

Republic of the Philippines  
**PHILIPPINE PORTS AUTHORITY**  
PPA Building, Bonifacio Drive, South Harbor  
Port Area, Manila

**CONTRACT**  
**FOR THE PROCUREMENT OF TECHNICAL SERVICES FOR THE**  
**CONDUCT OF SOIL INVESTIGATION AT SELECTED PORTS (PACKAGE 8)**

KNOW ALL MEN BY THESE PRESENTS:

This Contract, made and entered into the 20 day of APR 20 2018 2018, in Manila, Philippines, by and between:

**PHILIPPINE PORTS AUTHORITY**, a government instrumentality created under Presidential Decree No. 857, as amended, with principal office at PPA Building, Bonifacio Drive, South Harbor, Port Area, Manila, represented herein by its duly authorized General Manager, **JAY DANIEL R. SANTIAGO**, and hereinafter referred to as **PPA**;

-and-

**REDENTOR S. JARDIN**, (TIN No. 110-828-274-000), of legal age, Filipino, married, with business and postal address at No. 37 Torquoise St., Northview 1-A Subd., Batasan Hills, Quezon City, doing business under the firm name/style of **R.S. JARDIN & ASSOCIATES**, duly registered with the Department of Trade and Industry, Quezon City, under Certificate of Registration No. 03706294, a copy of which is hereto attached and made an integral part hereof as Annex "A", hereinafter referred to as the "**CONSULTANT**".

**WITNESSETH:**

WHEREAS, in accordance with Republic Act No. 9184 and its 2016 Revised Implementing Rules and Regulations, PPA advertised and published in a newspaper of general nationwide circulation and posted on the PPA website and PhilGEPS, as well as in its bulletin board, a Request for Expression of Interest for the Procurement of Technical Services for the Conduct of Soil Investigation at Selected Ports (Package 8);

WHEREAS, the **CONSULTANT** and other eligible bidders/consultants submitted their respective bids for the foregoing consultancy project;

WHEREAS, after the opening of Technical and Financial Proposals on 06 and 14 February 2018, respectively, and the conduct of bid evaluation and required post-qualification, the bid submitted by the **CONSULTANT** was found to be the Highest Rated and Responsive Bid, in the amount of **THIRTY THREE MILLION ONE HUNDRED NINETY SIX THOUSAND SEVEN HUNDRED SEVENTY ONE AND 22/100 PESOS (P33,196,771.22)**, Philippine Currency, inclusive of taxes;

WHEREAS, pursuant to the Bids and Awards Committee (BAC) Head Office Engineering Projects-Consultancy Resolution No. CON 010-2018, award of Contract for the above-mentioned project was made to the **CONSULTANT** in a Notice of Award dated 28 February 2018, in the amount of **THIRTY THREE MILLION ONE HUNDRED NINETY SIX THOUSAND SEVEN HUNDRED SEVENTY ONE AND 22/100 PESOS (P33,196,771.22)**, after submission of the required documents within the prescribed period and compliance to the conditions stipulated in the IRR;

Witness:  
**MICHAEL O. KIEFER**  
Laboratory Technician


**R.S. JARDIN & ASSOCIATES**  
BY: **REDENTOR S. JARDIN**  
Proprietor

Witness:  
**ADRIAN FERDINAND S. SUGAY**  
Chairperson- HO-BAC-EP/CON

**PHILIPPINE PORTS AUTHORITY**  
BY: **JAY DANIEL R. SANTIAGO**  
General Manager

WHEREAS, the CONSULTANT duly accepted the award by signing its "Conforme" on the said Notice of Award;

NOW, THEREFORE, for and in consideration of the foregoing premises and the mutual covenants, stipulations and agreements herein contained, the PPA and the CONSULTANT have agreed, as they do hereby agree and contract as follows:


Witness  
  
MICHAEL O. KIEFER  
Laboratory Technician

ARTICLE I

CONTRACT DOCUMENTS

1.01. The following documents shall constitute integral part of this Contract, as fully as if the contents of the said documents are reproduced, incorporated and set forth herein, and shall govern and control in full force and effect the rights and obligations of the Parties, except as otherwise modified by the terms and conditions of this Contract, or by mutual agreements in writing of both parties, to wit:

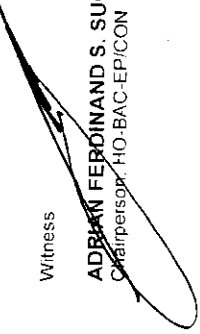
- a) Contract Agreement
  - b) Eligibility Documents/Bidding Documents
  - c) Winning Bidder's Bid, including the Technical and Financial Proposals and all other documents/statements submitted
  - d) Performance Security
  - e) Notice of Award of Contract
  - f) Other contract documents
- 1) Certificate of Availability of Funds
  - 2) Abstract of Bids
  - 3) Resolution of Award
  - 4) Tax Clearance
  - 5) Latest Income and Business Tax Returns
  - 6) Certificate of PhilGEPS Registration

R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

1.02 All contract documents are and shall remain as the property of the PPA.

1.03 The words and expressions in this Contract shall have the same meanings respectively assigned to them in the Contract Documents referred to above.

1.04 In case of irreconcilable conflict between the provisions of this Contract and the provisions of any of the contract documents, the provisions of this Contract shall prevail.

Witness  
  
ADNAN FERDINAND S. SUGAY  
Chairperson, HO-BAC-EPICON

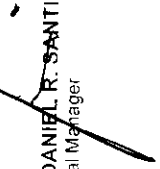
ARTICLE II

SERVICES

2.01 **Scope of Services** - This Contract covers the Procurement of Technical Services for the Conduct of Soil Investigation at Selected Ports (Package 8), namely:

LUZON

- 1. Basco, Batanes
- 2. Currimao, Ilocos Norte
- 3. San Juan, Batangas
- 4. Talaga, Mabini, Batangas
- 5. Cawit, Boac, Marinduque
- 6. Mauban, Quezon
- 7. Legazpi City, Albay
- 8. San Andres, Catanduanes

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTIAGO  
General Manager

- 10. Pandan (Cobo), Catanduanes
- 11. Esperanza, Masbate
- 12. Calapan City, Oriental Mindoro
- 13. Lubang, Occidental Mindoro
- 14. Coron, Palawan
- 15. Borac, Coron, Palawan
- 16. San Fernando, El Nido, Palawan

**VISAYAS**

- 1. Estancia, Iloilo
- 2. Tagbilaran City, Bohol
- 3. Ubay, Bohol
- 4. Maasin, Southern Leyte
- 5. Siquijor, Siquijor

**MINDANAO**

- 1. Benoni, Mahinog, Camiguin
- 2. Dapitan City, Zamboanga del Norte
- 3. Sindangan, Zamboanga del Norte
- 4. Liloy, Zamboanga del Norte
- 5. Doña Helene, Socorro, Surigao del Norte
- 6. Sultan Naga Dimaporo, Lanao del Norte


For this purpose, the CONSULTANT shall perform and render all the required and necessary services to achieve the objectives in accordance with internationally accepted standards, conventions and practices for the Procurement of Technical Services for the Conduct of Soil Investigation (Package 8). The Scope of Services to be undertaken by the Consultant shall include but shall not be limited to the following:

**2.01.1 Coverage**

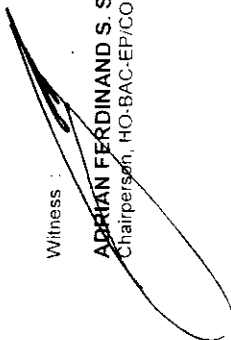
The work shall cover the drilling of and testing of soil samples from ninety two (92) boreholes, of which seventy four (74) shall be drilled offshore each to a depth of about 50 meters below seabed and eighteen (18) shall be drilled inland to a depth of 30 meters below existing ground line maximum for each borehole, respectively and/or there is 5 consecutive SPT N values of at least 50 blows but with less than 1 foot (30 cm.) of soil penetration recorded during two (2) - successive 15 cm. penetrations of the Split Spoon Sampler or 4.5 meters coring into bedrock, whichever comes first. Soil boring/drilling deeper than 50 meters or 30 meters in the case of Offshore boreholes or Inland boreholes, respectively, shall be referred to the PPA Engineer/Authorized Representative witnessing the drilling on-site. However, the minimum depth of drilling for both offshore and inland boreholes is 15 meters deep. All boreholes must be referred to benchmarks designated by the PPA. The actual number of boreholes, their locations and depths are subject to change depending on field conditions. A Geodetic Engineer shall determine the actual location of the borehole based on the coordinates specified in the development plan using GPS technology/system and the elevation on the seabed based on MLLW. The contract duration for this package is **Eight (8) months.**

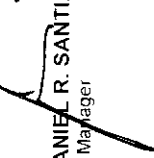
**2.01.2 Description of Work**

- 1. Soil Exploration. This shall consist of drilling test holes, classification


Witness :  
  
**MICHAEL O. KIEFER**  
 Laboratory Technician

R.S. JARDIN & ASSOCIATES  
 BY :  
  
**REDENTOR S. JARDIN**  
 Proprietor

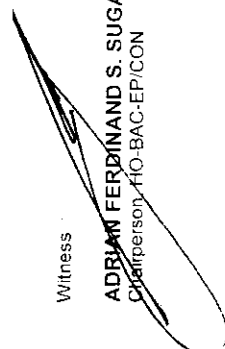
Witness :  
  
**ADRIAN FERDINAND S. SUGAY**  
 Chairperson, HO-BAC-EP/CON


PHILIPPINE PORTS AUTHORITY  
 BY :  
  
**JAY DANIEL R. SANTIAGO**  
 General Manager

laboratory tests shall be made as specified. The Consultant should be able to identify areas with geological problems and difficulties which could affect the stability of the proposed structures (i.e. buildings, pier/wharf, back-up area, causeway, etc. A complete report shall be required giving soil classifications and their engineering characteristics including a 3D settlement analysis and analysis on the rate of backfilling to counteract/avoid slip failure for projects where there are proposed reclamation (back-up areas, causeway). The dimension of the back-up area shall be coordinated with PPA.

Witness  
  
MICHAEL O. KIEFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

Witness  
  
ADRIAN FERDINAND S. SUGAY  
Champion, IO-BAC-EP/ICON

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTIAGO  
General Manager

- Depth of seabed with respect to Mean Lower Low Water (MLLW)
- Soil borings through ordinary soils (depth: 0-15m)
- Soil borings through hard soils/rock (depth: 5m)
- Split-spoon sampling (1meter interval for the first 3 meters, 1.5 meters interval thereafter or when there is noticeable change in the soil characteristics based on texture and color, whichever comes first)
- Standard Penetration Tests (similar to split-spoon sampling criteria)
- Undisturbed sampling using thin-walled Shelby tube sampler (one sampler every 10m deep when there is encountered soft to medium stiff cohesive samples with SPT readings ranging from 2 to 7 blows per foot of soil penetration)
- Stop criterion of soil boring for each borehole when: there is 5 consecutive SPT N values of 50 blows but with less than 1 foot (30 cm.) of soil penetration recorded during two (2) - successive 15 cm. penetrations of the Split-Spoon Sampler or 4.5 meters coring into bedrock or 50 meters below sea bed level in the case of offshore boreholes or 30 meters deep below Existing Ground Line in the case of inland boreholes, whichever comes first. Soil boring/drilling deeper than 50 meters or 30 meters in the case of offshore boreholes or inland boreholes, respectively, shall be referred to the PPA Engineer/Authorized Representative witnessing the drilling on-site. However, the minimum depth of drilling for both offshore and inland boreholes is 15 meters deep.

Pertinent ASTM standards are to be met in the conduct of the investigation.

If rock is encountered, holes shall be terminated after core drilling continuously for five (5) meters in the rock.

- a. Soil Classification. Soils shall be described according to the Unified Classification System of ASTM D2487. A visual field classification of soils by a competent Geologist or Geotechnical Engineer supplemented by laboratory tests shall be made.
- b. Penetration. The Standard Penetration Test (SPT) shall be carried out in accordance with ASTM D1586. Disturbed (split-spoon) samples shall be performed at intervals of 1 meter for the first 3 meters and every 1.5 meters thereafter. Representative samples shall be collected and shipped for laboratory testing. At least one undisturbed (Shelby tube) sample, 2½ inch diameter x 24" long or larger, shall be extracted from each distinct soft to medium stiff cohesive stratum. The depth of the undisturbed sample shall be subject to the directions of PPA.

c. Testing. The soil/rock samples to be scheduled for laboratory tests shall be selected by the Consultant. The types of test shall be referred to ASTM standard procedures as follows:

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 1) Visual Soil Classification (SPT) | ASTM D2488/D2487<br>2217/ASTM D1586 |
| 2) Gradation                        | ASTM D422/E100 Part 41              |
| 3) Atterberg Limits                 | ASTM 421/423                        |
| 4) Natural Water Content            | ASTM D2216                          |
| 5) Unit Weight                      | ASTM 2049/D1556/D2167               |
| 6) Organic Content                  | ASTM D2974                          |
| 7) Specific Gravity                 | ASTM D854/C127                      |
| 8) Consolidation Test               | ASTM D2435                          |
| 9) Unconfined Compression Test      | ASTM D2166-06                       |

2. Procedure

a. Pre-drilling Coordination Meeting. Prior to the mobilization of the drilling teams/crews of the Contractor to the priority port sites, a coordination meeting shall be held with the PPA Engineers in charge of monitoring the project activities to discuss among others, other parameters that maybe required relevant to the specific structure to be constructed, the type and size of structures (pier, causeway, wharf, back-up area, building, among others) to be built on each port site as clearly indicated in the Port Development Plan in relation to the borehole location and designation as superimposed therewith.

b. Technical Advice. The Contractor's Experts/Engineers shall be made available, if consulted, to give/submit their professional written opinion on technical matters that may arise in the course of the PPA Engineer's design of such foundation structures and during the implementation of the proposed structure.

c. Inspection. No work shall be performed in the absence of an authorized representative of the PPA.

The Contractor shall not remove casing or equipment from any completed boring except with the express permission of the authorized representative and until said representative has had the opportunity to obtain all relevant data prior to removal.

d. Size of Boring in Sampling. Samples shall be obtained either intermittently or continuously as specified herein with a minimum diameter of 1-3/8 inch. The sizes of boreholes shall be sufficient for the above size of sample. Intermittent sampling shall mean disturbed (split-spoon) samples taken at specified intervals and undisturbed (Shelby tube) samples at each change of soil type or if soft cohesive soils are required, they shall be obtained with thin-wall samplers. Samples shall be prepared in accordance with the applicable requirements of the section herein on "Preserving Samples."

e. Penetration on Boulders or Rock Layers. Boulders or rock layers encountered in drilling shall be cored to determine the character and size or thickness of the materials. After coring, the hole may be enlarged by reaming or by other means as approved

Witness  
  
MICHAEL O. KIEFFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES

BY :

  
REDENTOR S. JARDIN  
Proprietor

Witness

ADRIAN FERDINAND S. SUGAY  
Carpenter, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY

BY :

JAY DANIEL R. SANTIAGO  
General Manager

borehole in order to reach the target depth and obtain the required samples, the minimum casing diameter shall be of such size as to permit the use of a 1-5/8 inch core bit.

3. Supplemental Boring

- a. Abandoned Borings. Borings that are abandoned or lost before reaching the required depth, or from which unsatisfactory samples are obtained, shall be supplemented by other borings adjacent to the original in order to obtain satisfactory samples and the required information. Penetration to the depth where the original boring was abandoned may be made by any method selected by the Contractor that in the opinion of the PPA will permit satisfactory completion and sampling below the elevation not satisfactorily reached by the abandoned boring.
- b. False Start. It is intended that the borings be made so as to clear all underwater pipes, conduits, and other underwater structures. However, should the Contractor be unable to complete any boring due to underwater structures, obstacles or obstructions which the PPA considers are of unusual nature and that failure to penetrate them is not the fault of the Contractor's method or equipment, a false start will be allowed. In such cases, if directed by the PPA representative, another boring will be made in the adjacent vicinity.

4. Casing


- a. Advancing. Boring through overburden soils shall be suitably cased to permit obtaining samples of the size or sizes specified or as directed. Casing may consist of standard pipes and couplings or flush pointed pipes, and shall be advanced vertically by driving, chopping and washing, coring or by any method consistent with the manner and type of sampling described for the specified boring, and as approved by the PPA. In all borings where rock is to be cored below the cased overburden, the casing shall be firmly seated to the rock, and the hole cleaned of all loose material before commencing coring operations.
- b. Removal. All casings shall remain the property of the Contractor and shall be removed on the completion of the work.

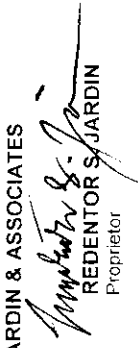
2.01.3 Soil Investigation of Proposed Structures

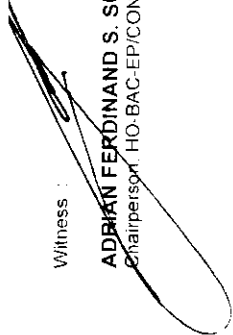
Sub-surface exploration shall be carried out at proposed sites for the proposed engineering structures in order to obtain sufficient and adequate subsoil data for the preliminary or detailed engineering design of the project.

a) Soil Borings and Core Drilling

Borings through underlying soils shall be advanced by drilling with either diamond or carbide NW casing shoe bits or such other method consistent with the manner and types of soil sampling to be employed, as may be approved by the PPA Engineer. Borings shall be cased to permit soil sampling by split-spoon and Shelby tube methods and shall extend down to the program depth of boreholes at respective area covered by the survey or deeper as directed by the PPA Engineer on-

Witness :  
  
**MICHAEL D. KIEFER**  
 Laboratory Technician

R.S. JARDIN & ASSOCIATES  
 BY :  
  
**REDENTOR S. JARDIN**  
 Proprietor

Witness :  
  
**ADRIAN FERDINAND S. SUGAY**  
 Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
 BY :  
  
**JAY DANIEL R. SANTIAGO**  
 General Manager

For coring into rock or hard strata, rotary drilling method shall be employed. Core drillings shall be performed in accordance with ASTM or AASHTO procedures and the following provisions. At the start of coring, the casings through the substrata shall be tightly seated. The coring of rocks shall employ NQ size double tube core barrels or triple tube core barrels, to provide a sample run from 0.5 m to 1.5 m long within the liner, and shall be continued 4.50 m penetration deep into the bedrock. Length of recovered rock in each run shall be recorded and recovery expressed as a percentage of total recovery for each drilling run. Cores shall be recovered and placed in core boxes in the correct sequence. Core boxes shall be of robust timber construction and to the satisfaction of the PPA Engineer. The Contractor shall exercise particular care in recording water losses, rod jerks and other unusual coring experience that is supplementary to the core record, and shall indicate the nature and the extent of any fracturing.

The Contractor shall record groundwater levels in each boring upon completion of boring, during the removal of the casings and 24 hours after the removal of the casing. Where the borings are made over a period of several days, the ground water readings shall be made each evening at the end of the drilling operations, and each morning prior to the resumption of drilling. In all cases the recorded data shall include the date and time of reading.

b) Standard Penetration Test and Split-Spoon Sampling

This work shall be performed in accordance with ASTM of AASHTO standard procedures, and the following provisions. Where discrepancies exist, these specifications shall govern. All procedures are subject to the approval of the PPA Engineer.

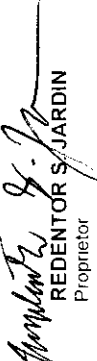
Representative soil samples (disturbed) shall be obtained at regular intervals of 1.0 meter for the first 3 meters or every 1.50 meters interval, thereafter or every change in soil characteristics, whichever is observed first.

Split-spoon sampler shall be driven into the soil at the bottom of the cleaned out casing using a 64.0 kg. hammer falling 75 cm. The hammer will be raised preferably by means of a mechanical free drop system. The sampler shall have a steel shoe with a sharp cutting edge, and a reliable check valve. A record shall be made of the number of blows for the sampler to penetrate the first 15 cm and is called the seating drive. The sampler shall be driven a further 30 cm or until 60 to 70 blows of the hammer have been applied. The number of blows for each 15 cm penetration shall be recorded. The penetration resistance, N, will be the total number of blows required to drive the sampler the last 30 cm.


If the sampler is driven less than a total of 45 cm, the penetration resistance shall be number of blows for the last 30 cm of penetration. If less than 30 cm is penetrated, the number of blows shall be stated and the depth of penetration measured. If the rate of penetration of the sampler is less than 2.5 cm for the 50 blows, refusal shall be considered to have been obtained.

The sampler shoe shall be provided or fitted with a flap valve to obtain samples in soils that are too granular to be retained in the sampler.

Witness :  
**MICHAEL O. KIEFER**  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY :   
**REYDENTOR S. JARDIN**  
Proprietor

Witness :  
**ADRIAN FERDINAND S. SUGAY**  
Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY :   
**JAY DANIEL R. SANTIAGO**  
General Manager

Tests shall be repeated if necessary to obtain acceptable samples. However, the sampler shall not be driven more than 60 cm. below the bottom of the casing, in which case, the casing shall be advanced before repeating the test procedure.

The split-spoon retrieved from the hole shall be handled carefully and shall be opened, with minimum disturbance of the sample, then placed into a clean plastic sheeting bag for visual classification. The soil sample shall be preserved and stored. If the sampler is found to contain more than one type of soil, each type shall be classified and preserved separately.

1. Split Spoon Drive Sampling

a. Sampler Description. Samplers for drive samples shall be of the standard split spoon type having an outside diameter of two (2) inches and an inside diameter of one and three eighths (1-3/8) inches for NW size holes. The sampler shall have a minimum inside length of sixteen (16) inches and shall be equipped with hardened tool shoe valve at the top. The Contractor shall also provide a core catcher at the bottom of the sampler when difficulty is experienced in recovering samples.

b. Sampling Procedures. At the points where drive samples are to be taken, advancement of the borehole shall be stopped and the hole or casing shall be completely cleaned of disturbed soil, segregated coarse material and any clay adhering to the walls of the casing. The cleaning shall extend to at least the bottom edge of the casing and should preferably advance the hole a few inches further in order to by-pass disturbance caused by the cutting edge of the casing. Cleaning shall be done with shielded jets suitable to the relative resistance of the various subsurface strata; the drive sampler shall be driven in the following manner:

- 1) The 1-3/8 inch inside diameter drive sampler shall be driven with a 140-lb. hammer a free fall of 30 inches.
- 2) The drive sampler shall be driven to a depth of 18 inches or as directed by the PPA representative and the number of blows shall be recorded for each 6-inch depth of penetration. If the samples obtained are less than 12 inches long, the sampling operation shall be repeated.


2. Undisturbed Sampling of Soils

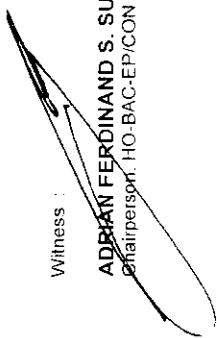
a) Shelby-Tube

This work shall be performed in accordance with ASTM or ASSHTO procedure and the following provisions. Where discrepancies exist between these provisions and ASTM and ASSHTO specifications, these specifications will prevail. All procedures are subject to the approval of the PPA Engineer.

In layers of soft to medium stiff cohesive soils (i.e. N-values ranging between 2 to 7 blows per foot of soil penetration), undisturbed Shelby-tube samples shall be obtained at intervals of not more than ten (10) meters or otherwise directed by the PPA Engineer. Undisturbed samples are required for consolidations and

Witness :  
  
MICHAEL D. KIEFFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY :   
REDENTOR S. JARDIN  
Proprietor

Witness :  
  
ADRIAN FERDINAND S. SUGAY  
Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY :   
JAY DANIEL R. SANTIAGO  
General Manager



The following procedures shall be adopted:

Clean out the hole to the deep of sampling such that the soil immediately below the casing shall be as undisturbed as possible. The casing shall be kept above the sampling position.

Attach a 70 mm diameter thin-wall tube sample to the drill rod and let rest on the bottom of the hole.

Push the sampler into the soil either manually or by hydraulic jack with a continuous and rapid motion without impact or twisting to fill the sampler. In no case shall the sampler tube be driven with a hammer or pushed further than the length provided for the soil sampler. If resistance is encountered when manually pushing the sampler tube, a heavy weight may be used without hammering to drive the sampler.

Before retrieving the tube, turn the rod at least two (2) revolutions to shear the sampler off, at the bottom. Raise the rod and detach the tube sampler.

Remove and store the disturbed material at the ends of the tube and preserve the undisturbed section in the tube. Great care must be observed in handling and transporting the samples.

1. General. Undisturbed Shelby tube samples, 2-1/2 inches in diameter x 24 inches long, shall be taken from all holes as specified herein and called for in these Technical Specifications.

Undisturbed samples shall be taken in cohesive soils whenever the soil conditions would permit driving of the Shelby tube sampler.

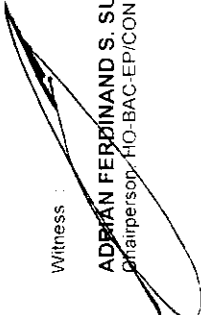
2. Sampler Description. The thin wall tube (Shelby tube) sampler shall consist of 16 or 18 gauge barrel, approximately 36 inches, or longer and will be equipped with a reliable check valve at the top. The tubes shall be provided with a sharp cutting edge and a positive inside clearance. The inside diameter of the cutting edge shall be 0.7 to 1.5 percent less than the inside diameter of the sampler tube.

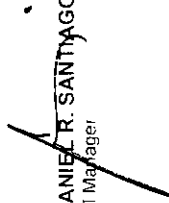
3. Sampling Procedure. Before each sample is taken, the casing or borehole shall be carefully cleaned out with a deflected jet or clean out auger as approved by the PPA. The inside of the tube shall be thoroughly cleansed prior to taking the sample. The sampler shall be forced into the soil at a distance of 24 inches at the rate ranging from 1/4 to 1/2 foot per second by hydraulic pressure. The sampler shall not be driven with a drop hammer to obtain samples. No undisturbed samples shall be accepted if the recovery is less than 24 inches long, unless expressly approved by the PPA field representative. After an acceptable undisturbed sample is obtained, the sample shall be preserved as specified in Section 8 "Preserving Samples."

In layers of soft to medium stiff cohesive soils (i.e. N-values ranging between 2 - 7 blows per foot of soil penetration),

Witness :  
  
**MICHAEL O. KIEFFER**  
 Laboratory Technician

R.S. JARDIN & ASSOCIATES  
 BY :  
  
**REDENTOR S. JARDIN**  
 Proprietor

Witness :  
  
**ADRIAN FERDINAND S. SUGAY**  
 Chairperson HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
 BY :  
  
**JAY DANIEL R. SANTIAGO**  
 General Manager

intervals of not more than ten meters or as otherwise directed by the PPA Engineer.

3. Rock Coring

- a. General. The term rock shall apply to any material that cannot be sampled by drive sampling as described herein. Where rock layers or boulders are encountered in the overburden above the specified bottom elevation of any borings, it shall be cored as described under "Penetration on Boulders or Rock Layers." Where ledge rock is encountered above the specified bottom elevation of any boring, it shall be cored to the depths as specified in the Proposal and as directed by PPA representative.
- b. Sampler Description. Rock coring shall be performed with a double tube swivel type core barrel as standardized by the Diamond Core Drill Manufacturers Association (DCMA) equipped with diamond-set bottom discharge core bits and standard core lifters and core gage. Core barrels shall be of 5 to 10 ft. length to obtain a continuous rock core 5 feet long, and unless otherwise specified or directed by PPA representative, the sampler shall produce a minimum core of 1-3/4 inches in diameter.
- c. Sampling Procedure. Casing through overburden shall be seated tightly on the rock at the elevation of the rock coring. The Contractor shall operate his drills at such speeds and with such water pressures that will ensure maximum core recovery in whatever kind of rock is being drilled. Where soft or broken rocks are encountered the Contractor shall reduce the length of "runs" to less than 1.5m. as may be required to reduce core loss and core disturbance to the minimum.

Failure to comply with the foregoing procedures shall constitute justification for PPA to require redrilling at the Contractor's expense of any boring from which the core recovery is unsatisfactory. The Contractor shall exercise particular care in recording water losses, rod jerks and other unusual experience that will throw light on the nature and extent of any fractures in the core samples.


4. Preserving Samples

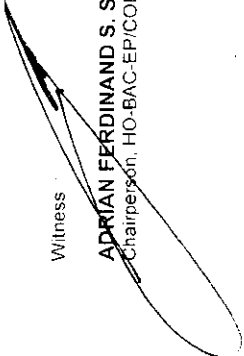
- a. General. The Contractor shall provide material, equipment and labor necessary for preserving samples. Wax or masking tape shall be used to ensure proper sealing of sample containers.
- b. Drive Samples. Representative specimen of each sample shall be preserved. The containers for preserving samples shall be maximum ten-ounce large-necked, round, screw top, air-tight, durable clear plastic jars, and the specimen shall be sealed with a threaded cap, and cohesive soil samples shall be further sealed by dipping the cap and threads into wax immediately after capping.

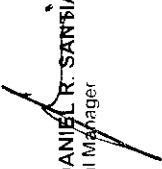
Each glass jar or undisturbed sample core liner shall have weatherproof labels giving the following information:

Project: \_\_\_\_\_

Witness :  
  
**MICHAEL O. KIEFER**  
 Laboratory Technician

R.S. JARDIN & ASSOCIATES  
 BY :   
**REDENTOR S. JARDIN**  
 Proprietor

Witness  
  
**ADRIAN FERDINAND S. SUGAY**  
 Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
 BY :   
**JAY DANIEL R. SANTIAGO**  
 General Manager

Borehole No: \_\_\_\_\_ Elevation: \_\_\_\_\_ Location: \_\_\_\_\_  
Coordinates of the boreholes: \_\_\_\_\_  
Jar No: \_\_\_\_\_  
Top Elevation of Hole \_\_\_\_\_ Depth of Sample \_\_\_\_\_  
Visual Description of Samples: \_\_\_\_\_  
Penetration (Blows/15 cm): \_\_\_\_\_

Shipping boxes: Each box of samples shall be indentified with weatherproof labels or marking indicating the following:

Project Description: \_\_\_\_\_  
Project Location: \_\_\_\_\_  
Boring No: \_\_\_\_\_ Sample No: \_\_\_\_\_

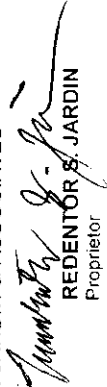
- c. Undisturbed Samples. Undisturbed samples from boring for preservation shall be treated in the following manner: A maximum of one inch of the undisturbed materials from the top and bottom of each sample shall be preserved as prescribed for Drive Samples. The ends of the sample tube shall be filled to the top with wax added in the increments to prevent voids, after which they shall be capped with tight fitting copper or galvanized steel caps bound on with friction tape and dipped in wax. Undisturbed samples shall be labeled and identified as directed by PPA.
- d. Rock Cores. Rock cores shall be suitably boxed, marked and identified in a manner satisfactory to PPA. Cores shall be boxed in the same sequence in which they were obtained in the field.

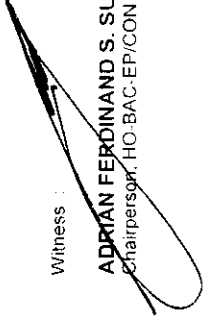
Cores from each drilling run shall be separated from adjacent with wooden blocks on which the depths of the beginning and end of the run shall be clearly, accurately and permanently indicated. Cores of soft rock which may be damaged in the normal course of shipping shall be further preserved by wrapping them first in polyethylene plastic. The container itself shall be marked to show borehole number, box number, depth and the date the sample was taken.

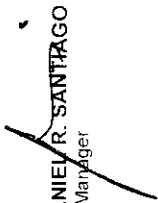
5. Records

- a. General. The Contractor shall keep accurate driller's logs and records of all work accomplished under this contract and shall deliver complete, legible copies of these logs and records to PPA upon completion of the work or at such other time or times as he may be directed. The PPA or his representative shall have the right to examine such records at any time prior to their delivery to him. Separate logs shall be made for each boring. All depths and elevations shall be measured in meters, and shall be referenced to proper benchmarks or datum as designated by PPA representative.
- b. Records. Records shall contain the following information:
  - 1) Results of all details of each borehole arranged in tabular form, giving full information on the location, type of boring, vertical arrangement, and the thickness and classification of the materials penetrated.
  - 2) Location, elevation and depth, type, number and date of

Witness :  
  
MICHAEL C. KIEFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

Witness :  
  
ADRIAN FERDINAND S. SUGAY  
Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTAGO  
General Manager

Witness :  
  
**MICHAEL C. KIEFER**  
Laboratory Technician

- 3) Heights of drop and weight of drop hammer for taken drive samples.
- 4) Size and length of casing used in each borehole.
- 5) Length in inches of samples of coring run.
- 6) Length in recovery for all samples and coring.
- 7) Elevation of refusal or rock if encountered.
- 8) Approximate force required to press in undisturbed samples.
- 9) Driving energy in inch-pounds and blow count data for six-inch penetration of drive sampler and for each twelve-inch penetration of casing.

6. Reference Elevation

The seabed elevation of each borehole should be included in the boring log based on Mean Lower Low Water (MLLW). Elevations above MLLW shall be marked positive (+) while those below shall be marked negative (-).

7. Submission of Samples

At such time as PPA may direct, all samples and cores selected by the Consultant shall be carefully boxed by the Consultant and shipped accordingly. Boxing shall be made in such a manner that will protect all soil and core samples from excessive disturbance while being shipped to the Soils Laboratory for testing. Payment for shipping samples shall be included in the bid proposal.

2.01.4 Required Expertise & Proposals


The consulting services shall be carried out by experienced local consultants. The following minimum specialization is anticipated to be required in the Study:

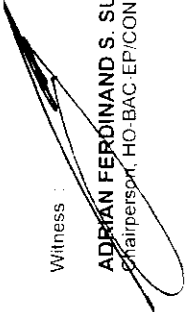
- Port Engineer/Planner
- Soil Engineer
- Geologist/Geotechnical Engineer
- Civil Engineer
- Geodetic Engineer
- Laboratory Chief

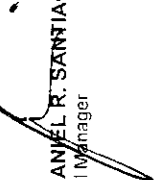
2.01.5 Sets of Tests Required and Reports

- A. Soil Classification. Soils shall be described in accordance with the Unified Soil Classification System (USCS). Each individual stratum shall be measured and described in writing. All thin layers, joints or partings shall be noted. Slices of samples may be prepared and slowly air-dried to reveal stratifications and laminations.

The visual description shall state the color, class of soil (gravel, sand, silt, clay or peat), the relative sizes of non-cohesive soil particles (coarse, medium or fine sand) and the relative cohesiveness and strength of clayey soils (high, medium or low). Any significant factors shall be noted such as the presence of shells, varves, roots and odor of the soil. All soil samples shall be tested in accordance with the ASTM or AASHTO specifications where applicable.

R.S. JARDIN & ASSOCIATES  
BY:   
**REDENTOR S. JARDIN**  
Proprietor

Witness :  
  
**ADRIAN FERONAND S. SUGAY**  
Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY:   
**JAY DANIEL R. SANTIAGO**  
General Manager

1. Monthly Progress Report

The Consultant shall prepare the Monthly Progress Report (MPR) in a form to be approved by the PPA qualified representative and submit to Port Planning and Design Department (PPDD) on the 25<sup>th</sup> of each Reporting Period. The MPR shall consist, but not limited to the following:

- a. Overall summary of accomplishment
- b. Core drilling progress
- c. Laboratory test accomplished
- d. Schedule of work
- e. List of equipment used
- f. Organizational Chart
- g. Detailed progress chart or S-curve

2. Partial Reports of Investigation Results

The Consultant shall submit partial reports consisting of completed results of boring in the form of a final boring log and soil profile for immediate use in the preliminary design work.

3. Photographs

Photographs showing the borehole drilling and sampling at each sites shall be taken by the Consultant and form part of the report. The photographs shall depict the following:

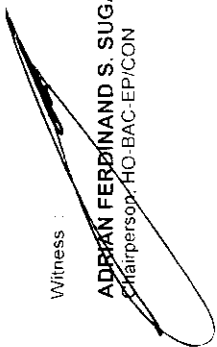
- a. Equipment used
- b. Core drilling operation
- c. Water level measurements
- d. Performance of SPT sampling
- e. All cores and SPT sample placed in core boxes
- f. Date photographs were taken
- g. Location or station

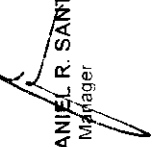
B. Final Report. After completion of the laboratory-testing program, a draft report clearly defining and summarizing all the works performed together with the 3D settlement analysis and analysis on the rate of backfilling to counteract/avoid slip failure for projects where there are proposed reclamation (back-up areas, causeway), for traffic load of 500 and 750 pounds per square foot (psf), soil bearing capacity, pile capacity recommended foundation and pile length depending on the type of structure to be constructed, including the findings and recommendations of a competent Soils Engineer of the Contractor, shall be submitted to PPA. The draft report shall be book-bound and shall contain among others a description of the test procedure, the number of tests for each type, boring logs, maps, summary tables of the results and complete details and analysis/computation and evaluation of the results of each test, grain size analysis curves, summary or recommended soil particles and Atterberg Limit worksheets.

In determining the pile bearing capacity as option/recommendation for foundation works, the Soil Engineer shall use the Design Manual for Ports and Harbor Facilities in the PPA. The provisions in the Design Manual shall serve as the technical reference in computing the bearing

Witness :  
  
**MICHAEL D. KIEFFER**  
 Laboratory Technician


R.S. JARDIN & ASSOCIATES  
 BY :   
**REDENTOR S. JARDIN**  
 Proprietor

Witness :  
  
**ADRIAN FERBINAND S. SUGAY**  
 Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
 BY :   
**JAY DANIEL R. SANTIAGO**  
 General Manager

The Final Geotechnical Report shall contain the methodology of geotechnical investigation performed, the result of field investigation including field logs, description of site conditions, profile of soil conditions, result of laboratory tests, summary of geotechnical data and photos. The Final Report (6 copies) in book-bound form, and (1 copy) in electronic media (CD-R disks and/or CD-RW disks) in a format and form replicating the paper-print copies, incorporating all revisions deemed appropriate by the Philippine Ports Authority should be submitted within 20 days after receipt of comments on the Draft Final Report from the PPA. The borehole logs, development plan indicating the actual borehole location and soil profile shall be submitted in AUTOCAD format.

Witness:  
  
MICHAEL O. KIEFER  
Laboratory Technician

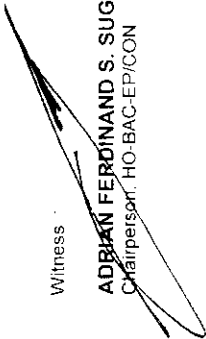
R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

2.02 **Standard of Services** - The CONSULTANT shall perform the services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe and effective equipment, machinery, materials and methods.

The CONSULTANT shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the PPA and shall at all times support and safeguard the PPA's legitimate interests in any dealings with the Sub-Consultants or third parties.

The CONSULTANT shall furnish to the PPA such information related to the Services as the PPA may from time to time reasonably request.

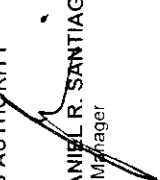
The CONSULTANT shall at all times cooperate and coordinate with the PPA with respect to the carrying out of its obligations under this Contract.

Witness:  
  
ADRIAN FERDINAND S. SUGAY  
Chairperson, HO-BAC-EP/CON

2.03 **Estimated Man-Months** - Notwithstanding any contrary provisions herein, the parties hereto agree that the CONSULTANT shall perform the Services in accordance with the Approach, Work Plan and Schedule and, for the performance of its obligations under this Contract, it shall make available man-months of service for the different classes of Personnel. Unless otherwise agreed upon by the parties hereto, in no event the CONSULTANT shall have obligations to render the services in excess of the said man-months of services. It is, however, agreed that PPA may, from time to time, assign other works under this Contract for due performance by the CONSULTANT which have been determined by PPA to be critical for the satisfactory completion of the services. In connection with this Contract, a man-month of services is defined as services of period of time equivalent to one (1) calendar month based on the person rendering or performing such services for 176 working hours per month on the average.

ARTICLE III

PERSONNEL

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTIAGO  
General Manager

3.01. **Staff** - The services shall be carried out by the Personnel of the CONSULTANT, viz:

1. JOHN ARVIN A. MANALOTO - Project Manager/Port Planner/Planner
2. REDENTOR S. JARDIN - Deputy Project Manager/Soil Engineer
3. CELSO L. REVELO - Mining Engineer/Geotechnical Engineer
4. JOEL D. NUÑEZ - Mining Engineer/Geotechnical Engineer
5. ZOSIMO OLIVER P. VILLA - Senior Geodetic Engineer
6. JEMMA A. OCON - Laboratory Chief

The CONSULTANT may, with the prior approval of PPA, make adjustments in such periods as may be appropriate to ensure the efficient performance of the services, provided that such adjustment will not cause payments made under the Contract to exceed the cost referred to in Section 4.01 hereof.

Witness :  
MICHAEL O. KIEFFER  
Laboratory Technician

3.02 **Replacement of Personnel** - There should be no replacement of key personnel before the awarding of contract, except for justifiable reason, such as, illness, death or resignation provided it is duly supported by relevant certificates, or any delay caused by the procuring entity. The procuring entity shall immediately consider negotiation with the next ranked consultant if unjustifiable replacement of personnel by the first ranked firm is made. Once the contract has been awarded, no replacement shall be allowed until after fifty percent (50%) of the personnel's man-months have been served, except for justifiable reasons, subject to appropriate sanctions as prescribed in the bidding documents.

R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

Further, in case of replacement, CONSULTANT shall, upon prior approval of and without cost to PPA, undertake to provide a suitable personnel of equivalent or better qualifications acceptable to PPA whose remuneration shall not exceed that which is being received by the one he has replaced. In like manner, it shall replace any of its staff who is found by PPA to be unqualified, incompetent or otherwise undesirable. The CONSULTANT shall bear all additional travel and other costs arising out of or incidental to any removal and/or replacement of personnel.

3.03 **Team Leader** - The CONSULTANT shall ensure that at all times during the performance of the services, a Resident Project Manager acceptable to PPA shall take charge of the performance of such services and be responsible for liaison between the CONSULTANT and the PPA.

ARTICLE IV

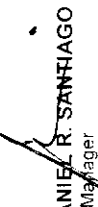
PAYMENT TO CONSULTANT

Witness :  
ADRIAN FERDINAND S. SUGAY  
Chairperson, MO-BAC-EP/CON

4.01 **Cost Estimates** - The summary of costs of the Services is **THIRTY THREE MILLION ONE HUNDRED NINETY SIX THOUSAND SEVEN HUNDRED SEVENTY ONE AND 22/100 PESOS (P33,196,771.22)**, inclusive of taxes;

4.02 **Ceiling Amount of the Professional Fee and Reimbursables** - Except as may otherwise be agreed upon by the parties and subject to Section 4.03 and notwithstanding any other provisions of this Contract, payments under this Contract shall not exceed **THIRTY THREE MILLION ONE HUNDRED NINETY SIX THOUSAND SEVEN HUNDRED SEVENTY ONE AND 22/100 PESOS (P33,196,771.22)**, Philippine currency, inclusive of taxes.

4.03. **Support Services and Facilities** - The amounts provided for in Section 4.02 have been fixed on the understanding that PPA will make available free of charge to the CONSULTANT the support services and facilities mentioned in Section 5.01 hereof.

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTIAGO  
General Manager

If any such support services and facilities are not made available to the CONSULTANT, the parties shall agree on:

- a) any time extension that it may be appropriate to grant to the CONSULTANT for the performance of the services;
- b) the manner in which the CONSULTANT shall procure any such services and facilities from other source; and

- c) the additional payment, if any, to be made to the CONSULTANT as a result thereof which should be within the contract ceiling amount as specified in Section 4.02 hereof.

Witness :  
  
**MICHAEL C. KIEFFER**  
 Laboratory Technician

4.04. **Payment to the Consultant** - The PPA shall pay or reimburse to the CONSULTANT the expenditures incurred in respect of the Services but subject to the ceiling amount specified in Section 4.02. The CONSULTANT provides that all expenses incurred as indicated in the Bill of Quantities shall be supported by the appropriate receipts (as applicable) and shall not exceed the ceiling amounts as stated. Any extension of contract time for any reason whatsoever shall not involve additional cost on the part of PPA.

4.05. **Method of Payment** - Billing and payment in respect of the services shall be made as follows:

R.S. JARDIN & ASSOCIATES  
 BY :   
**REDENTOR S. JARDIN**  
 Proprietor

- 4.05.1 Within thirty (30) days after giving Notice to Proceed, the PPA shall pay the CONSULTANT the amount **FOUR MILLION NINE HUNDRED SEVENTY NINE THOUSAND FIVE HUNDRED FIFTEEN AND 68/100 PESOS (P4,979,515.68)**, Philippine Currency, to cover the cost of mobilization. The advance payment shall be made only upon the submission and acceptance by PPA of an irrevocable stand-by letter of credit of equivalent value from a reputable commercial bank. The advance payment shall be recouped by the PPA by automatically deducting the same from the CONSULTANT's first five (5) monthly progress payments in accordance with the following schedule;

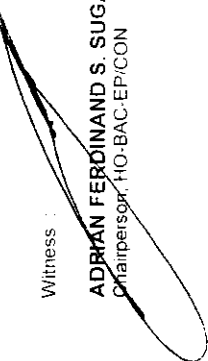
**Nine Hundred Ninety Five Thousand Nine Hundred Three and 14/100 Pesos (P995,903.14)** to be deducted from the first monthly progress payment;

**Nine Hundred Ninety Five Thousand Nine Hundred Three and 14/100 Pesos (P995,903.14)** to be deducted from the second monthly progress payment;

**Nine Hundred Ninety Five Thousand Nine Hundred Three and 14/100 Pesos (P995,903.14)** to be deducted from the third monthly progress payment;

**Nine Hundred Ninety Five Thousand Nine Hundred Three and 13/100 Pesos (P995,903.13)** to be deducted from the fourth monthly progress payment;

**Nine Hundred Ninety Five Thousand Nine Hundred Three and 13/100 Pesos (P995,903.13)** to be deducted from the fifth monthly progress payment;

Witness :  
  
**ADRIAN FERDINAND S. SUGAY**  
 Chairperson, HO-BAC-EP/CON

- 4.05.2 As soon as practicable and not later than fifteen (15) days from the end of each calendar month during the period of the Services, the CONSULTANT shall submit to the PPA, in duplicate, itemized statements, accompanied by copies of receipted invoices, vouchers and other appropriate supporting materials, of the amounts payable for such month. Separate monthly statements shall be submitted in respect of amounts payable in foreign currency and in local currency. Each separate monthly statement shall distinguish that portion of the total eligible costs which pertains to remuneration from that portion which pertains to reimbursable expenditures.

PHILIPPINE PORTS AUTHORITY  
 BY :   
**JAY DANIEL R. SANTIAGO**  
 General Manager

- 4.05.3 The PPA shall cause the payment of the CONSULTANT's monthly statements within sixty (60) days after the receipt by the PPA of such



statements with supporting documents. Only such portion of monthly statement that is not satisfactorily supported may be withheld from payment. Should any discrepancy be found to exist between actual payment and costs authorized to be incurred by the CONSULTANT, the PPA may add or subtract the difference from any subsequent payments. No interest shall be paid for delayed payments.

4.05.4 The final payment shall be made only after the final report and a final statement, identified as such, shall have been submitted by the CONSULTANT and approved as satisfactory by the PPA. The Services shall be deemed completed and finally accepted by the PPA and the final report and final statement shall be deemed approved by the PPA as satisfactory ninety (90) calendar days after receipt of the final report and final statement by the PPA unless the PPA, within such ninety (90) - day period, gives written notice to the CONSULTANT specifying in detail deficiencies in the Services, the final report or final statement. The CONSULTANT shall thereupon promptly make any necessary corrections within a maximum period of ninety (90) calendar days, and upon completion of such corrections, the foregoing process shall be repeated.

4.05.5 Any amount which the PPA has paid or caused to be paid in accordance with this Section in excess of the amounts actually payable in accordance with the provisions of this Contract shall be reimbursed by the CONSULTANT to the PPA within thirty (30) days after receipt by the CONSULTANT of notice thereof. Any such claim by the PPA for reimbursement must be made within twelve (12) calendar months after receipt by the PPA of a final report and a final statement approved by the PPA in accordance with the above.

ARTICLE V

OBLIGATIONS OF THE PPA

5.01 Support Services and Facilities -

5.01.1 The PPA shall provide:

- a) Data, available in the files of the PPA, to include previous studies, if any. However, the CONSULTANT is still responsible for reviewing the accuracy and adequacy of said data.
- b) Counterpart staff headed by a Project Manager relevant to the project.

5.02 Access to Land and Property - PPA warrants that the CONSULTANT shall have free of charge, unimpeded access to all lands required for the effective execution of the Services. The CONSULTANT shall be responsible for any damage to such land or any property thereon caused by the negligence or fault of its employees, staff, agents or representatives.

ARTICLE VI

OBLIGATIONS OF THE CONSULTANT

6.01 Responsibilities of CONSULTANT -

6.01.1 Generally, but without limiting CONSULTANT's responsibilities elsewhere stated under this Contract, it shall:

Witness  
MICHAEL O. KIEFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY: [Signature]  
REDENTOR S. JARDIN  
Proprietor

Witness :  
ADRIAN FERNAND S. SUGAY  
Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY: [Signature]  
JAY DANIEL R. SANTIAGO  
General Manager

- a) Carry out the services in accordance with generally accepted professional techniques, theories and practices therefore to ensure that the final works will provide the most economical and feasible development for the Project.
- b) Accept full responsibility for the consulting services to be performed under this Contract for which the CONSULTANT is liable to the PPA.
- c) Perform the work in an efficient and diligent manner and shall use its best effort to keep reimbursable costs down to the possible minimum without impairing the quality of the Services rendered.
- d) Comply with, and strictly observe any laws regarding workmen's health and safety, workmen's welfare, compensation for injuries, minimum wage, hours of labor and other laws.

Witness  
 MICHAEL O. KIEFER  
 Laboratory Technician

R.S. JARDIN & ASSOCIATES  
 BY: *[Signature]*  
 REDENTOR S. JARDIN  
 Proprietor

6.02 **Records** - The CONSULTANT shall:

6.02.1 Keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principle and in such form and detail as shall clearly identify all relevant time changes and cost, and the bases thereof.

6.02.2 Permit PPA or its duly authorized representative from time to time to inspect its records and accounts and make copies thereof as well as have them audited by auditors appointed by PPA.

6.03 **Information and Progress Reports** - The CONSULTANT shall furnish the PPA monthly progress report and any such information relative to the Services and the Project as the PPA may from time to time reasonably request.

6.04 **Sub-Contract** - The CONSULTANT may subcontract work relating to Services to an extent and with such specialist and entities as may be approved in advance by PPA and shall submit to PPA for prior approval the text of any proposed subcontract and any amendment thereto which may subsequently proposed. Notwithstanding such approval, the CONSULTANT shall, as provided in this Contract, retain full responsibility for the Services and for the Contents of all Reports required hereunder. In the event that any subcontractor is found by PPA to be incompetent or incapable of discharging assigned duties, PPA may request the CONSULTANT to provide a replacement with qualifications and experience acceptable to PPA, or to resume the performance of the Services itself.

6.05 **Prohibition on Association/Conflicting Activities** - The CONSULTANT agrees that during the term of this Contract and after its termination, the CONSULTANT and any entity affiliated with the CONSULTANT as well as any Sub-Consultant and any entity affiliated with such Sub-Consultant, shall be disqualified from providing goods, works, or consulting services for any project resulting from or closely related to this Contract other than the Services and any continuation thereof provided there is no current or future conflict.

The CONSULTANT shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any of the following activities:

- a) during the term of this Contract, any business or professional activities in the Philippines which would conflict with the activities assigned to them under this Contract; and

Witness  
 ADRIAN FERDINAND S. SUGAY  
 Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
 BY: *[Signature]*  
 JAY DANIEL R. SANTIAGO  
 General Manager

- b) for a period of two (2) years after the expiration of this Contract, the CONSULTANT shall not engage, and shall cause its Personnel as well as their Sub-Consultants and its Personnel not to engage in the activity of a purchaser (directly or indirectly) of the assets on which they advised the PPA under this Contract nor in the activity of an adviser (directly or indirectly) of potential purchasers of such assets. The CONSULTANT also agrees that their affiliates shall be disqualified for the same period of time from engaging in the said activities.

**6.06 Confidentiality** - Except with the prior consent of the PPA, the CONSULTANT and its Personnel shall not, at any time, communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the CONSULTANT and its Personnel make public the recommendations formulated in the course of, or as a result of the Services. For purposes of this Section, "confidential information" means any information or knowledge acquired by the CONSULTANT and/or its Personnel arising out of, or in connection with the performance of the Services under this Contract that is not otherwise available to the public.

**6.07 Independent Contractor** - Nothing contained herein shall be construed as establishing a relation of employer and employee or of principal and agent as between the PPA and the CONSULTANT. The CONSULTANT, subject to this Contract, has complete charge of its Personnel and Sub-Consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

The CONSULTANT shall, during the performance of the Services, be an independent contractor, retaining complete control over its Personnel, conforming to all statutory requirements with respect to all its employees, and providing all appropriate employee benefits.

**6.08 Indemnifications** - The CONSULTANT holds the PPA free and harmless from any and all liabilities, suits, actions, demands, or damages arising from death or injuries to persons or properties, or any loss resulting from or caused by its staff and personnel incident to or in connection with the services under this Contract.

The CONSULTANT agrees to indemnify, protect and defend at its own expense the PPA and its agent from and against all actions, claims, and liabilities arising out of acts done by the CONSULTANT or its Staff in the performance of the services including but not limited to the use or violation of any copyrighted materials, patented invention, article or appliance.

**6.09 Taxes** - Any and all taxes, fees, dues or charges of whatever form, kind or nature in connection with or arising out of this Contract or from the execution and performance of the obligations hereunder shall be borne exclusively by the CONSULTANT.

**6.10 Responsibility - Redentor S. Jardin** shall be responsible to PPA for the performance of the services and in all obligations and responsibilities of the CONSULTANT under the Contract. **R.S. Jardin & Associates** shall receive and maintain all the necessary communications and contracts with the PPA for the proper performance of the Services. Any actionable act of **Redentor S. Jardin** shall be construed likewise as violation of **R.S. Jardin & Associates**.

**ARTICLE VII**

**GENERAL CONDITIONS**

**7.01 Laws of the Republic of the Philippines** - The proper law of this Contract shall

Witness :  
MICHAEL O. KIEFFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY :  
REDENTOR S. JARDIN  
Proprietor

Witness :  
ADRIAN FERDINAND S. SUGAY  
Chairperson, HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY :  
JAY DANIEL R. SANTIAGO  
General Manager

CONSULTANT and the Staff as well as the Sub-Consultant/Contractor, if any, will conform to all applicable laws of the same and will take prompt corrective action with regard to any violation called to their attention.

**7.02 Proprietary Rights of the PPA -**

**7.02.1 On Documents, Software and Computer Programs** - All plans, drawings, specifications, designs, reports, other documents and software prepared by the CONSULTANT for PPA under this Contract, shall become and remain the property of PPA and the CONSULTANT shall, prior to termination or expiration of this Contract, deliver all such documents, reports, software, etc. to PPA, together with a detailed inventory thereof.

All computer programs developed by the CONSULTANT under this Contract shall be the sole and exclusive property of PPA, provided, however, that the CONSULTANT may use such program for its own use with prior written approval of PPA. If license agreement are necessary or appropriate between the CONSULTANT and third parties for purpose of development of any such computer programs, the CONSULTANT shall obtain the PPA's prior written approval to such agreement. In such cases, PPA shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned.

It is also agreed and understood that all rights, title and interest in and to the deliverables and other reports/works that the CONSULTANT may develop and supply in connection with this Contract, including but not limited to patent, copyright, trade-mark and other intellectual property rights shall be exclusively owned by and belong to PPA.

**7.02.2 On Equipment and Materials** - Equipment and Materials made available to the CONSULTANT by PPA, or purchased by the CONSULTANT with funds provided by PPA shall be the property of the PPA and shall be marked accordingly. Upon termination or expiration of this Contract, the CONSULTANT shall make available to PPA an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with PPA instruction. While in possession of such equipment and materials, the CONSULTANT, unless otherwise instructed by PPA in writing, shall insure it at the expense of PPA in an amount equal to their full replacement value.

**7.03 Control and Approval of the PPA** - The PPA General Manager or the Assistant General Manager for Engineering will designate in writing an official who shall supervise the project and shall be the authorized representative of PPA with regard to communications and/or approval in all matters relating to the Services under this Contract. The CONSULTANT shall, in advance, consult and secure approval of the PPA General Manager or his designated official or officials before acting upon important decisions and procedures.

**7.04 Insurance -**

**7.04.1** The CONSULTANT, at its own cost, shall be responsible for taking out or maintaining any insurance policy against any risk related to the project.

**7.04.2** The PPA undertakes no responsibility in respect of any life, health, accident, travel and any other insurance coverage for the CONSULTANT personnel or for the dependent of any such personnel.

**7.05 Changes** - The PPA may at any time, by written notice to CONSULTANT issue

Witness:  
**MICHAEL O. KIEFER**  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY: *[Signature]*  
**REYDOR S. JARDIN**  
Proprietor

Witness:  
**ADRIAN FERDINAND S. SUGAY**  
Chairperson, MO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY: *[Signature]*  
**JAY DANIEL R. SANTIAGO**  
General Manager

or direct the omissions of work of Services covered by this Contract. The CONSULTANT shall not make any additional changes, alterations and omissions except upon the prior written approval of the PPA.

The PPA may cause the CONSULTANT to terminate the services of some or all of the Personnel if the services of said Personnel are considered no longer necessary. The Notice of Termination however, shall not be less than fifteen (15) calendar days prior to the effective date of termination.

7.06 **Completion Time** - The CONSULTANT shall perform and complete the Services subject of this Contract within a period of **EIGHT (8)** calendar months to be reckoned from the commencement date mentioned in Section 9.02 hereof.

7.07 **Performance Security** - To guarantee the faithful performance of the CONSULTANT of its obligations under this Contract in accordance with the Bidding Documents, it shall post a performance security prior to the signing of the contract, in an amount equal to a percentage of the total contract price in accordance with the following schedule:

- (a) Irrevocable Letter of Credit issued by a Universal or Commercial Bank - Five (5%) of the total contract price
- (b) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security - Thirty percent (30%) of the Total Contract Price

Performance security shall be denominated in Philippine Pesos and posted in favor of the procuring entity, which shall be forfeited in the event it is established that the winning bidder is in default in any of its obligations under the contract. It shall remain valid until the issuance by the procuring entity of the Certificate of Completion.

7.08 **Liquidated Damages** - If the CONSULTANT fails to deliver any or all of the Services within the period(s) specified in this Contract, the PPA shall without prejudice to its other remedies under this Contract and under the Applicable Law, deduct from the contract price, as liquidated damages, a sum equivalent to one-tenth of one percent (1/10 of 1%) of the price of the unperformed portion of the Services for each day of delay based on the approved contract schedule up to a maximum deduction of ten percent (10%) of the contract price. Once the maximum is reached, the PPA may consider termination of this Contract pursuant to Section 8.06 hereof.

7.09 **Notice of Delay** - In the event that the CONSULTANT encounters delay in obtaining the required support services and facilities under this Contract, it shall promptly notify PPA of such delay and may request an appropriate extension for completion of the Services. An extension of time may be granted only if it is established that the cause of the delay in the performance of the work is due to the failure of PPA to provide the required services and facilities.

7.10 **Audits** - The CONSULTANT shall keep clear and orderly records of all accounts, expenses, salaries and costs. The monthly invoices to be submitted by the CONSULTANT under the provisions of Section 4.05 of this Contract shall be subject to review or verification by PPA and the Commission on Audit (COA) for purposes of payment. The expenses in connection with such review or verification shall be for the account of PPA.

Witness:  
MICHAEL O. KIEFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY: *[Signature]*  
REDENTOR S. JARDIN  
Proprietor

Witness:  
ADRIAN FERDINAND S. SUGAY  
Chairperson/HO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY: *[Signature]*  
JAY DANIEL R. SANTIAGO  
General Manager

7.11 **Certificate of Completion** - PPA shall issue the corresponding Certificate of Completion to the CONSULTANT only upon full completion of the subject services to the satisfaction of the former and fulfillment by the CONSULTANT of all the terms and conditions set forth in this Contract.

7.12 **Integration of all Prior Contracts and Negotiations** - It is agreed that this Contract expresses all the understanding, promises and covenants of the parties and that it integrates, combines and supersedes prior negotiations, understanding and agreements whether written or oral.

7.13 **Notarization and Documentation** - The documentation, notarial fees and documentary stamps in connection with this Contract shall be for the account of the CONSULTANT.

7.14 **Validity Clause** - If any terms or conditions of this Contract is held invalid or contrary to law, the validity of other terms and conditions hereof shall not be affected thereby.

7.15 **Warranty** - The CONSULTANT hereby warrants that it has not given, or promised to give any money or gift to any official or employee of the PPA or the Government to secure this Contract. Any violation of this warranty shall be sufficient ground for revocation or cancellation of this Contract.

The CONSULTANT also warrants that the Services shall be performed with reasonable care in a diligent and competent manner and hence, accepts liability in case of problems which may arise in view of its recommendations.

ARTICLE VIII

**DISPUTES, ARBITRATION AND TERMINATION**

8.01 **Disputes** - The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof.

8.02 **Arbitration** - Any dispute between the Parties as to matters arising pursuant to this Contract which cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for arbitration in the Philippines in accordance with the provisions of Republic Act No. 9285, otherwise known as the Alternative Dispute Resolution Act of 2004.


8.03 **Enforcement** - Any decision reached by arbitration may be enforced by either party in any court of competent jurisdiction in the City of Manila. Should PPA be constrained to resort to court action to enforce or safeguard its rights and interest under this Contract, the CONSULTANT shall be liable for Attorney's Fees in the amount equivalent to twenty percent (20%) of the total sum claimed in the complaint, exclusive of other damages and expenses in litigation.

8.04 **Consultant's Duty to Perform** - Despite any dispute between PPA and CONSULTANT, the CONSULTANT shall proceed diligently with the performance of its services as directed by the PPA.

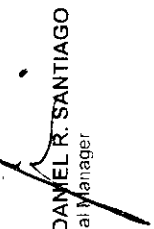
8.05 **Suspension** -

8.05.1 The PPA shall, by written notice of suspension to the CONSULTANT, suspend all payments to the CONSULTANT hereunder if the CONSULTANT fail to perform any of their obligations due to their own fault or due to force majeure or other circumstances beyond the control of

Witness :  
MICHAEL O. KIEFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

Witness :  
ADRIAN FERDINAND S. SUGAY  
Chairperson, MO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTIAGO  
General Manager

CONSULTANT) under this Contract, including the carrying out of the Services, provided that such notice of suspension:

- (a) shall specify the nature of the failure; and
- (b) shall request the CONSULTANT to remedy such failure within a period not exceeding thirty (30) days after receipt by the CONSULTANT of such notice of suspension.

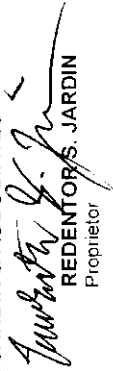
8.05.2 The CONSULTANT may, without prejudice to its right to terminate this Contract, by written notice of suspension, suspend the Services if the PPA fails to perform any of its obligations which are critical to the delivery of the CONSULTANT's services such as non-payment of any money due the CONSULTANT within forty-five (45) days after receiving notice from the CONSULTANT that such payment is overdue.

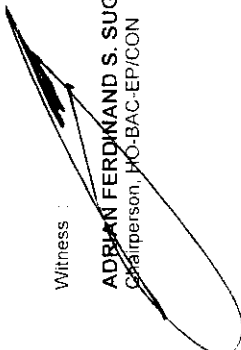
**8.06 Termination of the Contract -**

8.06.1 Termination by the PPA – The PPA shall terminate this Contract when any of the following conditions attends its implementation:

- (a) Outside of force majeure, the CONSULTANT fails to deliver or perform the Outputs within the period (s) specified in the Contract, or within any extension thereof granted by the PPA pursuant to a request made by the CONSULTANT prior to the delay;
- (b) As a result of force majeure, the CONSULTANT is unable to deliver or perform a material portion of the Outputs and Deliverables for a period of not less than sixty (60) calendar days after the CONSULTANT's receipt of the notice from the PPA stating that the circumstance of force majeure is deemed to have ceased;
- (c) In whole or in part, at any time for its convenience, the Head of the PPA may terminate the Contract for its convenience if he has determined the existence of conditions that make Project Implementation economically, financially, or technically impractical and/or unnecessary, such as, but not limited to, fortuitous event(s) or changes in law and National Government policies;
- (d) If the CONSULTANT is declared bankrupt or insolvent as determined with finality by a court of competent jurisdiction, in which event, termination will be without compensation to the CONSULTANT, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the PPA and/or the CONSULTANT.
- (e) In case it is determined prima facie that the CONSULTANT has engaged, before or during the implementation of this Contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to, the following: corrupt, fraudulent, collusive and coercive practices; drawing up or using forged documents; using adulterated materials, means or methods, or engaging in production contrary to rules of science or the trade; and any other act analogous to the foregoing. For purposes of this clause, corrupt, fraudulent, collusive, and coercive practices shall have the same meaning as that provided in the Contract Documents, specifically the Instructions to Bidders which form part of this Contract;

Witness :  
  
MICHAEL O. KIEFFER  
Laboratory Technician

R.S. JARDIN & ASSOCIATES  
BY:   
REDENTOR S. JARDIN  
Proprietor

Witness :  
  
ADRIAN FERDINAND S. SUGAY  
Chairperson, MO-BAC-EP/CON

PHILIPPINE PORTS AUTHORITY  
BY:   
JAY DANIEL R. SANTIAGO  
General Manager

