 3.29 | Supply, deliver and install conduit pipe including fittings of various sizes | lot | 1 | | |
| 3.30 | Supply, deliver and install wiring devices | lot | 1 | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur

| NO. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Pesos) (5) | AMOUNT (Pesos) (4) x (5) |
|------------|--|-------------|-------------|------------------------------|--------------------------------|
| 3.31 | Supply, deliver and install protective devices | lot | 1 | | |
| 3.32 | Supply, deliver and install lighting fixtures | lot | 1 | | |
| 3.33 | Supply, deliver and install lightning protection and accessories | lot | 1 | | |
| 3.34 | Supply, deliver and install auxiliary system | lot | 1 | | |
| 3.35 | Supply, deliver and install airconditioning units | lot | 1 | | |
| 3.36 | Supply, deliver and install distribution transformer including commissioning, testing and accessories | lot | 1 | | |
| 3.37 | Supply, deliver and install Generator set including accessories, | lot | 1 | | |
| 3.38 | Construct pumphouse including appurtenances | lot | 1 | | |
| 3.39 | Construct guardhouse including accessories | lot | 1 | | |
| 3.40 | Supply, deliver and install port signage | lot | 1 | | |
| 3.41 | Supply and install fire extinguisher including accessories | set | 3 | | |
| 3.42 | Construct septic vault including steel reinforcement | lot | 1 | | |
| 3.43 | Construct catch basin and manhole cover for drainage system including steel reinforcement | lot | 1 | | |
| 3.44 | Supply, deliver and install Baggage X-ray Machine and Walkthrough Metal Detector including accessories | lot | 1 | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MRP - PORT FACILITIES (CIVIL WORKS)
 Port of Marawi (MAB-Sector B), Marawi City, Lanao del Sur

| NO. | DESCRIPTION OF WORK | UNIT | QTY. | UNIT PRICE | AMOUNT |
|------|--|-------|--------|------------|-----------|
| (1) | (2) | (3) | (4) | (5) | (6) X (5) |
| 4.01 | Excavation of the materials for column footing, footing de-beam, septic vault and catch basin and backfilling thereafter | cu.m. | 211 | | |
| 4.02 | Supply and apply soil treatment | sq.m. | 480 | | |
| 4.03 | Supply, place and compact gravel bedding | cu.m. | 50 | | |
| 4.04 | Supply and place 4,000 psi. concrete for column, footing, beams, slab-on-fill, roof deck, chair, countertop and parapet | cu.m. | 183 | | |
| 4.05 | Supply and install steel reinforcement including steel reinforcement | kg. | 23,808 | | |
| 4.06 | Construct CHB wall and partitions including steel reinforcement | sq.m. | 79 | | |
| 4.07 | Supply and install Aluminum Chip-in Perforated Panel including accessories (0.80 x 0.80 x 0.70mm) | sq.m. | 38 | | |
| 4.08 | Supply and place 13mm thick plain cement plaster finish | sq.m. | 840 | | |
| 4.09 | Supply and apply two (2) coats of elastomeric paint | sq.m. | 834 | | |
| 4.10 | Supply and apply membrane type waterproofing | sq.m. | 508 | | |
| 4.11 | Supply and install 0.50m x 0.50m unglazed ceramic floor tiles | sq.m. | 8 | | |
| 4.12 | Supply and install 0.50m x 0.50m non-slip ceramic floor tiles | sq.m. | 32 | | |
| 4.13 | Supply and install 0.50m x 0.50m back tile floor tiles | sq.m. | 13 | | |
| 4.14 | Supply and install non-slip or rough cement floor finish | sq.m. | 387 | | |
| 4.15 | Supply and install 0.50m x 0.50m homogeneous ceramic wall tiles | sq.m. | 48 | | |
| 4.16 | Supply and install synthetic granite countertop | sq.m. | 8 | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
Port of Marawi (MAA-Sector A), Marawi City, Lanao del Sur

| NO. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Pesos) (5) | AMOUNT (Pesos) (4) x (5) |
|------------|--|-------------|-------------|------------------------------|--------------------------------|
| 4.17 | Supply and install 50mm diameter tubular stainless steel buff finished handrail | lot | 1 | | |
| 4.18 | Supply, fabricate and install doors and windows including accessories | lot | 1 | | |
| 4.19 | Supply, fabricate and install Phenolic anti-bacterial water proof Toilet partition 20mm thick including stainless hinges, lock indicators, bottom support door knobs and casters | lot | 1 | | |
| 4.20 | Supply, fabricate and install office furniture including accessories | lot | 1 | | |
| 4.21 | Supply and install toilet fixtures and accessories | lot | 1 | | |
| 4.22 | Supply and install water line pipes and fittings including accessories | lot | 1 | | |
| 4.23 | Supply and install sewerage pipes and fittings including accessories | lot | 1 | | |
| 4.24 | Supply and install drainage pipes and fittings including accessories | lot | 1 | | |
| 4.25 | Supply, deliver and install electrical works including transformer, generator set and accessories | lot | 1 | | |
| 4.26 | Construct pumphouse including appurtenances | lot | 1 | | |
| 4.27 | Construct guardhouse including accessories | lot | 1 | | |
| 4.28 | Supply, deliver and install port signage | set | 1 | | |
| 4.29 | Supply and install fire extinguisher including accessories | set | 1 | | |
| 4.30 | Construct septic vault including steel reinforcement | lot | 1 | | |
| 4.31 | Construct catch basin and manhole cover for drainage system including steel reinforcement | lot | 1 | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
Port of Marawi (MAA-Sector 5), Marawi City, Lanao del Sur

| NO. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Pesos) (5) | AMOUNT (Pesos) (4) x (5) |
|-----------------------------|---|-------------|-------------|------------------------------|--------------------------------|
| BILL NO. 8 | CONSTRUCTION OF PASSTRAFT BERTH AND RAMP | | | | |
| 8.01 | Supply, deliver and drive 400mm x 400mm x 21m PSC Test Piles | no. | 1 | | |
| 8.02 | Supply and deliver to site 400mm x 400mm PSC Piles | lm. | 816 | | |
| 8.03 | Handle, pitch and drive 400mm x 400mm Vertical PSC Piles | lm. | 420 | | |
| 8.04 | Handle, pitch and drive 400mm x 400mm Better PSC Piles | lm. | 328 | | |
| 8.06 | Chipout & dispose portion of newly driven PSC Piles up to required elevation | no. | 40 | | |
| 8.08 | Supply and install steel reinforcement for the superstructure | kg. | 35,224 | | |
| 8.07 | Supply and place 3,500 psi concrete for the superstructure | cum. | 181 | | |
| 8.08 | Supply and install construction joints (100mm x 100mm x 10mm angle bar, hot-dipped galvanized) including doveled bars | lm. | 34 | | |
| 8.09 | Supply and deliver to site Rubber Dock Fender (V600H x 1500L) including accessories | set | 8 | | |
| 8.10 | Install Rubber Dock Fender (V600H x 1500L) including accessories | set | 8 | | |
| 8.11 | Supply and deliver to site Mooring Bollard (25-Tons, T-head) including accessories | set | 7 | | |
| 8.12 | Install Mooring Bollard (25-Tons, T-head) including accessories | set | 7 | | |
| TOTAL FOR BILL NO. 8 | | | | | |

Bidder's Authorized Signature

BILL OF QUANTITIES
MRRP - PORT FACILITIES (CIVIL WORKS)
 Port of Marawi (MAA-Sector A), Marawi City, Lanao del Sur

| NO. (1) | DESCRIPTION OF WORK (2) | UNIT (3) | QTY. (4) | UNIT PRICE (Pesos) (5) | AMOUNT (Pesos) (4) x (5) |
|-----------------------------|--|-------------|-------------|------------------------------|--------------------------------|
| BILL NO. 1 | REIMBURSABLE ITEMS | | | | |
| 8.01 | Provide reimbursable items necessary in the implementation of the project as determined by the Authority | | | | |
| | a) Office furniture and appliances | lot | 1 | | |
| | b) Computers and accessories | lot | 1 | | |
| | c) Service vehicle including LTO registration and comprehensive insurance | lot | 1 | | |
| TOTAL FOR BILL NO. 1 | | | | | |

Bidder's Authorized Signature

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 for temporary 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 including stringent Covid-19 protocols per PPA Engineering Circular No. 01-2020 and PCR testing of all project personnel (as indicated in the bid documents)

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

CONSTRUCTION OF BACK-UP AREA WITH STAIRLANDING

Item 2.01 Excavation of seabed up to required elevation

The quantity to be paid for shall be the actual volume in cubic meter of seabed to be excavated 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 2.02 Supply and place 2-layers 1,000kg armour rocks

The quantity to be paid for shall be the actual volume in cubic meter of 2-layers 1,000kg armour rocks, 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 2.03 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. 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 Supply and install geotextile fabric (with overlaps)

The quantity to be paid for shall be the actual area in square meter of geotextile fabric (with overlaps), 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 2.05 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 2.06 Supply, spread 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. 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 Supply and place 3,500 psi concrete for the retaining wall, curb, stairlanding, mooring block, ditch, lamp post foundation, handhole, pedestal post and duct bank

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete for the retaining wall, curb, stairlanding, mooring block, ditch, lamp post foundation, handhole, pedestal post and duct bank, 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 2.08 Supply, fabricate and install steel reinforcement for the retaining wall, curb, stairlanding, mooring block, ditch, lamp post foundation, handhole, pedestal post and duct bank

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars for the retaining wall, curb, stairlanding, mooring block, ditch, lamp post foundation, handhole, pedestal post and duct bank, 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 2.09 Supply, spread and compact aggregate base course (CBR >80)

The quantity to be paid for shall be the actual volume in cubic meter of aggregate base course (CBR >80), 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 2.10 Construct Portland cement concrete pavement (300mm thick) including asphalt sealer and dowel bars

The quantity to be paid for shall be the actual area in square meter of Portland cement concrete pavement (300mm thick) including asphalt sealer and dowel bars, 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 2.11 Supply and place gravel bedding

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding, 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 2.12 Supply and install mooring cleat including accessories

The quantity to be paid for shall be the actual number of mooring cleat including accessories, 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 2.13 Supply, deliver and install integrated solar street light

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

Item 2.14 Supply and install catch drain manhole

The quantity to be paid for shall be the actual set of catch drain manhole, 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 2.15 Construct steel main gate, perimeter fence and railings at stairlanding

The quantity to be paid for shall be the actual lot of steel main gate, perimeter fence and railings at stairlanding, 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 2.16 Construct covered walkway including painting and lighting

The quantity to be paid for shall be the actual lot of covered walkway including painting and lighting, 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 2.17 Supply and lay reinforced concrete pipe (400mm-diameter) for drainage system

The quantity to be paid for shall be the actual length in linear meter of 400mm-diameter reinforced concrete pipe for drainage system, supplied and laid-in-place 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.

BILL NO. 3

CONSTRUCTION OF PASSENGER TERMINAL BUILDING

- Item 3.01 Excavation of fill materials for column footing, footing tie-beam, septic vault and catch basin and backfilling thereafter**
- The quantity to be paid for shall be the actual volume in cubic meter of fill materials to be excavated for column footing, footing tie-beam, septic vault and catch basin then backfilled thereafter 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 apply soil treatment**
- The quantity to be paid for shall be the actual area in square meter of soil treatment, supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.
- Item 3.03 Supply, place and compact gravel bedding**
- The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding placed, supplied, set-in-place and 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 3.04 Supply and place 4,000 psi concrete for footings, columns, beams, slabs, stairs and ramps**
- The quantity to be paid for shall be the actual volume in cubic meter of 4,000 psi concrete for footings, columns, beams, slabs, stairs and ramps 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 3.05 Supply and install steel reinforcement for footings, columns, beams, slabs, stairs and ramps**
- The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars for footings, columns, beams, slabs, stairs and ramps 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 3.06 Supply and place 50mm thick lean concrete**
- The quantity to be paid for shall be the actual volume in cubic meter of 50mm thick lean concrete, 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 3.07 Construct CHB wall and partitions including steel reinforcement**
a) 150mm thick
b) 100mm thick

The quantity to be paid for shall be the actual area in square meter of CHB wall of various thickness including steel reinforcement, 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 3.08 Supply and place 13mm thick plain cement plaster finish**

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

- Item 3.09 Supply and apply two (2) coats of acrylic solvent base paint**

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

- Item 3.10 Supply and apply membrane type waterproofing**

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

- Item 3.11 Supply and install 0.60m x 0.60m Unglazed Ceramic Floor Tiles**

The quantity to be paid for shall be the actual area in square meter of unglazed ceramic floor tiles (0.60m x 0.60m), 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 3.12 Supply and install 0.60m x 0.60m Non-Slip Ceramic Floor Tiles**

The quantity to be paid for shall be the actual area in square meter of non-slip ceramic floor tiles (0.60m x 0.60m), 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 3.13 Supply and install 0.30m x 0.30m tact tile Floor Tiles**

The quantity to be paid for shall be the actual area in square meter of tact tile floor tiles (0.30m x 0.30m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full

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

Item 3.14 Supply and install 50mm x 10mm thk. Stair Nosing (Rigid Type)

The quantity to be paid for shall be the actual length in linear meter of 50mm x 10mm thick stair nosing (rigid type), 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 3.15 Supply and install 0.30m x 0.60m homogenous ceramic wall Tiles

The quantity to be paid for shall be the actual area in square meter of homogenous ceramic wall tiles (0.30m x 0.60m), 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 3.16 Supply and install Aluminum Clip-in Perforated Panel including accessories (1.20 x 0.60 x 0.70m) (C1)

The quantity to be paid for shall be the actual area in square meter of aluminum clip-in perforated panel including accessories (1.20 x 0.60 x 0.70m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 3.17 Supply and install Aluminum Clip-in Perforated Panel including accessories (0.60 x 0.60 x 0.70m) (C2)

The quantity to be paid for shall be the actual area in square meter of aluminum clip-in perforated panel including accessories (0.60 x 0.60 x 0.70m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 3.18 Supply and install 50mm diameter tubular stainless steel buff finished handrail

The quantity to be paid for shall be the actual lot of 50mm diameter tubular stainless steel buff finished handrail, 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 3.19 Supply and install fabricated 1.5mm thk. Aluminum Framed Doors and Windows including reflective brown glass and accessories

The quantity to be paid for shall be the actual lot of fabricated 1.5mm thk. Aluminum Framed Doors and Windows including reflective brown glass and accessories, 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, fabricate and install Flush Doors including accessories

The quantity to be paid for shall be the actual lot of Flush Doors including accessories, 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 3.21 Supply, fabricate and install Phenolic anti-bacterial water proof Toilet partition 20mm thk., including stainless hinges, lock indicators, bottom support door knobs and coat hooks

The quantity to be paid for shall be the actual lot of phenolic anti-bacterial water proof toilet partition 20mm thk. including stainless hinges, lock indicators, bottom support door knobs and coat hooks 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 3.22 Supply and install decorative canopy support, perforated aluminum panel

The quantity to be paid for shall be the actual lot of decorative canopy support, perforated aluminum panel 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 3.23 Supply, fabricate and install office furniture including accessories

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

Item 3.24 Supply and install Toilet Fixtures and accessories

The quantity to be paid for shall be the actual lot of toilet fixtures and accessories, 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 3.25 Supply and install water line pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of water line pipes and fittings including accessories, 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 3.26 Supply and install sewerage pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of sewerage pipes and fittings including accessories, 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 3.27 Supply and install drainage pipes and fittings including and accessories

The quantity to be paid for shall be the actual lot of drainage pipes and fittings including accessories, 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 3.28 Supply, deliver and install wires and cables of various sizes

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

Item 3.29 Supply, deliver and install conduit pipe including fittings of various sizes

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

Item 3.30 Supply, deliver and install wiring devices

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

Item 3.31 Supply, deliver and install protective devices

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

Item 3.32 Supply, deliver and install lighting fixtures

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

Item 3.33 Supply, deliver and install lightning protection and accessories

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

Item 3.34 Supply, deliver and install auxiliary system

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

Item 3.35 Supply, deliver and install air conditioning unit

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

Item 3.36 Supply, deliver and install distribution transformer including commissioning, testing and accessories

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

Item 3.37 Supply, deliver and install Generator set including accessories

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

Item 3.38 Construct Pump house including appurtenances

The quantity to be paid for shall be the actual lot of Pump house including appurtenances, 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 3.39 Construct Guard House including accessories

The quantity to be paid for shall be the actual lot of Guard House including accessories, 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 3.40 Supply, deliver and install port signage

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

Item 3.41 Supply and install fire extinguisher including accessories

The quantity to be paid for shall be the actual set of fire extinguisher including accessories, 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 3.42 Construct septic vault including steel reinforcement

The quantity to be paid for shall be the actual lot of unit of septic vault including steel reinforcement, constructed in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation 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 3.43 Construct catch basin and manhole cover for drainage system including steel reinforcement

The quantity to be paid for shall be the actual lot of catch basin and manhole cover for drainage system including steel reinforcement, constructed in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation 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 3.44 Supply, deliver and install Baggage X-ray Machine and Walkthrough Detector including accessories

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

BILL NO. 4

CONSTRUCTION OF FISHPORT SHED

- Item 4.01 Excavation of fill materials for column footing, footing tie-beam, septic vault and catch basin and backfilling thereafter**

The quantity to be paid for shall be the actual volume in cubic meter of fill materials to be excavated for column footing, footing tie-beam, septic vault and catch basin then backfilled thereafter 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 and apply soil treatment**

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

- Item 4.03 Supply, place and compact gravel bedding**

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding placed, 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 4.04 Supply and place 4,000 psi concrete for column, footing, beams, slab-on-fill, roof deck, chair, countertop and parapet**

The quantity to be paid for shall be the actual volume in cubic meter of 4,000 psi concrete for column, footing, beams, slab-on-fill, roof deck, chair, countertop and parapet to be supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

- Item 4.05 Supply and install steel reinforcement for column, footing, beams, slab-on-fill, roof deck, chair, countertop and parapet**

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars for column, footing, beams, slab-on-fill, roof deck, chair, countertop and parapet to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

- Item 4.06 Construct CHB wall and partitions including steel reinforcement**
a) 150mm thick
b) 100mm thick

The quantity to be paid for shall be the actual area in square meter of CHB wall of various thickness including steel reinforcement, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be

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

Item 4.07 Supply and Install Aluminum Clip-In Perforated Panel including accessories (0.60 x 0.60 x 0.70m)

The quantity to be paid for shall be the actual area in square meter of aluminum clip-in perforated panel including accessories (0.60 x 0.60 x 0.70m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.08 Supply and place 13mm thick plain cement plaster finish

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

Item 4.09 Supply and apply two (2) coats of elastomeric paint

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

Item 4.10 Supply and apply membrane type waterproofing

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

Item 4.11 Supply and install 0.60m x 0.60m Unglazed Ceramic Floor Tiles

The quantity to be paid for shall be the actual area in square meter of unglazed ceramic floor tiles (0.60m x 0.60m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.12 Supply and install 0.60m x 0.60m Non-Slip Ceramic Floor Tiles

The quantity to be paid for shall be the actual area in square meter of non-slip ceramic floor tiles (0.60m x 0.60m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.13 Supply and install 0.50m x 0.50m tact tile Floor Tiles

The quantity to be paid for shall be the actual area in square meter of tact tile floor tiles (0.30m x 0.30m), supplied and installed in accordance with the plans and

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

Item 4.14 Supply and place Non-Skid or Rough Cement Floor Finish

The quantity to be paid for shall be the actual area in square meter of non-skid or rough cement floor finish, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.15 Supply and install 0.30m x 0.60m homogenous ceramic wall Tiles

The quantity to be paid for shall be the actual area in square meter of homogenous ceramic wall tiles (0.30m x 0.60m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.16 Supply and install synthetic Granite countertop

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

Item 4.17 Supply and install 50mm diameter tubular stainless steel buff finished handrail

The quantity to be paid for shall be the actual lot of 50mm diameter tubular stainless steel buff finished handrail, to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.18 Supply, fabricate and install doors and windows including accessories

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

Item 4.19 Supply, fabricate and install Phenolic anti-bacterial water proof Toilet partition 20mm thk., including stainless hinges, lock indicators, bottom support door knobs and coat hooks

The quantity to be paid for shall be the actual lot of phenolic anti-bacterial water proof toilet partition 20mm thk. including stainless hinges, lock indicators, bottom support door knobs and coat hooks to be supplied, fabricated and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.20 Supply, fabricate and install office furniture including accessories

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

Item 4.21 Supply and install Toilet Fixtures and accessories

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

Item 4.22 Supply and install water line pipes and fittings including accessories

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

Item 4.23 Supply and install sewerage pipes and fittings including accessories

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

Item 4.24 Supply and install drainage pipes and fittings including and accessories

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

Item 4.25 Supply, deliver and install electrical works including transformer, generator set and accessories

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

Item 4.26 Construct Pump house including appurtenances

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

Item 4.27 Construct Guard House including accessories

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

Item 4.28 Supply, deliver and install port signage

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

Item 4.29 Supply and install fire extinguisher including accessories

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

Item 4.30 Construct septic vault including steel reinforcement

The quantity to be paid for shall be the actual lot of unit of septic vault including steel reinforcement, constructed in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

Item 4.31 Construct catch basin and manhole cover for drainage system including steel reinforcement

The quantity to be paid for shall be the actual lot of catch basin and manhole cover for drainage system including steel reinforcement, constructed in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation 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 FASTCRAFT BERTH AND RAMP

Item 5.01 Supply, deliver and drive 400mm x 400mm x 21m PSC Test Piles

The quantity to be paid for shall be the actual number of PSC Test piles (400mm x 400mm x 21m), 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 5.02 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 PSC piles (400mm x 400mm), 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 5.03 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, 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 5.04 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, 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 5.05 Chip/cut and dispose portion of newly driven PSC piles up to required elevation

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

Item 5.06 Supply and install steel reinforcements for superstructure

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcements for superstructure, 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 5.07 Supply and place 3,500 psi concrete for superstructure

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete for superstructure, 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 5.08 Supply and install construction joints (100mm x 100mm x 10mm angle bar, hot-dipped galvanized) including dowel bars

The quantity to be paid for shall be the actual length in linear meter of construction joints (100mm x 100mm x 10mm angle bar, hot-dipped galvanized) including dowel bars, 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 5.09 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 5.10 Install rubber dock fenders (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, 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 5.11 Supply and deliver to site mooring bollard (25 Tons, T-head) including accessories

The quantity to be paid for shall be the actual set of mooring bollard (25 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 5.12 Install mooring bollard (25 Tons, T-head) including accessories

The quantity to be paid for shall be the actual set of mooring bollard (25 Tons, T-head) 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

REIMBURSABLE ITEMS

Item 6.01 **Provide reimbursable items necessary in the implementation of the project as determined by the Authority.**

- a. Office Furniture and Appliances**
- b. Computer and Accessories**
- c. Service Vehicle including LTO registration and comprehensive Insurance**

The quantity to be paid for shall be the actual quantity of determined items by the Authority deemed necessary in the implementation of the project, supplied, delivered and accepted by the Authority. Payment for said items shall be made only upon complete delivery/acceptance of such. The contract lump sum price shall be full compensation for providing all determined items. The Contractor's Profit and Overhead, Contingencies and Miscellaneous (OCM) should not be included in the cost of said items. Claims for payment shall be supported by Official Receipt(s) (OR) and at least three (3) canvasses. The amount to be paid for shall be the price indicated in the OR but should not exceed the contract lump sum price. The determined items shall be the property of PPA. Operation and maintenance shall be borne by PPA.

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.

OFFICE EQUIPMENT FOR USE OF THE PPA ENGINEER AND STAFF

The Contractor shall provide within thirty (30) days after notice to commence work, the following main items of brand new office equipment for use of the Engineer and his staff. The Contractor shall make available for use of the Engineer other equipment as may be necessary for the proper functioning of the office. The equipment shall be the property of PPA. Operation and maintenance shall be borne by PPA.

| | | |
|--|-------|--|
| a) Office Furnitures and appliances | | |
| 2 | sets | Office table, 1.5 x 0.70m with chair |
| 1 | set | Conference table w/ chair (6-str.) |
| 2 | pcs. | Single bunk beds w/ mattress & beddings |
| 2 | pcs. | Waste paper basket |
| 1 | pc. | Calculator (Scientific, 12 digit capacity) |
| 1 | pc. | Communication system, Cell phone |
| 1 | pc. | Filing Steel Cabinet, 4-drawers |
| 2 | units | Air-conditioned unit (1.0 hp., wdo type) |
| 1 | unit | Refrigerator (6 cu.ft.) |
| 1 | set | Gas stove (2 burner with tank) |
| 1 | unit | Hot and cold water dispenser (5 gal. Cap.) |
| 1 | pc. | White board with eraser and marker |
| 1 | unit | Stand fan (16" dia.) |
| b) Computers and Accessories | | |
| 2 | sets | Desktop Unit & Accessories |
| 2 | sets | Printer/scanner and accessories |
| 2 | units | Uninterrupted Power Supply (UPS) |
| 2 | units | External Hard Drive (USB 3.0, 4TB) |
| 1 | unit | Computer Table |
| 1 | unit | Computer Chair |
| c) Licensed Softwares | | |
| 2 | units | Microsoft Office 2016 |
| d) Service Vehicle including LTO registration and comprehensive insurance | | |
| 1 | unit | Service Vehicle (up to 3.0 DSL Engine, 4x2, A/T) |
| 1 | lot | Comprehensive Insurance (1 yr.) |
| 1 | lot | LTO Registration (3yrs.) |

COMPUTER AND ACCESSORIES

The Contractor shall provide within thirty (30) days after notice to commence work, two (2) "Brand New Desktop", complete with printer and accessories and licensed software for the use of the PPA Engineer and his Staff at the start of the project. The items shall be the property of PPA. Operation and maintenance shall be borne by PPA.

| Description / Specifications: | DESK TOP UNIT |
|---|---|
| Brand/Model | <i>Asus, Apple, Lenovo, ACER, HP or Equivalent Branded</i> |
| Processor | <i>Intel® Core™ i7-9700K CPU</i> |
| System Memory | <i>8GB DDR4 Ram at 2666MHZ up to 32GB, 2DIMM slots</i> |
| Chipset | <i>Intel B360</i> |
| CD-ROM | <i>Tray load DVD Drive (Reads and Writes to DVD/CD)</i> |
| Graphics | <i>NVIDIA GeForce RTX 2060 6GDS</i> |
| SATA | <i>4 x SATA 6.0 Gbps</i> |
| HDD/SSD | <i>128GB SSD (M.2 PCIe 128GB) + 1TB HDD (3.5" 7200rpm)</i> |
| WIFI/ Bluetooth | <i>802.11ac 2x2/ Bluetooth 5.0</i> |
| LAN | <i>Realtek RTL8111H 10/ 100/ 1000Mbps</i> |
| Audio | <i>Realtek ALC887, DTS Headphone X</i> |
| Accessories | <i>Wireless Keyboard and Mouse</i> |
| Ports | <i>4 x USB 3.2, 2 X USB 2.0, HDMI, Audio Jack, RJ45 and Mic in/ headphone out</i> |
| Display (Monitor) | <i>27" inch. FHD (1920 x 1080 Display) with speaker, display ports, USB hub, earphone jack and PC audio inputs.</i> |
| OS Bundled (Certification/License) | <i>Windows 10 PRO for business</i> |
| Multi-Function Printer (Copy, Scan Printer) | <i>HP, Epson, Brother or equivalent brand with wide format capabilities (A3 size), 128 MB Memory Capacity and Automatic Document Feeder (ADF)</i> |
| External Hard Drive | <i>Portable (USB 3.0 Interface, at least 4TB Capacity)</i> |

SOFTWARE

The Contractor shall provide within thirty (30) days after commence work, the specified "License softwares" latest version for the use of the PPA Engineer and staff. The software shall be the property of PPA. Operation and maintenance shall be borne by PPA.

SERVICE VEHICLE

The Contractor shall provide within thirty (30) days after notice to commence work, one (1) unit "Brand New" Transportation Service Vehicle for the use of the PPA personnel. The vehicle to be provided by the Contractor shall be to the satisfaction of PPA. The vehicle shall comply in all respect with all relevant national or local laws, statutes and regulations. The unit shall become the property of PPA. Operations and maintenance shall be borne by PPA.

The vehicle shall be diesel-fuel engine with a displacement of not more than 3000cc, 4 x 2 and with automatic transmission.

MINIMUM MAJOR EQUIPMENT REQUIREMENTS

| | | |
|---|--------|---|
| 2 | unit/s | Backhoe (0.40 cu.m., 94.30hp, minimum), 1-owned, 1-owned/leased |
| 3 | unit/s | Clamshell, owned |
| 1 | unit/s | Concrete Cutter, owned |
| 2 | unit/s | Concrete Mixer (1 bagger, minimum), owned |
| 1 | unit/s | Concrete Bucket, owned |
| 1 | unit/s | Concrete Screeder, owned |
| 2 | unit/s | Concrete Vibrator (3.50 hp, minimum), owned |
| 1 | unit/s | Crane Barge (319 GW, minimum) with 60T crane, owned |
| 3 | unit/s | Crawler Crane (30T, minimum), 1-owned, 2-owned/leased |
| 1 | unit/s | Pile Hammer (Diesel, 7,500 kg.m.), owned |
| 1 | unit/s | Drop Hammer (2T, minimum), owned |
| 1 | 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 | Oxy/Acetylene Cutting Outfit, owned |
| 2 | unit/s | Payloader (80 hp, minimum), 1-owned, 1-owned/leased |
| 1 | unit/s | Plate Compactor (5hp, minimum), owned |
| 2 | unit/s | Road Grader (125hp, minimum), 1-owned, 1-owned/leased |
| 1 | unit/s | Road Roller (12.05T, vibratory, minimum), owned/leased |
| 1 | unit/s | Transit Mixer (5-6 cu.m. cap., minimum), owned/leased |
| 2 | unit/s | Water Truck (1,000 gal., minimum) with pump, owned |
| 3 | unit/s | Welding Machine (400 amp., minimum), owned |
| 1 | unit/s | Cargo Truck (5 Ton, 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) including stringent covid-19 protocols per PPA Engineering Circular No. 01-2020 and Construction Guidelines for Project Implementation during the period of public health emergency approved by PDCB and CIAP.

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

| | | |
|----|------|--------------------------------|
| 69 | pcs. | Hard Hats |
| 69 | pcs. | Gloves (rubberized) |
| 69 | pcs. | Safety Glasses/Goggles (clear) |
| 69 | pcs. | Long sleeve T-shirt |
| 6 | pcs. | Aprons |
| 12 | pcs. | Safety Belts |
| 69 | pcs. | Safety Shoes |
| 12 | pcs. | Life Lines |

Safety Devices

| | | |
|----|--------|--|
| 1 | lot | Barricades |
| 1 | lot | Warning signs |
| 2 | unit/s | Fire extinguisher |
| 1 | lot | Disinfection Booth with Footbath |
| 69 | no. | PCR Test for Covid-19 (Initial Testing) |
| 69 | no. | PCR Test for Covid-19 (Confirmatory Testing) |

| | | |
|-------------------------------|---|------------------|
| Medical and First Aid System | - | Twelve (12) 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.

PPA MEMORANDUM CIRCULAR
No. 012
Series of 2016
Attachment

Page 1 of 16

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

| Materials/Items of Work | Required Tests | Minimum Incremental Frequency of Tests |
|---|--|---|
| I. Construction of Pier/Wharf, Platform and Ramp | | |
| Structural Concrete (SC) | | |
| A Portland Cement | Quality Test | For every 2,000 bags (40kg) or fraction thereof |
| B Fine Aggregate | Quality Test for Grading, Elutriation (wash), Bulk Specific Gravity, Absorption, Mortar Strength, Soundness, Organic Impurities, Unit Weight, % Clay Lumps and Shale | For every 1,500 cubic meter or fraction thereof |
| C Coarse Aggregate | Quality Test for Grading, Bulk Specific Gravity, Absorption and Abrasion | For every 1,500 cubic meter or fraction thereof |
| D Water | Certificate from the Engineer or Quality Test for Density and Chloride Content | One per source |
| E Steel Bars | 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 |

PPA MEMORANDUM CIRCULAR
 No. 02
 Series of 2016
 Attachment

Page 2 of 18

| 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 Frang Bolt, Anchor Bolt | Physical Test Quality Test for Chemical Composition and Mechanical Properties | All units One per fabrication |

Page 3 of 10

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MPA MEMORANDUM CIRCULAR
No. 02
Series of 2010
Attachment

Page 4 of 10

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

PPA MEMORANDUM CIRCULAR
No. 02
Series of 2016
Attachment

Page 5 of 10

| 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/Learn 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) |

PPA MEMORANDUM CIRCULAR
No. 02
Series of 2016
Attachment

Page 8 of 20

| 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 (C.j) | | |
| 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 |

PPA MEMORANDUM CIRCULAR
No. 02
Series of 2018
Attachment

Page 7 of 18

| 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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PPA MEMORANDUM CIRCULAR
No. 02
Series of 2016
Attachment

Page 2 of 18

| 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 |

PPA MEMORANDUM CIRCULAR
No. 02
Series of 2016
Attachment

Page 8 of 18

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


PPA MEMORANDUM CIRCULAR
No. 02
Series of 2018
Attachment

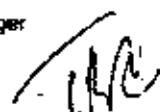
Page 10 of 18

| 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



MAY 15 2020



ENGINEERING CIRCULAR NO. 01 2020

**FOR : THE MANAGER, PCMD
ALL PORT MANAGERS
CONCERNED CONTRACTORS**

**FROM : THE ASSISTANT GENERAL MANAGER,
ENGINEERING OFFICE**

**SUBJECT : SAFETY GUIDELINES FOR THE IMPLEMENTATION OF
ALL PPA (CAPEX & RM) AND DOTr TOURISM AND
SOCIAL REFORM PROJECTS DURING THE COVID-19
PUBLIC HEALTH CRISIS**

Pursuant to the Proclamation No. 929, series of 2020 issued by President Rodrigo Roa Duterte, declaring a State of Calamity throughout the Philippines due to the Coronavirus Disease 2019 (COVID-19) and in view of the extended implementation of Enhanced Community Quarantine (ECQ) and General Community Quarantine (GCQ) in the identified areas, the following guidelines, in addition to the existing safety standards approved by the DOLE and also to the PPA Memorandum Circular No. 18-2020, are hereby directed to be implemented in all on-going PPA infrastructure projects including the DOTr Tourism and Social Reform projects:

1. Only persons from Twenty-One (21) to Fifty-Nine (59) years of age, without pre-existing health conditions, such as, but not limited to immunodeficiency, comorbidities or other health risk and who did not come in contact with someone with COVID-19 shall be allowed to be included in the workforce for areas under ECQ and GCQ.
2. The Contractor shall provide for their personnel/workers the necessary welfare facilities and amenities, such as employees' quarters for board and lodging for the project area covered by the ECQ and GCQ, otherwise, prior to deployment, prescribed procedures shall be conducted at every instance of re-entry.
3. Adequate food, potable drinking water, disinfectants shall be made available by the Contractors for their in-house personnel/worker during the period of ECQ/GCQ.
4. Compliance to social distancing, proper hygiene and mandatory wearing of face masks and other protective personal equipment shall be ensured for all on-going projects as precautionary measures to avoid and contain the spread of COVID-19 in the work place.

5. Field Offices, employees' quarters, bunkhouses and other common areas shall be maintained to ensure cleanliness and daily disinfection of said areas must be conducted accordingly.
6. Contractors shall provide disinfection facilities such as handwashing station, foot bath and others to be placed at various locations of all on-going projects.
7. Contractors shall ensure that their projects are in compliance with the DOLE D.O. No. 13 series of 1998. Personnel and workers shall be provided with the supply of vitamins particularly Vitamin C and other over the counter medicines, quarantine facilities and oxygen tanks for emergency purposes.
8. Safety Officer of the Contractor shall regularly conduct briefing on the information regarding COVID-19 construction protocols on top of other safety requirements.
9. As preventive measure, daily monitoring of the pre and post work health conditions of workers shall be undertaken by the Contractor's health/safety officer particularly the temperature, blood pressure and exposure monitoring. Personnel with symptoms relative to COVID-19 shall be immediately isolated and quarantined for fourteen (14) days and if necessary, brought to the DOH COVID-19 treatment facility under strict confidentiality/privacy.
10. Daily health monitoring report shall be prepared by the Safety Officer and to be submitted to the assigned PPA Project Engineer/Port Engineer.
11. Proper protocols in accordance with the DTI and DOLE Interim Guidelines and the Local Government Unit policy on work place prevention and control of COVID-19 shall likewise be strictly observed.
12. Daily work activities shall be under strict monitoring by the Safety Officer to ensure compliance with safety standards and quarantine protocols.
13. Sharing of construction and office equipment is discouraged. However, if it cannot be avoided, disinfection of equipment in between transfer shall be conducted.
14. All materials and equipment brought inside the project site shall be disinfected, as much as possible.
15. Non-essential personnel, visitors and general public shall be restricted to enter the project site. All personnel entering the construction site premises on a temporary basis (e.g. Delivery truck drivers, inspectors, etc) shall be properly logged and checked for symptoms. Gatherings, liquors, and/or merry-making are strictly prohibited in the project site.



16. PPA Port/Resident Engineer shall ensure strict compliance to DOLE D.O. No. 13, series of 1998 and implementation of the mentioned COVID -19 precautionary measures in the work place.
17. Clustered and staggered deployment of employees within the construction site shall be observed to minimize personnel contact.
18. Contractors shall submit to the implementing unit the inventory of work activities including the proposed sequencing of activities to be followed and undertaken to comply to the required social distancing. Break times shall be conducted in a staggered manner.

For strict compliance.


CONSTANTE T. FARINAS, JR.

- C - MEMO*
- ① *pls. forward a set/copies of these Guidelines to each DM for their info, reference and guidance*
 - ② *CHMB file/inf*



June 29, 2020

MEMORANDUM

FOR : The Assistant General Manager for Engineering
Office of the Assistant General Manager for Engineering

FROM : The Manager
Internal Audit Department (IAD)

SUBJECT : Construction Guidelines for Project Implementation during the period of Public Health Emergency

Last June 16, 2020, we received thru email the letter from the Construction Industry Authority of the Philippines (CIAP) to the General Manager dated June 15, 2020 (copy attached) regarding the above subject. CIAP is requesting PPA to assist them in disseminating the above Construction Guidelines to our stakeholders including contractors and implementing units.

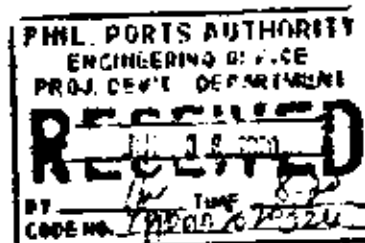
Relative to this, IAD being the implementing unit for Constructors Performance Evaluation System (CPES) and relative to its implementation, may we seek assistance from your good office in disseminating the attached guidelines to the PPA Engineering Units and PPA constructors.

Thank you for your kind consideration


VENICIUS V. VILLASEÑOR

Cc: The General Manager

Attachment/s: As stated





Construction Guidelines for Project Implementation during the period of Public Health Emergency

Background

The President declared a state of public health emergency through Presidential Proclamation No. 922 s. 2020 to address the Corona Virus Disease (COVID-19) threat, subsequently placing the whole of Luzon under Enhanced Community Quarantine (ECQ) on 16 March 2020.

The Inter-Agency Task Force for the Management of Emerging Infectious Diseases (IATF), based on its risk assessment recommended the extension of the ECQ in high risk geographic areas in Luzon and the imposition of the ECQ in some high risk areas in Visayas and Mindanao, while proposing a General Community Quarantine (GCQ) in all low risk and moderate risk areas in the country from 1 May 2020 to 15 May 2020.

Different parts of the country are expected to progress through various levels of public health emergency and declared as high, medium, or low risk areas depending on the prevalence of COVID-19 cases and related statistics, thereby placing them under corresponding community quarantine status.

The construction industry which contributes about 4.2 million workers to the country's labor force, in anticipation of the lifting of ECQ, is getting ready to return to work and would like to ensure the safety and welfare of people, most especially those of its employees/workers. Construction industry players would like to focus on preventing the occurrence of and controlling the spread of the virus in the workplace, mindful that a single case of COVID-19 can lead to an interruption, if not total work stoppage.

The global pandemic has affected livelihoods, lifestyles and industries including the construction industry which relies heavily on human resources. Total work stoppage from the time ECQ was declared has had debilitating effects not just on workers who are mostly project based and therefore paid on a daily basis but on contractors as well, majority of whom or 88% are small and medium enterprises (SMEs).

The Philippine Domestic Construction Board (PDCB), an implementing board of the Construction Industry Authority of the Philippines (CIAP), mandated to formulate policies, plans, programs, and strategies for the development of the Philippine construction industry organized a Technical Working Group (TWG) comprised of representatives from contractors of varying sizes and suppliers coming from Luzon, Visayas and Mindanao to draft the proposed protocols for the industry in preparation for resumption of construction work in areas under quarantine. The TWG drafted the "Construction Guidelines for Project Implementation during the period of Public Health Emergency" as a reference for contractors and implementing agencies, to ensure viability of projects and protection from and spread of the corona virus.

The TWG considered four (4) major components of the project cycle, namely: Materials, Manpower, Machinery and Money or the 4Ms of construction in creating the

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guidelines. These were developed considering SME contractors which employ the biggest chunk of the industry's labor workforce and large contractors involved in both public and private infrastructure projects as well as vertical construction. The guidelines will give pointers in managing their human resources at this critical time but will likewise give important directions to contractors in managing their business not just for survival but to be able to contribute to the country's economic recovery program.

The TWG is presenting options or courses of actions which contractors may consider depending on applicability to the project's unique characteristics while maintaining minimum requirements based on guidelines by government authorities such as the IATF Omnibus Guidelines for the Implementation of Community Quarantine in the Philippines, Department of Trade and Industry (DTI) and Department of Labor and Employment (DOLE) Interim Guidelines on Workplace Prevention and Control of COVID-19, and DOH Department Memorandum No. 2020-220, Interim Guidelines on the Return-to-Work.

These guidelines are subject to periodic review to better respond to developments and ensure workers health and protection as well as compliance with government regulations.

Purpose

The guidelines will set key principles and minimum requirements that define responsible, healthy and safe operations for construction related operations under COVID-19 and ensure the survival of business as well as the protection of workers.

Scope / Coverage

The guidelines will include prevention, detection, and rapid response measures designed to achieve the principles above while maintaining business continuity across the construction industry.

Policy Content / Guidelines

Materials

1. Deliveries

1. All equipment and material deliveries must be carefully planned and monitored.
2. Transition and delivery zones are identified and limited to select personnel, i.e., receivers and deliverers.
 - 2.1. Transition personnel are regularly monitored, always provided required Personal Protective Equipment (PPEs) and may be included for optional testing.
 - 2.2. Social distancing and other protocols by the Department of Health (DOH) should be followed.
3. As much as possible, cargo is unloaded only by the receivers, while the deliverers do not leave their vehicles. If the receivers are not enough to unload the cargo, the deliverers must unload while the receiver has to wait at a secured distance until completed.

4. All cargo should undergo proper disinfection procedures before use. Likewise, involved staff should also be properly disinfected before entering the jobsite.
- 4.1. Materials, which are exposed to the sun, such as concrete and gravel, need not be disinfected.

Manpower

i. Awareness and Communication

1. Active communication between the workers, safety officers (as specified under Section 14 of R.A. 11058 and its Implementing Rules and Regulations (IRR) as specified in DOLE D.O. 198 S. 2018), site supervisors, and management is advised in planning and implementing the protocols.
 - 1.1. All languages and dialects should be accounted for to ensure proper communication.
2. Infographics (may adopt DOH's), signages, and posters on health and safety measures (see Annex A) must be posted at entry points and strategic areas:
 - 2.1. Daily updates on the latest developments.
 - 2.2. Self-screening measures.
 - 2.3. COVID-19 Hotline.
3. As much as possible, all workers should exercise the practices for reducing the risk of transmission, and proper hygiene as identified by the DOH:
 - 3.1. Social distancing (at least one (1) meter distance from next person).
 - 3.2. Proper handwashing using anti-bacterial soap (or use alcohol-based hand sanitizer when unavailable).
 - 3.3. Avoid contact with own eyes, nose, and mouth.
 - 3.4. Prohibit spitting.
 - 3.5. Covering of mouth with tissue or arm (if tissue is unavailable) when sneezing or coughing.
 - 3.6. Use and remove PPE with care.
 - 3.7. Do not share personal belongings such as phones, pens, PPEs.
 - 3.8. Avoid physical greetings (e.g. handshakes, hugs).
4. All workers' status on-site and off-site, are properly noted at all times by the safety officers.
 - 4.1. Fit to work
 - 4.2. Sick
 - 4.3. High temperature
 - 4.4. Other conditions
5. An acceptable level of health evaluation is properly communicated between new hires and management.
6. All workers would need to provide their location or place of residence prior to working. This is to help create a proper algorithm for contact tracing.
 - 6.1. Additionally, workers coming from COVID-19 hotspots would need to be identified.
7. Quarantined workers should also be kept track of under strict confidentiality and privacy.

ii. Clearing for Return to Work

1. Stringent qualification criteria for employees/workers:

- 1.1. Must be 21 to 59-year-old, without pre-existing health conditions, such as, but not limited to, immunodeficiency, comorbidities, or other health risks, including any person who resides with the aforementioned.
- 1.2. Employees or consultants who are 60-year-old or above may be part of the workforce for construction projects as may be allowed under General Community Quarantine (GCQ) and ECQ guidelines under Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines dated 15 May 2020 which states that those aged 60 and above may be allowed to work in permitted industries and offices.
- 1.3. Must have no COVID 19 symptoms.
2. Screening and entry at construction site. Item 4, Section 8 of the Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines, dated 15 May 2020, states that "Compliance with Joint DTI-DOLE Return-to-Work Guidelines and DOH Return-to-Work Guidelines shall be considered sufficient compliance with minimum health standards. In no case shall the testing of all returning workers be construed as a condition precedent for his/her return." The most important screening step is checking all returning workers for symptoms within the last 14 days and excluding anyone who is symptomatic. (Annex B) Contractors have the option to test workers for COVID-19 thru DOH prescribed testing protocols to determine if there is asymptomatic transmission.
 - 2.1. The Human Resource Department should undertake daily health pre-screening (see Annexes C & D – DOLE Work Resumption Protocol & pre-screening sample form). Returning employees/workers should be made aware of giving accurate information as specified in RA 11332.
 - 2.2. All returning employees/workers must declare (via SMS) any recent travel history to or residence in an area with a reported case of local transmission of COVID-19 over the 14-days prior to entry.
 - 2.3. Returning workers that do not show any symptoms will be quarantined for 14 days within the jobsite and will be allowed to work under a zoned or grouped area.
 - 2.4. Those who have been living/confined in the barracks during ECQ/GCQ period for at least 14 days and with no symptoms, will be allowed to work immediately.
 - 2.5. Management should have an understanding and plan on how the workers travel to and from the jobsites.
 - 2.6. A heightened gate entrance screening protocol (see Annex E – Sample Protocol for Screening Employees and Visitors per DTI-DOLE Interim Guidelines) with the use of non-contact thermal scanners on ALL personnel upon entry to construction premises will be implemented. He/She must declare recent possible exposure to confirmed COVID-19 cases, including travel history to or residence in an area with reported local transmission of COVID-19 disease. The individual should also attest that they are not experiencing the following symptoms: (see Annex F – Daily COVID-19 Health Checklist Form)
 - 2.6.1. Fever
 - 2.6.2. Cough
 - 2.6.3. Shortness of breath
 - 2.6.4. Colds
 - 2.6.5. Sore throat

- 2.6.6. Runny nose
- 2.6.7. Nasal congestion
- 2.6.8. Muscle pains
- 2.6.9. Headache
- 2.6.10. Difficulty of breathing
- 2.6.11. Diarrhea
- 2.6.12. Loss of sense of smell
- 2.6.13. Loss of sense of taste
- 2.7. Security guard or assigned personnel/ safety engineers on duty will then refer these personnel to the Safety and Health Personnel, who will then conduct the DOH Decision Tool for COVID-19 Assessment.
- 2.8. Employers shall provide the DOLE through its Regional Office copy furnished DOH, monthly report of illness, diseases and injuries utilizing the DOLE Work Accident/Illness Report Form (WAIR) (see Annex G).
- 3. Suspected Cases (Possible cases of COVID-19)
 - 3.1. Any individual exhibiting flu-like symptoms should not report to work. Instead, they should do the following:
 - 3.1.1. Self-isolate, alert their safety officers or other applicable authorities.
 - 3.1.2. Contact proper health authorities for additional guidance.
 - 3.2. Employees/workers, who had the COVID-19 virus, should do the following before reporting to work:
 - 3.2.1. Fulfill the adequate time for self-quarantining as recommended by the DOH.
 - 3.2.2. Test negative for COVID-19.
 - 3.2.3. Receive proper medical clearance, before reporting to work.
 - 3.3. In the event of a worker contracting COVID-19 while working, the management should do the following:
 - 3.3.1. Isolate the worker immediately in a separate well-ventilated holding area (or in site isolation room) in the workplace, away from other workers.
 - 3.3.2. Contact local government and health authorities.
 - 3.3.3. Gather records of all people who have worked with the infected worker, who tested positive within the past four weeks.
 - 3.3.4. Gather information on those who have been in location or shared equipment with the person.
 - 3.3.5. Provide COVID-19 testing to all workers, who have been working closely with the infected individual.
 - 3.3.6. Be ready to present the information to the appropriate authorities.
 - 3.3.7. Inform the wider workforce of the situation while protecting the privacy of the individual.
 - 3.3.8. Clean and disinfect all site surfaces and equipment.
 - 3.3.9. Follow any additional directions from local government and health authorities.
 - 3.4. For sensor personnel, who are working in multiple jobsites, they are expected to self-quarantine for at least 14 days, if there has been a breach in one of their jobsites.
 - 3.5. The safety officer should have a knowledge on the proximate hospitals or quarantine facilities to ensure that in the event of a COVID-19 incident, workers can be given proper healthcare.

III. Monitoring

1. Health Checks
 - 1.1. Regular monitoring of personnel's health, especially for COVID-19 symptoms (e.g., mandatory regular no contact temperature check).
 - 1.2. Day to day monitoring of personnel's health.
2. Workers Hygiene
 - 2.1. Constant reminder on proper coughing etiquette.
3. Limit number of Work Personnel
 - 3.1. Limited mobilization of personnel and minimized skeletal staff.

IV. Proper Work Attire

1. All workers must wear the prescribed clothing of the DOLE-OSHC:
 - 1.1. Shirt with sleeves
 - 1.2. Pants
 - 1.3. Closed-toe boots
 - 1.4. Hard hat
 - 1.5. High visibility vest
 - 1.6. Other necessary Personal Protective Equipment (i.e. face masks, gloves, goggles, face shields, etc.) shall be prescribed based on specific characteristics of project.
2. As per the DOH, all workers are expected to wear proper face masks.

V. Social Distancing and Precautionary Measures

1. Social distancing should be observed at the construction site and in the office:
 - 1.1. All workers should respect social distancing guidelines, as much as possible.
2. Provision for transport compliant with social distancing requirements.
3. Provision of On-/Near-Site accommodations/barracks, where available.
 - 3.1. Enough space should be provided for every employees/worker staying in the barracks to ensure that social distancing (at least 50% reduction in density of people) are adequately implemented. This can be achieved either by providing additional space/facilities or by having occupants work (and sleep) in shifts.
 - 3.2. Segregate employees/workers who are coming back to work from those who originally stayed in the barracks during the ECQ period.
 - 3.3. Barracks should have at least one (1) meter of physical distance from each occupant and/or provision of a physical barrier in between occupants.
 - 3.4. Should be well ventilated / windows opened to allow fresh air circulation.
4. Provision of dedicated point-to-point shuttle service (residence-workplace-residence and compliant with social distancing).
5. Observe social distancing (e.g., no sharing of workspaces, staggered lunch breaks, use of large conference rooms only) and hygiene measures (e.g., provide hand washing and disinfection stations, mandatory use of face masks) in workplaces, shuttles and accommodations.
 - 5.1. Split/alternating shifts are encouraged to avoid extensive intermingling.
 - 5.2. Breaks should be staggered to limit the number of people in proximity with each other.

- 5.3. Individuals are expected to clean up their own areas after eating with proper disinfectants.
- 5.4. Limit the number of people operating or occupying freight elevators.
- 5.5. Designate smoking area:
 - 5.5.1. Smokers/vapers must use designated area or do so off-site and butts are to be placed in the designated receptacle. Hands must be washed before and after smoking.
 - 5.5.2. Stand so that smoke or vapor produced is not going into another person's breathing zone.
- 5.6. Site meetings:
 - 5.6.1. Only absolutely necessary meeting participants should attend.
 - 5.6.2. Attendees should be one (1) meter apart from each other.
 - 5.6.3. Rooms should be well ventilated / windows opened to allow fresh air circulation.
 - 5.6.4. Hold meetings in open areas where possible.
 - 5.6.5. Conduct toolbox meetings in wide open spaces to enable workers to keep the required physical distance of at least one (1) meter. (see Annex H).
 - 5.6.6. Meetings are to be held through teleconferencing or videoconferencing, where possible.

VI. Site Operations / Construction Work Site

- 1. Access and Movement to/from Construction Site
 - 1.1. If possible, establish one-way staircases and walkways to minimize workers' contact.
 - 1.2. Management can look up possible decontamination chambers (e.g. swimming pool grade-chlorine).
 - 1.3. All people entering and exiting the workplace should be registered, for easier contact tracing in the event of an outbreak.
 - 1.4. All non-essential workers are prohibited from entering the jobsite.
- 2. Limiting and Removing Internal touch points areas.
- 3. Compartmentalization
 - 3.1. If possible, divide the construction site into zones or other methods to keep workers physically separated. This will promote social distancing and will make containment of possible outbreak easier.
 - 3.1.1. Limit on the number of people per zone is advised.
 - 3.1.2. Management can consider reducing workforce in the jobsite.
- 4. Construction Site Cleaning
 - 4.1. Regular disinfection of workplaces, shuttles, and accommodations.
 - 4.2. All offices and jobsites should disinfect the following at least twice per day:
 - 4.2.1. Door handles
 - 4.2.2. Railings
 - 4.2.3. Ladders
 - 4.2.4. Switches
 - 4.2.5. Controls
 - 4.2.6. Shared equipment
 - 4.2.7. Common and eating areas
 - 4.2.8. Personal workstations

- 4.3. Hands and common tools/equipment are cleaned or disinfected after each task.
- 4.4. Awareness on location of commonly used items
5. All offices and jobsites should implement additional cleaning measures of common areas as recommended by the DOH.
6. Management can look up possible decontamination chambers (e.g. chlorine, iodine, betadine, potassium persulfate).
 - 6.1. Demisting only decontaminates the surface, thus the need for PPEs.
 - 6.2. Suggested additional sanitary measures to be implemented/installed on site but are not limited to the following:
 - 6.2.1. Water stations
 - 6.2.2. Proper handwashing areas and hand washing protocol.
 - 6.2.3. Alcohol-based hand sanitizer shall be provided in all department areas, entrances, canteens, beside hand punch machines and other facilities.
 - 6.2.4. Disinfectant wiping products.
 - 6.2.5. Footwear disinfection treatment units (foot baths) before entering site premises or facilities (staff houses, barracks, canteens/mess halls, site offices and others).
7. Limit and remove internal touch point areas (e.g. coffee machines, water fountains, common pens). If possible, also remove doors/ door handles for jobsites.
8. A proper waste and disposal area must be provided, as well as proper disposal of contaminated products.

VII. Additional Guidelines for Vertical and Horizontal Projects

1. If possible, all construction workers are to be housed in either on-site barracks, or off-site barracks. This would make monitoring of workers' activities easier.
 - 1.1. All workers must use the same vehicles they came into work in, if returning to the off-site barracks.
 - 1.2. All vehicles would need to be disinfected, before being ready for use the next day.
2. Management can also look into using the floors of buildings, as barracks, with proper permission of the owners.

Machinery

1. All equipment deliveries must be carefully planned, monitored and managed to avoid the risk of COVID-19 transmission.
2. All delivered equipment must be cleaned and disinfected before use.
3. Assign regular worker to use the equipment, if possible. If sharing cannot be prevented, take precautions and follow the cleaning guide before and after each use.
4. Clean equipment before and after each day's work with a disinfectant, concentrating on points of contact such as handles.
5. If equipment needs to be transferred to other construction sites, the following action must be taken into considerations:
 - 5.1. Plan, monitor and manage the transfer of equipment.
 - 5.2. Equipment should be disinfected before transporting.

- 5.3. Transporting driver must be recorded including the assistant.
- 5.4. At the delivery site, equipment should be properly endorsed.
- 5.5. Once the equipment is received at the project site, number 2, 3 and 4 must be done.

Money

Contracting parties need to discuss, before resumption or start of work, contract provisions on: Payments, Variations and Timelines considering the effects of current government health and safety standards that have to be complied with to prevent the spread of the coronavirus pandemic and ensure workers' protection from the contagious disease. Contractors' concern on cash flow, price escalation, time extensions and productivity will need to be established and agreed with project owners. Contractors need to devise project implementation plan aligned with government approved health and safety protocols.

Contractors need to familiarize themselves with Republic Act (R.A.) 11469 or Bayanihan to Heal As One Act; R.A. 11058 and its IRR as specified in DOLE D.O. 198 S. 2018, and DOLE's D.O. 13 and ensure contracts are aligned with these landmark regulations. For projects with signed contracts before the onset of the coronavirus pandemic, contractors need to check on DOLE's guidelines on drafting new contracts so provisions on employment details, i.e. accommodations, meals, etc. can be included as these are expected to be heavily affected by new guidelines on health and safety. Company code of disciplines may likewise need to be reviewed and re-written to consider pandemic guidelines and ensure employees/workers' full support and cooperation.

Pursuant to Section 21 of DOLE D.O. 198, s. 2018, *"The total cost of implementing a OSH program shall be an integral part of the operations cost. It shall be a separate pay item in construction and in all contracting or subcontracting arrangements."* to cover the cost inflicted during this Public Health Emergency. These costs include, but are not limited, to testing kits; personal protective equipment; workers' barracks; quarantine facilities; isolation rooms; disinfectants; sanitation equipment and facilities; and other expenses relative to compliance with safety and health standards during construction.

Contractors should conduct periodic audits (frequency to be determined based on a project scale and scope) to verify that the appropriate measures have been implemented and are maintained.

The site supervisors and safety officers are expected to conduct daily audits, and safety reports to management in order to make sure that the appropriate measures are implemented and followed.

Construction companies should expect to deal with heightened safety and health guidelines until such time that the pandemic has fully been eradicated, and:

1. Analyze contract requirements;
2. Comply with contractual notice requirements;
3. Adapt and Adjust schedule;
4. Coordinate and Cooperate with all participants; and

5. Document everything.

Risk Assessment and Response:

1. All contractors would need to guarantee the minimum level of standards to protect the health of the workers engaged in the construction sites.
2. Before any activity is resumed, all hazards, due to the halting of work, must be reviewed and controlled.
 - 2.1. Workers involved should have proper understanding of the operations and environment condition checking
3. An integrated continuity plan should also be provided in the event of a partial or complete shutdown of jobsite or if jobsite operations are severely limited.
4. All contractors should complete an integrated continuity plan to respond to partial or complete shutdown of construction sites or in the case of a severe limitation of site operations.

The COVID-19 pandemic affects working hours and earnings in all businesses, globally. However, the construction industry is unique with respect to the COVID-19 because construction contracts typically contain provisions about time for performance and fees for failing to perform on time. There is no question that all participants in the construction industry have experienced, and will continue to experience, impacts on their operations because of COVID-19 and experts say the fallout is one more factor poised to affect construction firms. These impacts include, among others, schedule delays, workforce disruptions, equipment and supply chain disruptions, reduced productivity due to on site health and safety measures (e.g., social distancing, staggering of work, enhanced sanitary measures, etc.), permit delays or restrictions on new permits, and financing restrictions or cash flow shortages.

Therefore, it is critical that construction companies be proactive rather than reactive in dealing with the COVID-19 and it is highly recommended that they take the following steps with respect to the coronavirus:

1. Define – identify the company's main vulnerabilities (convene a meeting with senior management and decision-makers to identify potential impacts on the company).
2. Assess – understand if and how the company is prepared to deal with the company's main vulnerabilities (review any existing plans and procedures to ensure they are current and begin preparing business continuity and crisis management plans and procedures aimed at minimizing potential impacts on the company).
3. Implement and Manage – ensure the company's plans and procedures work (work with senior management and decision-makers to establish and embed response and recovery arrangements and confirm senior management and decision-makers understand their roles and support how the plans and procedures will be used).
4. Communicate and Remain Vigilant – ensure the company's teams are informed (assign clear responsibilities for internal and external communications).

This pandemic was not foreseeable and unfortunately, its duration and fallout remain uncertain. What is certain is that the world is transitioning. Being prepared for this will be essential to managing the outcome and minimizing negative impacts.

Monitoring

DTI-CIAP is revitalizing its Joint Administrative Order No. 01, S. 2011 with DOLE, DPWH, DILG and the Professional Regulation Commission (PRC) to strengthen coordination and enhance the implementation of the Construction Guidelines on Project Implementation for the period of Public Health Emergency, DOLE D.O. 13 and R.A. 11058 and its IRR as specified in DOLE D.O. 198 S. 2018, and specifically, enforce strict monitoring of construction activities.

The DOLE shall refer to the Philippine Contractors Accreditation Board (PCAB) its findings, after due process, on any act or omission committed by construction contractors in violation of labor standards, safety rules and regulations and other pertinent policies.

Effectivity

These guidelines shall take effect after approval by the CIAP Board and posting in the official gazette (www.officialgazette.gov.ph) and CIAP website (www.ciap.dti.gov.ph).

References

1. WHO – Getting your workplace ready for COVID-19, 19 March 2020
2. Philippines – Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines as of 15 May 2020
3. Philippines – COVID-19 Protocols for Construction Sites Workers Safety and Security Version 3 by Philippine Constructors Association (PCA) as of 25 April 2020
4. Australia – Building and Construction Industry: Minimizing the Risk and exposure to COVID-19 as of 9 April 2020
5. Canada – COVID-19 – Standardized Protocols for all Canadian Construction Sites Version 4
6. New Zealand COVID-19: V&H Construction Protocols Version 2
7. New Zealand – COVID-19 Health and Safety Protocols for New Zealand Residential Construction Sites Version 3, 22 April 2020
8. DOH – Administrative Order No. 2020-015, "Guidelines on the Risk-Based Public Health Standards for COVID-19 Mitigation"
9. DOH Department Memorandum No. 2020-151, Interim Guidelines on Expanded Testing for COVID-19, reiterated under DOH D.M. No. 2020-174
10. DOH D.M. No. 2020-0220, s. 2020, Interim Guidelines on the Return-to-Work as of 11 May 2020
11. DPWH D.O. 39, S. 2020, Revised Construction Safety Guidelines for the Implementation of Infrastructure Projects during the COVID-19 Public Health Crisis, repealing D.O. No. 35, S. 2020
12. DTI - DOLE Interim Guidelines on Workplace Prevention and Control of COVID-19
13. DTI and DOLE Webinar on 8 May 2020
14. DOLE Labor Advisory No. 18, S. 2020, Guidelines on the Cost of COVID-19 Prevention and Control Measures, 16 May 2020
15. DOLE Department Order 13: Guidelines Governing Occupational Safety and Health in the Construction Industry
16. R.A.11058, "An Act Strengthening Compliance with Occupational Safety and Health Standards and Providing Penalties for Violations thereof" and its Implementing Rules and Regulations as specified in DOLE D.O. 198 S. 2018
17. DOLE-DPWH-DTI-DILG-PRC Joint Administrative Order No. 1, Series of 2011

18. *EEI Guidelines on the COVID-19 Prevention and Control at the Workplace (Alert level code RED sub-level 2)*
19. *DMCI Work Resumption Protocols as of 22 April 2020*

Acknowledgment

The Construction Guidelines for Project Implementation during the period of Public Health Emergency would not have been possible without the patience, diligence and selfless dedication of the following members of the Technical Working Group (TWG) who religiously participated in the deliberations and drafting work:

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15 June 2020

Atty. JAY DANIEL R. SANTIAGO
General Manager
Philippines Ports Authority (PPA)
Bonifacio Drive, South Harbor
Port Area, Manila

Subject: Construction Guidelines for Project Implementation during the period of Public Health Emergency

Dear Atty. Santiago:

Greetings!

In line with the President's declaration of Public Health Emergency in the country to address COVID-19, the Philippine Domestic Construction Board (PDCB), an implementing board of the Construction Industry Authority of the Philippines (CIAP), mandated to formulate policies, plans, programs, and strategies for the development of the Philippine construction industry organized a Technical Working Group (TWG) comprised of representatives from contractors of varying sizes and suppliers coming from Luzon, Visayas and Mindanao to formulate protocols for the industry for resumption of construction work in areas under quarantine.

As a result, we have developed the "Construction Guidelines for Project Implementation during the period of Public Health Emergency" to serve as reference for contractors and implementing agencies, to ensure viability of projects and protection from and spread of the coronavirus. The Guidelines were approved by the PDCB and CIAP Board on May 19 and June 2020, respectively.

These guidelines set key principles and minimum requirements that define responsible, healthy and safe operations for construction-related operations under COVID-19 and ensure the survival of business as well as the protection of workers. These guidelines include prevention, detection, and rapid response measures designed to achieve the principles above while maintaining business continuity across the construction industry.

These also present options or courses of actions which contractors may consider depending on applicability to the project's unique characteristics while maintaining minimum requirements based on guidelines by government authorities such as the IATF Omnibus Guidelines for the Implementation of Community Quarantine in the Philippines, Department of Trade and Industry (DTI) and Department of Labor and Employment (DOLE) Interim Guidelines on Workplace Prevention and Control of COVID-19, and DOH Department Memorandum No. 2020-220, Interim Guidelines on the Return-to-Work.

In this regard, may we respectfully furnish you with the copy of the approved Construction Guidelines (copy attached), for your reference. Further, may we also

PHILIPPINE DOMESTIC CONSTRUCTION BOARD
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request your kind assistance in disseminating these Construction Guidelines among your stakeholders, including contractors and implementing agencies.

You may also visit CIAP's website at www.ciap.dti.gov.ph for the latest updates and version of these Construction Guidelines.

For questions and clarifications, kindly email PODCB Secretariat at podcb@dti.gov.ph.
Thank you for your usual support.

Sincerely,



DORIS U. GACHO

Executive Director, PODCB 

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); or
- ☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and
- ☐ (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and
- ☐ (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

Technical Documents

- ☐ (e) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; and
- ☐ (f) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules; and
- ☐ (g) Philippine Contractors Accreditation Board (PCAB) License; or
Special PCAB License in case of Joint Ventures;
and registration for the type and cost of the contract to be bid; and
- ☐ (h) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;
or
Original copy of Notarized Bid Securing Declaration; and
- ☐ (i) 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
- ☐ (j) Original duly signed Omnibus Sworn Statement (OSS);
and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- ☐ (k) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the 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; and
- ☐ (l) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

Class "B" Documents

- ☐ (m) 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

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

Other documentary requirements under RA No. 9184

- ☐ (o) Original of duly signed Bid Prices in the Bill of Quantities; and
- ☐ (p) 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
- ☐ (q) 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: **MRRP – Port Facilities (Civil Works), Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur,**
- 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 included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and

¹ currently based on GPPB Resolution No. 09-2020

- 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 **MRRP – Port Facilities (Civil Works), Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur 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 ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS,
INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED, WHETHER SIMILAR OR NOT SIMILAR IN NATURE**

| Name of the Contract or Title Of the Project 1] | Owner's Name and Address | Nature/ Scope of Work 2] | Contractor's Role (in percentage) 3] | Total Contract Value At | | | Date of Award 5] | Value of Outstanding Works | Estimated Time of Completion | % of Accomplishment | | Contract Duration 5] | |
|---|--------------------------|-----------------------------|---|-------------------------|--------------------|---|---------------------|----------------------------|------------------------------|---------------------|--------|-------------------------|-----------|
| | | | | Award | Project Completion | Escalated Value to Present Prices 4] | | | | Planned | Actual | Start | Completed |
| 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 or defined in the contract entered/executed by the parties
- 2] With special reference to the Scope of Works as described/enumerated in the advertised Invitation To Bid.
- 3] Indicate 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. Specify the "Escalation Factor" used to escalate the Contract Value from completion date to the advertisement date of the Invitation to Bid per section 23.11.2 (3) of R.A. 9184.
- 5] State Month and Year.

This Statement shall be supported by:

- a) Notice of Award and/or Contract
- b) Notice to Proceed

Name of Firm/Applicant

Authorized Signing Official

Date

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

| Name of the Contract or Title Of the Project | Owner's Name and Address | Nature/Scope of Work | Contractor's Role and Percentage Of Participation | Total Contract Value At | | | Date of Award | Value of Outstanding Works | Contract Duration | |
|--|--------------------------|----------------------|---|-------------------------|------------|-----------------------------------|---------------|----------------------------|-------------------|-----------|
| | | | | Award | Completion | Escalated Value to Present Prices | | | Start | Completed |
| | | | | | | | | | | |

NOTE :

1. The prospective bidder must have completed an SLCC that is similar to the contract to be bid, and whose value, adjusted to current prices using the PSA consumer price indices, must be at least fifty percent (50%) of the ABC to be bid.
2. This Statement shall be supported by:
 - a. Notice of Award and / or Notice to Proceed.
 - b. Project Owner's Certificate of Final acceptance issued by the owner other than the Contractor or Constructors Performance Evaluation System (CPES) Final Rating, which must be at least satisfactory.

Name of Firm/Applicant

Authorized Signing Official

Date

EXPERIENCE RECORD ON SIMILARLY COMPLETED PROJECTS

| Similar Major Categories of Work 1] | Unit of Measure | Quantity | | | | | Unit of Measure | Quantity |
|--|-----------------|----------|----------------------|----------------------|----------------------|----------------------|-----------------|----------|
| | | | Title of the Project | Title of the Project | Title of the Project | Title of the Project | | |
| 1. RC Pile Driving Works (Off-shore) | l.m. | 419 | | | | | | |
| 2. Reinforced Concrete Works | cu.m. | 339 | | | | | | |
| 3. Offshore Rockworks (50-1,000kg./pc.) | cu.m. | 6,653 | | | | | | |
| 4. Placing of Fill Materials (Reclamation) | cu.m. | 18,054 | | | | | | |
| 5. Construction of Portland Cement Concrete Pavement | sq.m. | 4,386 | | | | | | |
| 6. Building Construction (PTB/Shed) | sq.m. | 311 | | | | | | |

NOTE: 1] Submit the Certificate of Completion/Certificate of Acceptance by the project owner, Final Recapitulation/Bill of Quantities and/or Constructor Performance Evaluation System (CPES) ratings, 1st, 2nd & Final visit (if applicable). Projects with no Certificate of Completion/Acceptance and Recapitulation/Bill of Quantities shall not be considered.

2] The Owner's Certificate of Final Acceptance; or the Constructors Performance Evaluation Summary (CPES) Final Rating and/or the Certificate of Completion, must be satisfactory.

Name of Firm/Applicant

Authorized Signing Official

Date

(Revised Form : September 2012)

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.

LIST OF CONTRACTOR'S PERSONNEL

I hereby declare that the following key personnel enumerated below, with attached resume/bio-data, including valid PRC License, for the various positions / functions, are available for the project applied for:

| Position of Key Personnel | Name | No. of Key Personnel | Similar Experience in the Position (Years) 1) | Total Experience in the Position (Years) | Attachment(s) | Annex(es) |
|--|------|----------------------|--|--|---|-------------|
| Project Manager | | | | | PRC License (CE Preferred) Complete Qualification and Experience Data Certificate of Commitment | Annex " _ " |
| Project Engineer | | | | | PRC License (CE Preferred) Complete Qualification and Experience Data Certificate of Commitment | Annex " _ " |
| Project Architect | | | | | PRC License (Architect) Complete Qualification and Experience Data Certificate of Commitment | Annex " _ " |
| Materials Engineer | | | | | 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. Minimum qualification requirements: (work experience is similar in nature and complexity to the project to be bid with regard to Registration Particulars of the Contractor's License)

Project Manager - Five (5) years
Project Engineer - Three (3) years
Project Architect - Three (3) years
Foreman - Five (5) years

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

Name of Firm/Applicant
REVISED FORM (September 2012)

Authorized Signing Official

Date

LIST OF CONTRACTOR'S EQUIPMENT UNITS

I hereby declare that the following equipment listed below which are owned, leased or under purchase agreement are in good operating condition and are available for the duration of the project:

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

- 1] Indicate if owned or leased as listed in the Checklist/Bidding Documents. For owned equipment, as required, submit proof of ownership (i.e. deed of sale, sales invoice, official receipt). For 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. For newly purchased barge/tugboat, submit Deed of Sale together with an application for Marina Certificate of Ownership duly received/authenticated by Marina with corresponding valid Cargo Ship Safety Certificate. For leased equipment, submit duly notarized copy of lease contract together with a copy of the Marina Owner's (Lessor's) Certificate and valid Cargo Ship Safety Certificate.
- 2] The unit of each equipment shall be as indicated in the Checklist/Bidding Documents, 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).

Name of Firm/Applicant

Authorized Signing Official

Date

REVISED FORM (January 2011)

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 **MRRP – Port Facilities (Civil Works), Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur 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 **MRRP – Port Facilities (Civil Works), Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur 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 **MRRP – Port Facilities (Civil Works), Port of Marawi (MAA-Sector 8), Marawi City, Lanao del Sur 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, 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 : _____
Proposed Project Description : _____
Location : _____

MINIMUM SCOPE OF CONSTRUCTION METHODOLOGY

A. CONSTRUCTION OF BACK-UP AREA WITH STAIRLANDING (9,250 sq.m.)

1. Excavation of seabed up to required elevation (61 cu.m.)
2. Supply and place 2-layers of 1,000 kg. armour rocks (3,172 cu.m.)
3. Supply and place 50-100 kg. core rocks (10,134 cu.m.)
4. Supply and install geotextile fabric (4,470 sq.m.)
5. Supply and place sand and gravel fill (27,153 cu.m.)
6. Supply, spread and compact aggregate subbase course (8,995 cu.m.)
7. Supply and place 3,500 psi. concrete for retaining wall, curb, stairlanding, mooring block, ditch, lamp post foundation, handhole, pedestal post and ductbank (497 cu.m.)
8. Supply and install of steel reinforcement for retaining wall, curb, stairlanding, mooring block, ditch, lamp post foundation, handhole, pedestal post and ductbank (34,425 kgs.)
9. Supply, spread and compact aggregate base course (CBR >80, 1,834 cu.m.)
10. Construct portland cement concrete pavement (300mm thk.) including asphalt sealer and dowel bars (8,772 sq.m.)
11. Supply and place gravel bedding (20 cu.m.)
12. Supply and install mooring cleat including accessories (18 set)
13. Supply, deliver and install integrated solar street light (1 lot)
14. Supply and install catch drain manhole (4 set)
15. Construct steel main gate, perimeter fence and railings at stairlanding (1 lot)
16. Construct covered walkway including painting (1 lot)
17. Supply and lay reinforced concrete pipe (400mm diameter) for drainage system (73 l.m.)

B. CONSTRUCTION OF PASSENGER TERMINAL BUILDING

1. Construction of 1-storey Passenger Terminal Building (264.5 sq.m.)

C. CONSTRUCTION OF FISHPORT SHED

1. Construction of 1-storey Fishport Shed (357 sq.m.)

D. CONSTRUCTION OF FASTCRAFT BERTH AND RAMP

1. Supply, deliver and drive 400mm x 400mm x 21m PSC Test Piles (1 no.)
2. Supply and deliver to site 400mm x 400mm PSC Piles (816 l.m.)
3. Handle, pitch and drive 400mm x 400mm Vertical PSC Piles (420 l.m.)
4. Handle, pitch and drive 400mm x 400mm Batter PSC Piles (396 l.m.)
5. Chip/cut & dispose portion of newly driven PSC Piles up to required elevation (40 pcs)
6. Supply and install steel reinforcement for the superstructure (35,224 kg.)
7. Supply and place 3,500 psi concrete for the superstructure (181 cu.m.)
8. Supply and install construction joints (100mm x 100mm x 10mm angle bar, hot-dipped galvanized) including dowel bars (34 l.m.)

9. deliver to site and install Rubber Dock Fender (V500H x 1500L) including accessories (8 set)
10. Supply, deliver to site and install Mooring Bollard (25-Tons, T-head) including accessories (7 set)

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.

Signature
(Authorized Signing Official)

MANPOWER SCHEDULE

Name of Project : _____

Proposed 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 |
| Project Manager | | | | | | | | | | | | |
| Project Engineer | | | | | | | | | | | | |
| Project Architect | | | | | | | | | | | | |
| Materials Engineer | | | | | | | | | | | | |
| Construction Safety and Health Officer | | | | | | | | | | | | |
| Foreman | | | | | | | | | | | | |
| Specify other applicable positions, i.e.: | | | | | | | | | | | | |
| - Carpenter | | | | | | | | | | | | |
| - Steelman | | | | | | | | | | | | |
| - Mason | | | | | | | | | | | | |
| - Electrician | | | | | | | | | | | | |
| - Rigger | | | | | | | | | | | | |
| - Others | | | | | | | | | | | | |

Signature
(Authorized Signing Official)

EQUIPMENT UTILIZATION SCHEDULE

Name of Project : _____

Proposed Project Description : _____

Location : _____

[illegible]

Signature
(Authorized Signing Official)

Name of Project: _____

Proposed Project Description: _____

Location: _____

[illegible]

- 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.

Signature
(Authorized Signing Official)

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]