

DRAFT

**TENDER DOCUMENTS
FOR
CONSTRUCTION WORK
ON
THE PROJECT
FOR
RECONSTRUCTION OF QUAYWALL, SLIPWAY AND
CFHC OFFICE BUILDING AT GALLE FISHERY
HARBOR
DAMAGED BY TSUNAMI DISASTER
(DESIGN AND BUILD CONTRACT)**

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ON
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FOR
RECONSTRUCTION OF QUAYWALL, SLIPWAY AND CFHC OFFICE
BUILDING AT GALLE FISHERY HARBOR
DAMAGED BY TSUNAMI DISASTER
(DESIGN AND BUILD CONTRACT)**

Section - 1

INSTRUCTIONS TO TENDERERS

Section 1. INSTRUCTIONS TO TENDERERS

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CHAPTER 1 INTRODUCTION

1. THE PURPOSE OF TENDER

- (1) For the purpose of contributing to the execution of the Project for Reconstruction of Quaywall, Slipway and CFHC Office Building at Galle Fishery Harbor Damaged by Tsunami Disaster (hereinafter called “the Project”), in its current portion of the execution of the Program for Efforts to cope with the Damages caused by the Great Earthquake off the Coast of Sumatra, the Republic of Indonesia, and by Indian Ocean Tsunami Disaster (hereinafter called “the Program”) under Japan’s Grant aid to the Government of the Democratic Socialist Republic of Sri Lanka in accordance with the Exchange of Notes signed on the 17th day of January, 2005 between the Government of Japan (the Donor) and the Government of the Democratic Socialist Republic of Sri Lanka (the Recipient).
- (2) The Project consists of the construction (design and build contract basis) of the followings, namely;
 - Reconstruction of Quaywall, Slipway and CFHC Office Building at Galle Fishery Harbor
- (3) On behalf of the Government of the Democratic Socialist Republic of Sri Lanka, Japan International Cooperation System (JICS) (hereinafter called “the Employer”) as a competent agent of the Government of the Democratic Socialist Republic of Sri Lanka to secure the smooth and successful implementation of the Programme, will invite the qualified Tenderers provided in Clause 2 of this Chapter to Tender for Construction Work for the Project.
- (4) The Executing Agency of the Project shall be the Ceylon Fishery Harbours Corporation under the Ministry of Fisheries & Aquatic Resources in the Democratic Socialist Republic of Sri Lanka.

2. QUALIFICATION OF TENDERERS

Tenderers shall be construction firms and companies who were qualified on the pre-qualification procedure to participate in the Tendering process by the Employer and obtained the Tender Documents.

3. DESCRIPTION OF THE PROJECT

- (1) The Employer takes responsibility for implementing the Project, with the consultancy services provided by the Consultant who is designated by the Employer through the tender process for the Project (hereinafter called “the Consultant”).
- (2) The Project will contribute to the recovery of social securities through construction of quaywall, slipway and CFHC building in the Galle Fishery Harbor.

- (3) The Tenderer, if awarded, shall proceed with the work in accordance with the detailed design and drawings prepared by the Tenderer stipulated in the Tender Documents.

4. SCOPE OF WORKS

The scope of works of the Project covered by this Tendering (hereinafter called “the Work”) of the Project consists of the following:

- Construction of Quaywall, Slipway and CFHC Office Building at Galle Fishery Harbor

Details of the Work shall be stipulated in due conformity with the Specifications of the Tender Documents.

5. COMPLETION DATE OF THE WORK

The Work shall be completed within ten (10) calendar months from the date of Notice to Commence.

6. ACQUAINTANCE WITH LOCAL CONDITIONS

- (1) The Project Site is located in Galle Fishery Harbor in Galle District.
- (2) To the extent practicable (taking into account of cost and time), the Tenderers shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances that may influence or affect the Tender or to have inspected and examined the Project Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):
 - 1) the form and nature of the Project Site, including sub-surface conditions,
 - 2) the hydrological and climatic conditions,
 - 3) the extent and nature of the Work and goods necessary for the execution and completion of the Work and remedying of any defects,
 - 4) the laws, procedures and labor practices of the country, and
 - 5) the Contractor's requirement for access, accommodation, facilities, personnel, power, transport, water and other services.

CHAPTER 2 TENDER DOCUMENTS

1. COMPOSITION OF TENDER DOCUMENTS

The Tender Documents are composed of the following:

- (1) Instructions to Tenderers
- (2) Forms
- (3) Conditions of Contract
- (4) Particular Conditions
- (5) Form of Tender
- (6) Tendering Data and Contract Data
- (7) Specifications
- (8) Bill of Quantities
- (9) Drawings

The documents are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found in the documents, it shall be interpreted in accordance with the above-mentioned sequence as an order of priority.

2. ISSUANCE OF TENDER DOCUMENTS

Tender Documents shall be issued at the Employer's Office of 5th floor, Hilton Colombo Residence, 200, Union Place, Colombo 02, Sri Lanka.

3. RESPONSIBILITY OF TENDERERS

- (1) Tenderers shall have a responsibility to carry out the Works under the "Design and Build Contracts" basis.
- (2) Tenderers shall examine carefully the Tender Documents to understand fully the content of the Work including the amounts and any difficulties or restrictions that may affect the execution and completion of the Work.
- (3) Tenderers shall be liable for any failure or negligence to obtain reliable and necessary information for successful execution or completion of the Work.

4. CLARIFICATION OF TENDER DOCUMENTS

- (1) Any inquiries on the Tender Document or any doubts as to its interpretation shall be written in English and sent to the Consultant by facsimile on or before 17:00 on the ___ day of (month), 2005

- (2) The Employer shall respond in writing to the inquiry and/or expressed doubt on interpretation. The responses will be sent by facsimile to all prospective Tenderers who purchased the Tender Documents on the ___ day of (month), 2005.
- (3) All prospective Tenderers shall send a facsimile to the Consultant for the confirmation of the receipt.
- (4) The responses shall constitute a part of the Tender Documents provided in Chapter 2 Clause 1.

5. ADDENDA OF TENDER DOCUMENTS

- (1) The Consultant may, for any reason, whether at his own initiative or in response to a clarification requested by prospective Tenderers, modify the Tender Documents.
- (2) The Employer will notify in English all prospective Tenderers by facsimile of any addenda indicating such modification on or before the ___ day of (month), 2005, i.e., **at least 6 calendar days** before the day of Tender opening.
- (3) The prospective Tenderers shall send the confirmation of receiving the addenda stated above to the Consultant by facsimile.
- (4) The addenda shall constitute a part of the Tender Documents provided in Chapter 2 Clause 1.

CHAPTER 3 PREPARATION AND SUBMISSION OF TENDER

1. PREPARATION OF TENDER

- (1) The Tenderer shall be prepared in accordance with the forms as shown in "SCHEDULE" in this INSTRUCTION TO TENDERERS unless otherwise specified particularly. The Tender shall be also submitted by filling out the forms and documents provided on the Form of Tender. Each of the forms shall be completely filled in indelible ink or typewritten or computer printouts. No interlinings, erasures (or crossing out), addition, or alteration may be allowed. If the documents submitted by the Tenderer do not meet the requirements mentioned above, the Tenderer may be disqualified.
- (2) The Tenderers shall submit the following:
 - 1) Letter of Authority with signature of the representative duly certified by the Tenderer.
 - 2) General Information on Tenderer.

(See the attached "Schedule" in this Part.)
 - 3) Construction schedule together with method statement and labor histogram

(The Work shall be completed by the date appointed in Clause 1, Chapter 1.)
 - 4) Form of Tender, Tendering Data and Contract Data
 - 5) Tender Security (See (5) in this Clause below.)
 - 6) Priced Bill of Quantities
- (3) All entries in the Tender including attachments shall be written in English. All units in the Tender shall be in the metric system unless otherwise specified in the Specifications or Drawings.
- (4) Incomplete, vague or conditional Tenderer will not be considered.
- (5) Tenderer shall submit a Tender Security. The details are described in the conditions below:
 - 1) Issuer shall be by the head office or a branch in Sri Lanka of a first class, internationally recognized bank or an insurance company.
 - 2) Form shall be in a form of guarantee issued by the above-mentioned institution.
 - 3) Amount shall be not less than two percent (2%) of the total Tender price.

4) Validity shall cover more than 60 days after the opening date of Tender. (May be extended if so requested)

5) Timing of Release

i) To the unsuccessful Tenderers

Promptly after the official decision is made that they are unsuccessful.

ii) To the successful Tenderer

After signing the Contract and his submission of a performance security.

2. TENDER PRICES

(1) All prices shall be quoted in Sri Lanka Rupees (Rs.) without exception and the Tender price shall be stated on the basis of lump sum price.

(2) Duties and VAT component under this contract shall be borne by the Executing Agency.

(3) Tender prices shall be firm and final, and not subject to escalation.

(4) The contract price is also to be made in Sri Lanka Rupees (Rs.). However, all payments from the Employer shall be done by bank transfer from Japan to the bank account designated by the Contractor in Japanese Yen. The conversion from Sri Lanka Rupees to Japanese Yen shall be made according to the exchange rate published on the date of Certificate required for each payment issued by the Employer.

3. TERM OF VALIDITY OF TENDER

The Tenderers shall remain valid and irrevocable for a period of sixty (60) days on and after the date of the Tender opening.

4. SUBMISSION OF TENDER

(1) The Tenderers shall prepare one (1) original and one (1) copy of their Tender. The Tenderers shall submit the Tender in envelopes that are properly sealed and duly marked as, "ORIGINAL" or "COPY", the name of Tenderer, and the name of the Project. Therefore, the Tenderers shall submit two sets (ORIGINAL and COPY) respectively

(2) The Tender shall be submitted to the address specified in Chapter 4 herein, not later than the closing time for submission of Tender specified in the same.

(3) The Tender shall be submitted in person. The Tender through other means such as telex, telegraph, facsimile, e-mail or mail shall not be accepted.

- (4) Any Tender received after the closing time will be returned unopened.
- (5) Alternative Tender shall not be allowed.
- (6) The Tenderer is neither allowed to modify nor withdraw his Tender after the closing time.

5. INTERPRETATION OF TENDER

- (1) Should there be any discrepancy between the "ORIGINAL" and the "COPY", the "ORIGINAL" shall prevail. If there is a difference between the figures entered in words and in numerals in the Tender, the figures entered in words shall prevail.
- (2) Should there be any discrepancy between the Tender price in the Letter of Tender and the total price of the Bill of Quantities, the Tender price in the Form of Tender shall prevail.

CHAPTER 4 OPENING OF TENDER

1. INTRODUCTION

- (1) The Proposals of all Tenders shall be opened at the Employer's office, immediately after the closing time, in the presence of the Tenderers as follow.

Venue: Conference room on the 3rd floor in Hilton Colombo Residence

Time & Date: 11:00 a.m. Sri Lanka Standard Time on the ___ day of (month), 2005

Address: Hilton Colombo Residence, 200, Union Place, Colombo 02, Sri Lanka
Telephone/Facsimile; +94-11-536-0503

At least one (1) authorized person with a Letter of Authority of the Tenderer shall attend the Tender opening.

2. TENDER OPENING PROCEDURES

- (1) All participants of the Tender opening shall register their signatures in an attendant list prepared by the Consultant before the Tender opening.
- (2) The Consultant shall confirm the validity of each authorized person with a Letter of Authority of the Tenderers. In case the document is incomplete or inappropriate, the Tenderers shall forfeit his right to participate in the Tender opening any further and the Tender shall be returned unopened.
- (3) Tenders will be open immediately after closing time and the tender price offered by each Tenderer shall be read aloud and recorded.
- (4) In the event that all Tenderers are not successful, the Employer will prepare another Tender with modifications and exercise a re-Tender.

CHAPTER 5 EVALUATION OF TENDER AND AWARD OF CONTRACT

1. EVALUATION OF TENDER

- (1) The Consultant will ascertain, examine and evaluate the Tender in the light of the following:
 - 1) computations are free of material errors,
 - 2) the submitted documents are substantially responsive to the Tender Documents,
 - 3) the required certificates have been provided,
 - 4) documents have been properly signed, and
 - 5) the Tender are otherwise generally in order.
- (2) If a Tender does not substantially conform to the Specifications, or contains inadmissible reservations or otherwise is not substantially responsive to the Tender Documents, it shall be rejected.
- (3) The Consultant will examine and evaluate at his discretion the Tender prices submitted by Tenderers.
- (4) If the Tender of the prioritized Tenderer is incomplete, the Consultant will negotiate for the contract with the next lowest priced Tenderer and these procedures will be followed until the Consultant reaches agreement with a Tenderer.
- (5) The Employer intends to select an appropriate contractor for the Work within one month after opening of Tender.

2. CLARIFICATION OR ALTERNATION OF TENDER

In the examination, evaluation and comparison of the Tender, the Consultant may, at his discretion, ask any Tenderer for a clarification of his Tender. All responses to the requests for clarification shall be in writing, and no change in the total price or the substance of the Tender shall be offered or permitted.

3. PROCESS TO BE CONFIDENTIAL

Information relating to the examination, clarification, and evaluation of Tenders, and recommendations for the award of the contract shall not be disclosed to Tenderers or any other persons who are not officially concerned with such process until the notification of award defined in Chapter 5 Clause 5.

4. CONTACT WITH THE EMPLOYER

- (1) Except for the purpose of clarification of the Tender as provided in Clause 2 of this Chapter, no Tenderers shall contact the Employer and the Consultant on any matter related to the Tender, from the time of the Tender opening to the time of Contract awarding.
- (2) Any attempt by a Tenderer to influence the Employer's and the Consultant's processing or awarding of Tender may result in the disqualification of the Tenderer.

5. LETTER OF ACCEPTANCE

- (1) The Tenderer whose offer substantially conforms to the Specifications and other conditions of the Tender Documents, and who offers the lowest price shall be designated as the successful Tenderer.
- (2) After completion of evaluation of the Tenders, the Employer shall issue the Letter of Acceptance to successful Tenderer within the period of validity of Tenders stated in Chapter 3 Clause 3 hereof by facsimile or registered letter.

6. SIGNING OF CONTRACT

- (1) At the same time that the Employer notifies the successful Tenderer that his Tender has been accepted, the Employer will send the Tenderer the Contract Agreement provided in the Tender Documents, incorporating all arrangements between the parties.
- (2) The following documents shall be considered as integral parts of the Contract:
 - 1) Contract Agreement
 - 2) Tender of the successful Tenderer
 - 3) General Conditions
 - 4) Particular Conditions
 - 5) Specifications
 - 6) Drawings
 - 7) Bill of Quantities and Schedules
 - 8) Instruction to Tenderers and such other documents intended to form the Contract

The documents of the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found in the documents, the interpretation shall be done in accordance with the above-mentioned sequence of the priority.

7. PERFORMANCE SECURITY

The successful Tenderer, having received the Letter of Acceptance, shall furnish a performance security amounting to ten percent (10%) of the total contract price within fourteen (14) days following the date of award. The Employer shall have the custody of the performance security.

8. NOTIFICATION OF THE RESULT OF TENDER

Upon receiving the performance security from the successful Tenderer, the Employer shall promptly notify the other Tenderers in writing that their Tenders have been unsuccessful.

CHAPTER 6 COMMON CONDITIONS

1. SAFETY PROCEDURE

The Contractor shall:

- (1) comply with all applicable safety regulations in Sri Lanka,
- (2) take care for the safety of all persons entitled to be on the Project Site,
- (3) use reasonable efforts to keep the Project Site and the Work clear of unnecessary obstruction so as to avoid danger to persons entitled to be on the Project Site,
- (4) provide fencing, lighting, guarding and watching of the Work until completion and taking-over, and
- (5) provide any temporary works (including roadways, footways, guards and fences) that may, because of the execution of the Work, be necessary for the use by or protection of the public and of owners and occupants of adjacent land.

2. PROTECTION OF THE ENVIRONMENT

The Contractor shall take all reasonable steps to protect the environment (both on and off the Project Site) and to limit damage and nuisance to people and property resulting from pollution, noise or other aspects of his operations.

2.0 PERSON MANAGING THE AFFAIRS OF THE CONTRACTOR'S ORGANIZATION

(a) Name of person :

(b) Designation / Title :

(c) Certified copy of appointment / authority and designation

(d) Telephone Number :-.....

(e) E-mail Address : -.....

(f) Fax No. :-.....

Section - 2

FORMS

Form of Tender Security, Letter of Acceptance, Form of Agreement,
Forms of Performance Guarantees and Bonds
And
Form of Advance Payment Guarantee

TENDER SECURITY

WHEREAS _____ [name of tenderer] (hereinafter called "the Tenderer") has submitted his Tender dated _____ [date] for the construction of _____ [name of Contract] (hereinafter called "the Tender").

KNOW ALL PEOPLE by these presents that we _____ [name of the organization] having our registered office at _____ (hereinafter called "Guarantor") are bound unto Japan International Cooperation System (JICS) of Japan (hereinafter called "the Employer") in the sum of Sri Lanka Rupees _____ for which payment well and truly to be made to the said Employer. The Guarantor binds itself, its successors, and assigned by these presents.

SEALED with the Common Seal of the said Guarantor this ____ day of ____ 200_.

THE CONDITIONS of this obligation are:

- (1) If, after Tender opening, the Tenderer withdraws its Tender during the period of Tender validity specified in Form of Tender; or
- (2) If the Tenderer having notified of the acceptance of its Tender by the Employer during the period of Tender validity:
 - (a) fails or refuses to execute the Form of Agreement in accordance with the Instruction to Tenderers, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Tenderers; or
 - (c) does not accept the correction of the Tender Price pursuant to Clause 1 and 2, Chapter 5. Evaluation of Tender and award of Contract of the Instruction to Tenderers.

we undertake to pay to the Employer up to amount upon receipt of his first written demand, without the Employer's having to substantiate its demand, provided that in its

demand the Employer will note that the amount claimed by it is due to it owing to the occurrence of one or more of the above conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to _____ *[date]*.

Any demand in respect of this guarantee should reach the Guarantor not later than the above date.

DATE _____ SIGNATURE OF THE GUARANTOR _____

SEAL

WITNESS _____

[signature, name and address]

LETTER OF ACCEPTANCE

[letter head paper of the Employer]

To: _____ _____ [date]
_____ *[name of the Contractor]*
_____ *[address of the Contractor]*

This is to notify you that your Tender dated _____ for design, construction and remedying defects of the _____ *[name of the Contract and identification number, as given in the Contract Data]* for the Contract price of Rupees (_____ *[amount in numbers and words]* as corrected in accordance with Instruction to Tenderers.

You are hereby instructed to proceed with the execution of the said Works in accordance with the Contract documents.

Authorized Signature: _____

Name and title of Signatory: _____

Name of Agency: _____

Attachment: Agreement

CONTRACT AGREEMENT

This Agreement made and entered in to the ____ day of (month), 2005 between Japan International Cooperation System (JICS) of Japan (hereinafter called "the Employer") of the one part, and _____ [*Name and Address of the Contractor*] (hereinafter called "the Contractor") of the other part,

WHEREAS, the Government of Japan extends its grant to the Government of the Democratic Socialist Republic of Sri Lanka on the basis of "the Exchange of Notes" signed on the 17th day of January, 2005 between the Governments concerning the execution of the Programme for Efforts to cope with the Damages caused by the Great Earthquake off the Coast of Sumatra, the Republic of Indonesia, and by Indian Ocean Tsunami Disaster (hereinafter referred to as "the Programme"); and

WHEREAS, the Employer, as a competent agent of the Government of the Democratic Socialist Republic of Sri Lanka to secure the smooth and successful implementation of the Program, is desirous to execute and complete the Work for the Project for Reconstruction of Quaywall, Slipway and CFHC Office Buildings at Gall Fishery Harbor Damaged by Tsunami Disaster (hereinafter referred to as "the Project"), in its current portion of the Program; and

WHEREAS, the Contractor is willing to execute and complete the Work and the remedying of any defects therein, to the Employer under the terms and conditions as set forth in this Agreement;

The Employer and the Contractor agree 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 shall be deemed to form and be read and construed as part of this Agreement:
 - (a) The Letter of Acceptance dated _____

- (b) The Letter of Tender dated _____
 - (c) The Addenda no. _____
 - (d) The Conditions of Contract
 - (e) Contract Data
 - (f) The Specification
 - (g) The Drawings
 - (h) The Priced Bill of Quantities, and
 - (i) The completed Schedules.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Work and remedy any defects therein, in conformity with the provisions of the Contract.
4. The Employer, on behalf of the Government of the Democratic Socialist Republic of Sri Lanka, hereby covenants to pay the Contractor, in consideration of the execution and completion of the Work and the remedying of defects therein. The Contract Price at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written in accordance with their respective laws.

SIGNED by _____
For and on behalf of the Employer in the
presence of

SIGNED by _____
For and on behalf of the Contractor in the
presence of

Witness: _____
Name: _____
Address: _____
Date: _____

Witness: _____
Name: _____
Address: _____
Date: _____

PERFROMANCE GUARANTEE

(Unconditional)

NUMBER: _____

DATE: _____

SUM GUARANTEED: _____

To: Japan International Cooperation System (JICS) of Japan (hereinafter called "the Employer), 5th Floor, Hilton Colombo Residence, 200, Union Place, Colombo 02, Sri Lanka.

Whereas _____ [*name and address of the Contractor*] (hereinafter called "the Contractor) has undertaken, in pursuance of contract No. _____ dated _____ to execute _____ [*name of Contract*] (hereinafter called "the Contract).

And whereas it has been stipulated by the Employer in the said Contract that the Contractor shall furnish the Employer with a Guarantee by a recognized organization for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

And whereas we have agreed to give the Contractor such a Guarantee;

Now therefore we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [*amount of Guarantee*] _____ [*amount in words*], such sum being payable in the type and proportion of currencies in which the Contract Price is payable, and we undertake to pay the Employer, upon the Employer's first written demand and without cavil or argument, any sum or sums within the said amount as aforesaid without the Employer needing to prove or to show grounds or reasons for the Employer's demand for the sum specified therein.

We hereby waive the necessity of the Employer demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of

the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between the Employer and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any change, addition or modification.

This guarantee shall be valid until a date 28 days from the date of issue of the Certificate of Completion.

Signature and the Seal of the Guarantor: _____

Name of the Organization: _____

Address: _____

Date: _____

Witness: _____

ADVANCE PAYMENT GUARANTEE

NUMBER: _____

DATE: _____

SUM GUARANTEED: _____

To: Japan International Cooperation System (JICS) of Japan (hereinafter called "the Employer), 5th Floor, Hilton Colombo Residence, 200, Union Place, Colombo 02, Sri Lanka.

Name of the Contract _____

In accordance with the provision of the Conditions of Contract, Clause 51 (Advance Payment), of the above mentioned contract _____
[name and address of contractor] (hereinafter called "the Contractor") shall deposit with the Employer a guarantee acceptable to the Employer to guarantee his proper and faithful performance under the said Contract in and amount of _____
_____ [amount of guarantee] _____ [amount in words].

We, the _____ [the name and address of the organization], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the Employer on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee], such amount to be reduced periodically by the amounts recovered by the Employer from the proceeds of the Contract.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract document which may be made between the Employer and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice or any such change, addition or modification.

No drawing may be made by the Employer under this guarantee until we have received notice in writing from the Employer that an advance payment of the

amount listed above has been paid to the Contractor pursuant to the Contract.

This guarantee shall remain valid and in full effect from the date of the advance payment received by the Contractor under the Contract until the Employer receives full repayment of the same amount from the Contractor.

Signature and the Seal of the Guarantor: _____

Name of the Organization: _____

Address: _____

Date: _____

Witness: _____

Section - 3

CONDITIONS OF CONTRACT

Conditions of contract shall be read in conjunction with Contract Data

Section - 3. CONDITIONS OF CONTRACT

The General Conditions shall be “Conditions of Contract for STANDARD BIDDING DOCUMENT (PROCUREMENT OF WORKS : DESIGN & BUILD CONTRACTS), First Edition - November 2002, Reprinted with amendments – May 2003 published by the Institute for Construction Training and Development (ICTAD) , Publication No. ICTAD/SBD/04.

The General Conditions shall be read in conjunction with the Particular Conditions. Where indicated in the Particular Conditions, the General Conditions shall be amended, and where a discrepancy occurs between the two documents the Particular Conditions shall have priority.

Section - 4
PARTICULAR CONDITIONS

CONDITIONS OF CONTRACT

PARTICULAR CONDITIONS

1.0 General Provisions

Definitions	1.1.2.2	The Employer: The Employer is Japan International Cooperation System (JICS), the agent of the Democratic Socialist Republic of Sri Lanka.
	1.1.2.4	The Engineer: The Engineer is (to be nominated) . “The word ‘Bid’ is synonymous with ‘Tender’, and the words ‘Appendix to Bid’ with Appendix to Tender, ‘and the words ‘Bidding Documents’ with ‘Tender Documents’.”
Law and Language	1.4	<i>Delete it's entirely, and substitutes following paragraph:</i> The Contract shall be governed by the laws of Japan and the language for all purposes for the Contract shall be English.

13.0 Variations and Adjustments

Day work	13.5	Not Applicable
Adjustments for Changes in Cost	13.7	Not Applicable

14.0 Contract Price and Payment

The Contract Price	14.1	<i>Delete paragraph (b) and replace the following:</i> (b) Duties and VAT component under this contract shall be borne by the Executing Agency.
Advance Payment	14.2	<i>Delete it's entirely, and substitutes the following paragraph;</i> Advance payment will be made in accordance with Sub-clause 14.5
Payment	14.5	<i>Delete it's entirely, and substitutes the following paragraph;</i>

The Contract Price shall be quoted in Sri Lanka Rupees (Rs) on the basis of lump sum price and shall be firm and final, and not subject to escalation.

The Contract Price will be paid in accordance with the following schedules to the Contractor.

(1) Advance Payment

The amount which corresponds to thirty percent (30%) of the Contract Price shall be paid upon the concluding the Contract and acceptance of the Performance Security from the Contractor together with an on demand bank guarantee equivalent to the advance payment should be submitted from a Commercial Bank operating in Sri Lanka approved by the Central Bank.

(2) First Interim Payment

The amount which corresponds to Thirty percent (30%) of the Contract Price shall be paid upon Fifty percent (50%) of completion of the Work under the Contract.

(3) Second Interim Payment

The amount which corresponds to Thirty percent (30%) of the Contract Price shall be paid upon Eighty-five percent (85%) of completion of the Work under the Contract.

(4) Third interim Payment (Practical completion)

The amount which corresponds to seven and half percent (7 ½ %) of the Contract Price shall be paid upon the practical completion of the Work under the Contract.

(5) Final payment

After the completion of all defects identified during the practical completion and also by the consultant and the client during the 12 months defects liability period together with final certificate issued by the consultant balance 2 ½ percent withheld for the defects liability period shall be released under the contract.

Section - 5

FORM OF TENDER

Form of Tender, Form of Design/Technical Proposal
and Form of Price Proposal

FORM OF TENDER

NAME OF CONTRACT: Design, Construction, and Commissioning of Reconstruction of Quaywall, Slipway and CFHC Office Building at Gall Fishery Harbor

To: Japan International Cooperation System

5th Floor, Hilton Colombo Residence, 200, Union Place, Colombo 2, Sri Lanka

We have examined the Conditions of Contract, Employer's Requirements, and Addenda Nos. _____ for the execution of the above-named Works. We accordingly offer to design, execute and complete the said Works and remedy and defects fit for the purpose, in conformity with the Tender Documents and the enclosed Proposal, at the lump sum stated in the Form of Price Proposal included in a separate envelope and submitted with this tender, or other such sums as may be determined in accordance with the terms and conditions of the Contract.

We confirm that our tender includes this General Information, Price Proposal, and Design/Technical Proposal sealed under three separate envelopes.

We agree to abide by this Tender until _____ *[insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.

We confirm that, we (including members of a joint venture and subcontractors) are not associated, directly or indirectly, with the consultant or any other entity in presentation of the design, specifications, and other documents for the Contract.

If this offer is accepted, we will provide the specified Performance Security, commence the Works as soon as reasonably practicable after the Commencement Date, and complete the Works in accordance with the above-named documents within the Time for Completion. We will ensure that works will be done in conformity with the contract.

Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a tender Contract between us.

We understand that you are not bound to accept the lowest offer or any other tender you may receive.

Signature of the persons duly authorized to sign documents for and on behalf of

Address:

Date: _____

FORM OF DESIGN/TECHNICAL PROPOSAL

NAME OF CONTRACT: Design, Construction, and Commissioning of Reconstruction of Quaywall, Slipway and CFHC Office Building at Gall Fishery Harbor

To: Japan International Cooperation System

5th Floor, Hilton Colombo Residence, 200, Union Place, Colombo 2, Sri Lanka

We have examined the Conditions of Contract, Employer's Requirements, and Addenda Nos. _____ for the execution of the above-named Works.

We accordingly offer to design, execute and complete the said Works and remedy and defects, fit for the purpose in conformity with the Tender Documents and the enclosed Proposal. We are hereby submitting our Tender, which includes this Design/Technical Proposal, General information and a Financial Proposal sealed under a separate envelope.

We understand that you are not bound to accept the lowest offer or any other tender you may receive.

Signature of the persons duly authorized to sign documents for and on behalf of

Address:

Date: _____

FORM OF PRICE PROPOSAL

NAME OF CONTRACT: Design, Construction, and Commissioning of Reconstruction of Quaywall, Slipway and CFHC Office Building at Gall Fishery Harbor

To: Japan International Cooperation System

5th Floor, Hilton Colombo Residence, 200, Union Place, Colombo 2, Sri Lanka

We have examined the Conditions of Contract, Employer's Requirements, and Addenda Nos. _____ for the execution of the above-named Works. We accordingly offer to design, execute and complete the said Works and remedy and defects fit for the purpose, in conformity with the Tender Documents and the enclosed Proposal, for the fix lump sum of _____

_____ or other such sums as may be determined in accordance with the terms and conditions of the Contract. The above amounts are in accordance with the Price Schedules herewith and are made part of this tender. We confirm that our tender includes this Price Proposal, Design/Technical Proposal, and General Information sealed under a separate envelope.

We accept your suggestions for the appointment of the Adjudicator as set out in Tender Data.

We agree to abide by this Tender until _____ *[insert date]*, and it shall remain binding upon us and may be accepted at any time before that date.

We confirm that, we (including all members of a joint venture and subcontractors) are not associated, directly or indirectly, with the consultant or any other entity in preparation of the design, specifications, and other documents for the Contract.

If this offer is accepted, we will provide the specified Performance Security, commence the Works as soon as reasonably practicable after the

Commencement Date, and complete the Works in accordance with the above-named documents within the Time for Completion. We will ensure that works will be done in conformity with the contract.

Unless and until a formal Agreement is prepared and execute this Tender, together with your written acceptance thereof, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest offer or any other tender you may receive.

Signature of the persons duly authorized to sign documents for and on behalf of

Address:

Date: _____

Section - 6

TENDER DATA AND CONTRACT DATA

Section - 6 - 1. TENDER DATA

Instructions to Tenderers

References

Chapter 1 : Introduction

(1.1) (1) The source of funds is The Government of Japan's Grant Aid.

(1.1) (3) The Employer is

Name: Japan International Cooperation System (JICS)

Address: 5th Floor, Hilton Colombo Residence, 200, Union Place,
Colombo 02, Sri Lanka
Telephone/Facsimile; +94-11-536-0503

The Executing Agency of the Project is The Ceylon Fishery Harbours Corporation under the Ministry of Fisheries & Aquatic Resources in the Democratic Socialist Republic of Sri Lanka.

(1.2) The Tenderers shall be pre-qualified Tenderers.

(1.3)(1.4) The Works is reconstruction of quaywall, slipway and CFHC office building at Galle Fishery Harbor in Galle district damaged by Tsunami Disaster; The Works shall be design and build contract basis and consists of construction of quaywall, slipway, CFHC office building and their ancillary works.

Located at Galle Fishery Harbor, Galle District

(1.5) Intended Completion Date is ten (10) calendar months from the Notice to Commence.

Chapter 2 : Tender Documents

(2.2) The office for collection of tender documents is

Chapter 3 : Preparation and Submission of Tender

(3.1) (3) Language of the tender documents shall be English.

(3.1) (5) 3) Amount of Tender Security shall be not less than two percent (2%) of the Total Tender Price.

- (3.2) (2) Duties and VAT component under this contract shall be borne by the Executing Agency. However VAT component shall be shown separately at the end of the Tender Price Summary.
- (3.2) (3) Tender prices shall be firm and final, and not subject to escalation.
- (3.3) Tender validity shall be sixty (60) days on and after the date of the Tender opening.
- (3.4) (1) The Tenderers shall prepare one (1) "Original" and one (1) "Copy" of their Tender. The Tenderers shall submit the Tender in envelopes that are properly sealed and duly marked as, "Original" or "Copy", the name of Tenderer, and the name of the Project.
- (3.4) (2) The Tender shall be submitted to the following date/time and address;
- Submission date and time: 10:00 a.m. Sri Lanka Standard Time on the ____ day of _____ (month), 2005.
- Address: Conference room on the 3rd floor in Hilton Colombo Residence, 200, Union Place, Colombo 02, Sri Lanka
- (3.4) (5) Alternative Tender shall not be allowed.

Chapter 4 : Opening of Tender

- (4.1) The Proposal of all Tenders shall be opened at the Employer's office in the presence of the Tenderers as follow;
- Opening date and time: 11:00 a.m. Sri Lanka Standard Time on the ____ day of _____ (month), 2005.
- Address: Conference room on the 3rd floor in Hilton Colombo Residence, 200, Union Place, Colombo 02, Sri Lanka

Chapter 5 : Evaluation of Tender and Award of Contract

- (5.7) *The Standard Form of Performance Security acceptable to the Employer shall be a Bank Guarantee or a Performance Bond from a reputed Insurance Company operating in Sri Lanka and accepted by the Treasury for issue of Guarantees or from any other organization approved by the Treasury for this purpose.*

The amount of Performance Security is ten percent (10%) of the Total Contract Price. The successful Tenderer, having received the Letter of Acceptance, shall furnish within fourteen (14) days.

Section - 6 - 2. CONTRACT DATA

(The information given under Contract Data will supersede Conditions of Contract)

Clause Reference on Conditions of Contract

1.0 General Provision

(1.1.2.2) The Employer is

Name: Japan International Cooperation System (JICS)

Address: 5th Floor, Hilton Colombo Residence, 200, Union Place,
Colombo 02, Sri Lanka
Telephone/Facsimile; +94-11-536-0503

The Executing Agency of the Project is The Ceylon Fishery Harbours Corporation under the Ministry of Fisheries & Aquatic Resources in the Democratic Socialist Republic of Sri Lanka.

(1.1.2.4) The Engineer is

Name: **(To be nominated)**

Address: _____

(1.1.5.6) The Works is reconstruction of quaywall, slipway and CFHC office building at Galle Fishery Harbor in Galle district damaged by Tsunami Disaster; The Works shall be design and build contract basis and consists of construction of quaywall, slipway, CFHC office building and their ancillary works.

Located at Galle Fishery Harbor, Galle District

(1.4) The Contract shall be governed by the laws of Japan and the language for all purpose for the Contract shall be English.

2.0 The Employer

(2.1) The right of access to, and possession is amended shall be _____
Days from Letter of Acceptance.

3.0 The Engineer

(3.1) Engineer's Duties and Authority.

The Engineer shall obtain the specific approval of the Employer before taking action under the following Sub-Clause of these Conditions:

(a) consenting to the subletting of any art of the Works under Sub-Clause 4.4 (b);

(b) approving an extension of the Time for Completion, and/or any additional payment under Sub-Clause 19.1 (Contractor's Claim) issuing variation under Sub-Clause 13.1 (Right to vary Employer's Requirement), except in an emergency situation, as reasonably determined by the Engineer;

(c) approving additional payment under Sub-Clause 13.3.

Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibilities under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13.3 and shall notify the Contractor accordingly, with a copy to the Employer.

4.0 The Contractor

(4.1) Key Personnel

Schedule of Key Personnel:

Name with qualifications and experience to be written:

(a) Design

(b) Contract Administration

(c) Accounting

(4.2) The amount of Performance Security is ten percent (10%) of the Total Contract Price. The successful Tenderer, having received the Letter of acceptance, shall furnish within fourteen (14) days.

5.0 Design

(5.4) In addition to the Clause 5.4, the alternative standards which are internationally recognized standards are also applicable.

8.0 Commencement, Delays and Suspension

(8.1) Commencement date shall be ____ Days from the issuance of the Letter of Acceptance.

(8.2) Time for Completion is ten (10) calendar months from the Notice to Commence.

- (8.7) The Liquidated Damages for delay for the whole of the Works shall be zero point five percent (0.5%) of the Contract Price per Day, in the currencies and proportions in which the Contract price is payable.

The maximum amount of liquidated damages for the whole of the Works shall be ten percent (10%) of the Total Contract Price.

11.0 Defects Liability

- (11.1) Defect Liability Period is three hundred and sixty five (365) Days.

13.0 Variations and Adjustment

- (13.5) Day work: Not Applicable
- (13.7) Contract is not subjected to price adjustment for fluctuation of prices.

14.0 Contract Price and Payment

- (14.3 (c)) Retention from each payment shall be five percent (5%) of the each payment.

The limit of retention shall be five percent (5%) of the Total Contract Price.

18.0 Insurance

- (18; Entirely) The minimum insurance covers shall be:

- (a) The maximum deductible for insurance of the Works and of Plant and Material is five percent (5%) of Contract Price.
- (b) The minimum cover for insurance of the Works and of Plant and Material is hundred and ten percent (110%) of Contract Price.
- (c) The minimum cover for insurance of other property is Rs. 1.0 million/accident (number of accident shall be unlimited)

The minimum cover for personal injury or death,

- (d) for the Contractor's workmen is Rs. _____ per event.
- (e) Contractor's employee other than workmen is Rs. _____ per event.
- (f) for third party and employee of the Employer and other persons engaged by the Employer is Rs. _____ per event.

19.0 Claims, Disputes and Arbitration

- (19.2, 19.4) The Institute for Construction Training and Development (ICTAD) shall appoint the Adjudicator for the contract and fix the fees and expenses.

(19.3) *Fees and types of reimbursable expenses to be paid to the Adjudicator shall be on a case to case basis and shall be shared by the Contractor and the Employer.*

Hourly rate: _____

Reimbursable cost: _____ (ie, traveling subsistence, accommodation, etc.)

Section - 7
SPECIFICATIONS

GENERAL SPECIFICATIONS

The General Specifications applicable to this Contract are;

1. SPECIFICATIONS FOR COASTAL & HARBOUR ENGINEERING WORKS

ICTAD Publication No. SCA/6 (Revised Edition - August 2002) published by The Institute for Construction Training and Development, Ministry of Housing and Plantation Infrastructure, Sri Lanka.

2. SPECIFICATIONS FOR BUILDING WORKS – VOLUME I

ICTAD Publication No. SCA/4/I published by The Institute for Construction Training and Development, Ministry of Housing and Plantation Infrastructure, Sri Lanka.

3. SPECIFICATIONS FOR BUILDING WORKS – VOLUME II

ICTAD Publication No. SCA/4/II (Revised Edition - October 2001) published by The Institute for Construction Training and Development, Ministry of Housing and Plantation Infrastructure, Sri Lanka.

The Works shall be done in accordance with the Specifications mentioned above however the instructions specified in the Particular Specifications shall have priority.

PARTICULAR SPECIFICATIONS

1. GENERAL

1.1 Background

For the purpose of contributing to the execution of the Project for Reconstruction of Galle Fishery Harbor in Galle District damaged by Tsunami Disaster, in its current portion of the execution of the Program for Efforts to cope with the Damages caused by the Great Earthquake off the Coast of Sumatra, the Republic of Indonesia, and by Indian Ocean Tsunami Disaster (hereinafter called "the Program") under Japan's Grant aid to the Government of the Democratic Socialist Republic of Sri Lanka in accordance with the Exchange of Notes signed on the 17th day of January, 2005 between the Government of Japan (the Donor) and the Government of the Democratic Socialist Republic of Sri Lanka

The existing quay area at Galle Fishery Harbor area consists of Jetty (90m long and 15m wide), western quay area (90m+35m long) and an eastern quay area (approximately 120m long). The Jetty and the western quays are the main quay areas in the Harbor where the essential fishery activities are vital having been nearby provided with the main fishery-related facilities such as an auction hall, offices, ice plants, cold storages and so on. The eastern quay, which has been seriously damaged by the Tsunami over its almost whole length, was mainly used for small to medium size fishery boats and/or as a boat-resting quay due to its water depth (designed at - 1.5m MSL).

Under the above circumstances CFHC therefore, intends to rehabilitate / reconstruct this quay area.

On behalf of the Government of the Democratic Socialist Republic of Sri Lanka, Japan International Cooperation System (JICS) (hereinafter called "the Employer") as a competent agent of the Government of the Democratic Socialist Republic of Sri Lanka to secure the smooth and successful implementation of the Program.

The Executing Agency of the Project shall be the Ceylon Fishery Harbours Corporation under the Ministry of Fisheries & Aquatic Resources in the Democratic Socialist Republic of Sri Lanka.

1.2 Scope of Works

The Project is design and build contract basis which is to construct, namely; Reconstruction of Quaywall, Slipway and CFHC Office Building at Galle Fishery Harbor.

The Project consists of the following work items;

- a. Quay structure work consists of -3.5m quay, slipway, retaining wall, ancillary facilities and pavement behind the quay structures.

- b. Building works consists of demolition of existing building, CFHC office building construction and winch house construction.
- c. Winch and cradle system.

1.3 Natural Conditions

1.3.1 Meteorological Conditions

1) Topography

Sri Lanka is located between the latitude of 5.55 and 9.50 degrees N and between the longitude of 79.42 and 81.52 degrees E, whose national land is topographically divided into the following four (4) Regions.

- i) Central Highlands, ranging in elevation from 1,000 to 2,500 m
- ii) Northern Lowlands, having gentle sloping area
- iii) Southwest area, having steep sloping area
- iv) Southeast area, having steep sloping area

The northern part from the center of the island is almost plains, while the southern part is mountainous and surrounded by coastal plains. The highest point of in Sri Lanka is Mt. Pidurutalagala, 2,525 m above sea level, in Nuwara Eliya District. The country has a maximum length of about 430 km and a maximum width of about 220 km, and an area of about 65,000 km². Figure 3.5.1 shows topographic condition of Sri Lanka.

Sri Lanka consists of 9 provinces: Western, Central, Southern, North-Western, Sabaragamuwa, Northern Eastern, Uva and North-Central, and 25 districts. Project site for the project (Galle) is located in Southern province.

Galle fishery harbor

Galle city is located in Galle district, about 120 km south of Colombo, on the south – west coast of Sri Lanka. Galle fishery harbor is adjacent with Galle commercial port in Galle bay.

2) Climate

The climate of Sri Lanka is generally divided into three types in based on topographic condition. The northern and the south-east areas are generally classified by “Dry-Zone”, other hand the central highlands and the south-west areas belong to “Wet-Zone” with heavy rainfall. Area between the two areas (“Dry Zone” in the northern and south-east area, and “Wet Zone” in the central highlands and south-west area) is called as “Medium-Dry Zone”.

3) Rainfall

The climate of Sri Lanka is significantly affected by two monsoons (South-West Monsoon and Northeast Monsoon) through the year, therefore the general climate can be divided into the four (4) distinct periods as follow.

- i) South-West Monsoon (Yala) (May to September)

There is monsoon blowing in from the south-east, Indian Ocean. During the period, 1,000 to 3,500 mm rainfall in the south-west part and 3,000 to 3,500 mm rainfall in the central highlands part occur respectively.

ii) North-East Monsoon (Maha) (December to February)

There is monsoon blowing in from the north-east, Indian Ocean. During the period, 500 to 2,500 mm rainfall in the east part of the island occurs.

iii) Inter-monsoon (March to April)

Heavy rainfalls in the south-west part due to wet air flow from the south-west, Indian Ocean.

iv) Inter-monsoon (October to November)

Heavy rainfalls occur in whole part of the country due to tropical cyclone in Indian Ocean.

Usually, more than 30 % of annual rainfall occurs during the south-west monsoon, another remaining 70 % is caused by the north-west monsoon.

For rainfall data of the project site, monthly rainfall data of Galle is available as shown in below table.

Monthly Rainfall in Galle (unit: mm)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul.	Aug.	Sep	Oct.	Nov.	Dec.	Annual
Rainfall	85	71	111	207	290	188	163	186	256	323	321	177	2,378

Source: Meteorological Department, "Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000"

4) Temperature

Monthly maximum and minimum temperature in Galle is summarized below.

Monthly Temperature in Galle (unit: °C)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul.	Aug.	Sep	Oct.	Nov.	Dec.	Mean
Max.	29.0	29.9	30.6	30.6	29.8	29.0	28.6	28.4	28.5	28.7	29.0	29.1	29.3
Min.	22.8	23.0	23.9	24.8	25.5	25.2	24.8	24.7	24.7	24.1	23.5	23.1	24.2
Mean	25.9	26.5	27.3	27.7	27.7	27.1	26.7	26.6	26.6	26.4	26.3	26.1	26.8

Source: Meteorological Department, "Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000"

5) Humidity

The average humidity in the Galle area is around 80 % during daytime and 88 % during nighttime throughout the year. Daytime humidity increases in the months of July – August up to 85 % and relatively low humidity of the order 70 % occur in January – February.

Monthly Humidity in Galle (unit: Mean %)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul.	Aug.	Sep	Oct.	Nov.	Dec.	Mean
Day	78.2	72..8	73.6	78.2	81.6	88.3	84.2	85.8	82.8	81.7	79.2	79.0	80.0

Night	88.6	86.0	87.0	88.2	88.8	87.4	90.2	89.4	88.0	89.2	89.4	91.3	88.6
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Source: Meteorological Department, "Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000"

6) Wind

The wind pattern in Sri Lanka is mainly associated with the monsoons. During the south-west monsoon, western and southern parts of the island are normally subject to high winds. In the Galle area, wind speed occasionally reaches 15 – 20 knots (7.7 m/sec – 10.3 m/sec) during the south west monsoon. From the analysis of wind data collected a 3-year period at the Galle from 1986 to 1988, it has been found that wind speeds at the Galle exceeded 20 knots (= 10.3 m/sec) at a frequency of 0.1 % and 10 knots (= 7.7 m/sec) at a frequency of 10.5 %.

Wind direction in Galle is mostly confined to south-west sector. While during the north-east monsoon, wind and direction are not as regular as during south-west. However, the predominant wind directions during this season are found as north and east-north-east.

7) Cyclone

Southern area in Sri Lanka is not attacked by cyclones so much. Recently Batticaloa Cyclone damaged to Eastern area in Sri Lanka in 1978, the maximum wind speed is recorded 100 knots.

8) Earthquake

There is no big earthquake in Sri Lanka, and is no standard for facilities against earthquake.

1.3.2 Oceanographic Conditions

1) Tide

Tide levels at project harbor and neighboring ports are summarized in below.

Tide Level at Project Harbor and Neighboring Port (unit: EL, m)

Level / Location	Colombo port	Galle port	Tangalle port	Hambantota port	Kirinda port
HWL	+0.72	+0.61	+0.53	+0.47	+0.33
MSL	+0.38	+0.34	+0.28	+0.25	+0.17
LWL	+0.20	+0.10	+0.10	+0.10	+0.10
D.L.	+0.00	+0.00	+0.00	+0.00	+0.00

Source: Meteorological Department, "The Project for Implementation of Fishery Harbor Facilities and Fisheries Training Center at Tangalle, 2000"

2) Wave

50 years occurrence rate of deepwater wave at Galle bay had been calculated as bellow by wave observation record at 12 km from Galle port.

50 years Occurrence Rate of Deepwater Wave

Main Direction	Significant wave $H_{1/3}$	Highest wave H_{max}	Period
WSW	6.2 m	10.7 m	12.3 sec

Source: Meteorological Department, "Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000"

2. TECHNICAL

2.1 Design Requirements

2.1.1 Quay Structures

2.1.1.1 Facilities Requirements

1) Scope of Work

The scope of the quay structures consist of:

- -3.5m Quay
- Slipway
- Retaining wall structure
- Ancillary facilities
- Pavement behind the quay structures

2) Definition Dimensions and Layout

The required dimensions and layout of the quay structures above are indicated on the drawings provided in Section - 9.

2.1.1.2 Functions

1) -3.5m Quay

The quay is 95 m long and the water depth of the quay is at least -3.5 m MSL. The quay has an associated 6.0 m wide apron. The quay face elevation will be +1.45m MSL, and designed to discharge surface water directly into the sea.

The quay will mainly be used as Preparation & Resting berths, and shall be designed to accommodate fishing boats up to 60ft class. The structural type of the quay will be a steel sheet pile type judging from the site conditions such as subsoil profile.

The quay shall be provided with quay fittings, as specified in 4) in this chapter; Ancillary Facilities, of sizes and numbers appropriate for the intended purpose of its utilization.

2) Slipway

The slipway is to be constructed for fishing boats repairs and maintenance with associated provision of a cradle & winch system, rail track, etc.

The slipway will be 7.0m wide with 2.5m clearance each side, sloping at 1:10 from ground level +2.50 to -3.5m MSL, as shown on the Drawing provided in Section - 9. The surface of the slipway shall be paved with pre-cast concrete blocks and in-situ concrete construction as shown on the relevant drawing.

The slipway shall be designed for cradle-mounted boats up to 60ft class fishing boat.

3) Retaining Wall Structure

Along the slipway, retaining walls shall be provided as indicated on the drawings.

A part of the western-side retaining wall where connected to the quay wall, with its length approximately 20m from the quay face, shall be a similar construction with the quay wall structure and shall be respected as a part of the quay wall work. The remaining parts of the retaining wall may be designed with a gravity type structure as shown on the drawings.

4) Ancillary Facilities

Ancillary facilities for the quay such as fenders, bollards and mooring rings are to be constructed as shown on the relevant drawings. All such facilities shall have enough capacities to withstand the intended utilization of the quay in accordance with the requirements specified in **2.1.1.3: Design Criteria and Conditions**.

5) Pavement behind the Quay and Slipway

In order to enable smooth and effective operations of the quay structures, the surrounding areas will be provided with a proper paving or surfacing.

The pavement behind the Slipway will be asphalt concrete paving and/or concrete paving as shown on the drawing provided in Section - 9. Behind the Quay apron, at least 4m-wide areas are to be land-leveled and provided with a gravel surfacing.

2.1.1.3 Design Criteria and Conditions

1) Applicable Codes and Standards

The following codes and standards of the latest editions shall apply to the design works;

- a) Specifications for Coastal & Harbour Engineering Works (ICTAD, No. SCA/6)
- b) BS (British Standards) 6349: Maritime Structures; Part 1 to Part 7

Where deemed appropriate and agreed by the Engineer, internationally recognized standards such as EURO codes and Japanese Technical Standards will also be applied.

2) Usage Conditions

The quay structures shall be designed in accordance with the following usage requirements;

a) Dimensions of the design ships

- Fishing boats of sizing from 20 ft to 60 ft class
- Maximum boat sizes to be considered
LOA=20.0m, Breadth=5.0m, Full Load draft= 2.5m (unladen; 2.0m)

b) Mooring system

The following mooring equipment shall be provided on the quay;

- 50 kN bollard with maximum interval at 10.0m
- Mooring rings installed at 5.0m intervals, except where bollard is installed

c) Fender System

- Required Performance

Rubber fender shall satisfy the following requirements:

Shape	: V-Type
Height	: 200 mm
Length	: 1,500 mm
Energy Absorption (Minimum)	: 20kN-m
Reaction Force (Maximum)	: 35kN

- Performance of Rubber fender

The performance of rubber fender shall be measured in accordance with the test requirement of ANNEX 4.1 of "Report of the International Commission for Improving the Design of Fender System", Supplement to Bulletin No. 45 (1984) by P.I.A.N.C., and shall satisfy the following requirements:

- c-1) Energy absorption shall be more than 110 % (+ 10 % allowance) of the required performance characteristics at the rated deflection as specified before.
- c-2) Reaction force shall be less than 90 % (- 10 % allowance) of the required performance characteristics at the rated deflection as specified before.

3) Natural Conditions

The quay structures shall be designed to withstand all loads arising from the following environmental conditions:

a) Meteorological/Oceanographic Conditions

The following conditions may be used in the design in case of the absence of any measured or other generally recognized data;

Item	Description	Set values
Wind	Recorded max. gust wind	50m/sec.
	Monthly max. average	15m/sec.
Temperature	Monthly average max.	28.7
	Monthly average min.	26.1
Rainfall	Annual total max. (in 1980-1998)	3,784 mm
	Monthly total max. (in Nov. 1980)	283 mm
Tidal data	HWL	+ 0.30 m
	MSL	0.00 m
	LWL	- 0.30 m
Wave	H1/3 inside the harbor	0.50 m

(Source: Basic Design Report for Tangalle Fishery Harbor ; JICA in 2000, except Tide & Wave)

b) Soil Conditions

A soil investigation by boring at Galle Fishery Harbor has been carried out. The soil data obtained from the investigation will be made available to the Contractor. It will, however be the responsibility of the Contractor to review and interpret such available soil data, and the Contractor shall establish the soil parameters to be used in the detailed design for the Engineer's acceptance.

The following soil parameters have been used in the preliminary design stage based on the soil investigation results;

Layer	N-value	Unit weight	Internal friction angle	Cohesion
1.Reclamation-fill & upper layer (silty sand)	10-25	17 kN/m ³	35 °	-
2.Silty fine sand/ sandy clay	0-5	16 kN/m ³	25 °	-
3.Stiff sandy clay	9-15	17 kN/m ³	-	30-50 kN/m ²
4.Weathered bedrock	15-30	18 kN/m ³	35 °	-

c) Earthquake Conditions

Although no strong earthquake record exists in the region, a minimum seismic force coefficient; $k_h=0.05$ shall be considered.

4) Design Loads

a) Dead Loads

- Concrete	(plain)	: 24.0 kN/m ²
	(reinforced/ pre-stressed)	: 25.0 kN/m ³
- Steel material		: 77.0 kN/m ³
- Rocks/ stones	(dry)	: 18 kN/m ³
	(saturated)	: 20 kN/m ³
- Seawater		: 10.1 kN/m ³

b) Live Load / Surcharge Load

- Uniform Live Load for quay wall : 10 kN/m²
- for retaining walls : 20 kN/m²

c) Vehicle Load : 50 ton truck crane for retaining walls design

d) Horizontal Loads

Horizontal loads such as bollard pull, fender reaction, earth pressures, seismic force, etc. shall be precisely calculated based on the facilities requirements, usage conditions and natural conditions.

5) Corrosion Rate

The following corrosion rates of steel sheet piles shall be applied:

- a) HWL ~ -0.5 m: 0.1 ~ 0.3 mm/year
(Design Corrosion Rate: 0.2 mm/year)
- b) -0.5m ~ Sea bed: 0.1 ~ 0.2 mm/year
(Design Corrosion Rate 0.1 mm/year)
- c) Below seabed: 0.03 mm/year

6) Other Design Conditions

Any other design conditions, not specified herein but required in the detailed design, shall be proposed by the Contractor for the Engineer's approval.

2.1.1.4 Design Method

Unless accepted by the Engineer otherwise, Limit Status Design method shall be used in the detailed design of reinforced concrete structures.

Any design methods and/or analytical methods which the Contractor intends to adopt, but not specifically specified in the said technical standards, such methods including computing software shall be agreed by the Engineer prior to the design commencement. The design/analysis that may require such acceptance will be the structural design/analysis of sheet piled quay wall and stability analysis of quay structures.

2.1.2 Building Works

2.1.2.1 Facilities Requirements

1) Scope of Work

The scope of the building works consist of:

- Demolition of part of the damaged building (Management Office Building)
- Reconstruction of CFHC Office Building
- Construction of Winch House at Slipway area

2) Definition Dimensions and Layout

The required dimensions and layout of the building works above are indicated on the drawings provided in Section - 9.

2.1.2.2 Functions and Area Requirement

1) CFHC Office Building

As managing and controlling whole of the harbour activities, the reconstruction of the damaged CFHC office building is essentially important and urgently needed. The CFHC Office building will be a 2-storied RC construction with its total floor area approximately 400 m² in order to perform its required roles/ functions.

Taking into account the efficient utilizations of the respective roles/functions and the lessons learnt from the last Tsunami, the designed basic composition and allocation of the CFHC Office building facility will be as follows;

- a) Ground Floor : Administration office, manager's room, PC room, Entrance hall, etc.,
- b) 1st Floor : Radio communication room, Night-duty room, Manager's quarter and associated functions areas

2) Winch House

A winch house of its area 16m² (4.0x4.0m) will be constructed at Slipway Area to shelter winch and its associated facilities/equipment. The winch house shall be constructed with RC Beam & Column and concrete block wall as indicated on the drawing.

3) Demolition of the existing Building

In order to construct the above buildings and slipway facilities, part of the existing building used as Harbor Managing Complex and stores will be demolished to the extent as shown on the drawings. The exact limit of the

demolition of the existing facilities/ structures shall be as directed by the Engineer.

2.1.2.3 Specifications

The Finish Schedules of the respective building is as indicated in the relevant drawings.

The detail design works and specifications for the construction shall be in accordance with the requirements of the following Sri Lankan Standard Specifications;

- 1) Specifications for Building Works-Volume I (ICTAD Publication No.SCA/4/I, 3rd Edition)
- 2) Specifications for Building Works-Volume II (ICTAD Publication No.SCA/4/I, 3rd Edition)

2.1.3 Winch and Cradle System

A winch and cradle system is required for the operation of the Slipway. The winch and cradle including rail track and associated facilities/equipment shall be properly designed, procured/ constructed and installed by the Contractor in accordance with the following requirements;

2.1.3.1 Winch and Associated Facilities/Equipment

The winch system shall be capable to safely handle the design max. fishing boat (65 ft class, refer **Section 2.1.1.3 Design Criteria and Conditions**) mounted on the cradle with the intended slipway slope (1:10). In any case however, the hauling up capacity of the winch should not be less than 10.0 ton.

The winch system shall at least be composed of the following facilities/equipment;

- Winch : Minimum hauling capacity and speed; 10.0 ton and 10 m/min. respectively
- Wire rope guide roller : 1 set
- Rail stoppers : 2 pcs.
- Mooring rings : 2 pcs.
- Wind up Limit Switch : 1 set
- Rail : 64m approx.
- Chain cables & shackles : 1 set

All the steel materials used shall be stainless steel or appropriate corrosion protection coated steels.

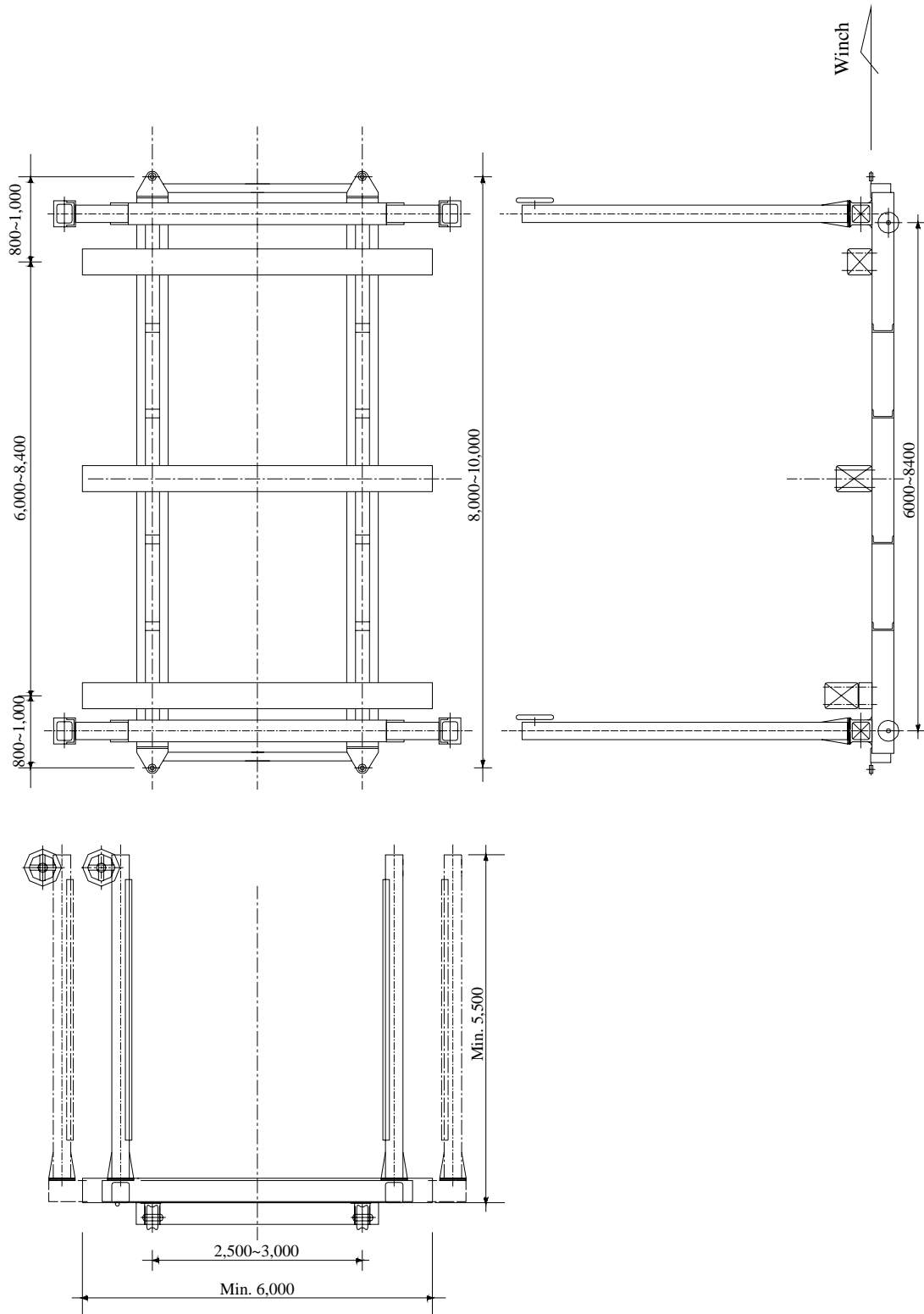
2.1.3.2 Cradle

Cradle shall be of a type introduced to the slipway at Tangalle Fishery Harbor or other construction approved by the Engineer.

The Contractor shall study and design an appropriate cradle, and submit to the Engineer for his approval prior to the construction. When the Contractor intends to adopt a similar construction with the Tangalle slipway, the dimensions of the cradle may be as indicated in Figure 2.1.3.1 (It should not be regarded as the design requirement)

All the steel materials shall be anti-corrosion type, or otherwise an appropriate corrosion protection shall be provided.

Due care should be taken by the Contractor that the dimensions of the designed cradle will not cause any modification of the planned slipway design.



(For Reference)

Figure 2.1.3.1 : Out View of Cradle similar to Tangalle Fisher Harbor

2.2 Material Requirements

This Clause shall be amended to the Standard Specifications which is mentioned in GENERAL SPECIFICATIONS.

2.2.1 Steel Sheet Piles

2.2.1.1 Material for Steel Sheet Pile

The material shall comply with JIS A 5528 – 2000: Hot rolled steel sheet piles SY 390 or approved equivalent. The chemical composition and mechanical properties shall comply with the following;

Chemical Composition:

Cu	: more than 0.25%
P	: not more than 0.040%
S	: not more than 0.040%

Mechanical Properties:

Tensile strength	: 540 N/mm ²
Yield point	: 390 N/mm ²
Elongation	: 15 % or over

Steel sheet piles shall be supplied in one length required by design. The Contractor shall obtain mill certificates from the manufacturer of the steel sheet piles and such certificates shall be approved by the Engineer.

2.2.1.2 Fabrication of Corner Pile and Wedge Pile (if applicable)

- (1) Corner piles shall be shop fabricated as required on the Drawings.
- (2) Wedge piles shall be field fabricated as designed by the Contractor after obtaining the approval of the Engineer for design and fabrication work.

2.2.1.3 Transport and Storage of Steel Sheet Pile

- (1) In transporting and storing steel sheet piles, adequate measures shall be taken to protect them from being dented or developing permanent set in section or length wise.
- (2) In cargo handling, all steel sheet piles shall be handled in such a manner that they shall not develop permanent deflection. Also care should be taken not to cause permanent deflection in their sectional form. As a rule, when hoisting steel sheet pile, wire ropes shall be fastened at two points so spaced that deflection which may be caused by its dead weight shall be minimized.
- (3) The steel sheet piles shall be stacked not higher than 2m in one course, and wooden sleepers shall be placed between each course at intervals not exceeding 4m. The Contractor shall submit details of his methods of handling of the steel sheet piles to the Engineer for approval in advance.

2.2.1.4 Guide Waling

- (1) Guide waling shall be provided for steel sheet piling works to maintain the steel sheet pile in the correct position in pitching and driving.
- (2) Guide waling shall be of sufficient strength to support the steel sheet pile against lateral force during steel sheet pile driving. It shall remain in position until the steel sheet pile wall develops stability against wave action.
- (3) Prior to the commencement, the Contractor shall submit the execution plan of the guide waling for the approval of the Consultant.

2.2.1.5 Pitching of Steel Sheet Piles

- (1) Each steel sheet pile shall be clearly marked with its pile number, overall length and be marked with 50cm interval on the upper half length of each pile for the purpose of driving records as specified in section 1.7 of the Specifications.
- (2) The alignment and plumb for pitching piles shall be established by carrying out accurate surveys.
- (3) Steel sheet piles shall be interlocked and pitched vertically in the wall by its own weight taking care not to cause misalignment, slanting and/or distortion.
- (4) When pitched sheet pile wall shown slanting in direction of alignment line more than 2% of the total length, the sheet piles should be adjusted either by extracting and re-pitching or by using wedge shaped sheet piles.

2.2.1.6 Driving of Steel Sheet Piles

- (1) The equipment for driving of steel sheet piles either diesel/steam hammer or vibro-hammer shall be subject to the approval of the Engineer. The Contractor shall submit his method to the Engineer for approval in advance.
- (2) All steel sheet piles have to be installed to the designed depth.
- (3) When steel sheet pile bottom reaches the hard bed layer before reaching the design depth, the pile shall be driven into the hard bed layer to penetrate at least 50cm.
- (4) Driving of steel sheet piles shall be suspended when driving records shown refusal before reaching the design penetration of 50cm penetrations into the hard layer and the Contractor should report this to the Engineer.
- (5) Cutting of any pile before reaching required depth will not be permitted except when otherwise instructed by the Engineer.

- (6) When head of driven steel sheet pile is found below designed level, the sheet pile shall be either extracted up to the design level, or extended by adding a pile of the necessary length at the top of the driven pile by welding.
- (7) The Contractor shall report to the Engineer immediately of such change in driving characteristics of sheet pile, as slanting, dragging down, damage to the head of sheet piles or damage to joints occurring during work. The Contractor shall take suitable measures under supervision of the Engineer.

Steel sheet piles damages in any way may be condemned and replacements may be ordered by the Engineer.

2.2.1.7 Driving Records

The Contractor shall submit his proposal for the records and their analysis of steel sheet pile driving to the Engineer. Items to be recorded shall be subject to the approval of the Engineer.

2.2.1.8 Tolerances in Pitching and Driving

- (1) All sheet piles shall be pitched correctly on alignment line. A tolerance of 25mm horizontal away from the true alignment line will be allowed before driving. Steel sheet piles shall be driven carefully so that the deviation of head of any sheet pile after completion of driving shall not exceed 10cm from the designed position and also shall not exceed 1 in 100 from the plumb in wall alignment line direction.
- (2) Tolerance for finished head elevation should not exceed 10cm to the design elevation. Should any driven steel sheet piles exceed these specified tolerances the Engineer may direct the Contractor to extract and re-drive in the correct position at the Contractor's responsibility.

2.2.1.9 Welding

1. General

- (1) Welding of steel sheet pile to extend the length shall be executed by electrical arc welding and shall comply with the requirements of JIS Z 3801 and Z 3841 or equivalent. All welding work shall be carried out by experienced and qualified welders.
- (2) The Contractor shall submit to the Engineer for approval a roster of all welders employed in welding work showing the names, qualification, job experience and other details.

2. Welding Equipment

- (1) Electrodes for welding of all shop and field weld joints shall conform to the requirements of JIS 3211, 3212, 3311 and 3312 or equivalent. The

Contractor shall provide the samples of electrodes and their manufacturer's certificate.

- (2) Care shall be taken for electrodes in storage not to absorb moisture and they shall be dried in a proper manner if they absorb atmospheric moisture.
- (3) All welding plant, equipment and accessories shall be used in accordance with the requirements of JIS C9301 or equivalent.

3. Welding Procedure

- (1) Details of welding procedures shall be approved by the Engineer before commencement of the work. Approval by the Engineer shall not relieve the Contractor's responsibility for suitability of any welding procedure and for satisfactory execution of welds.

Section - 8

BILL OF QUANTITIES

Section - 8 - 1: PREAMBLES

1. General Notes

The Tenderer shall read and be conversant with the full description of workmanship and materials as described in the Particular Specification and ICTAD Specification for the respective items of work/trades prior to the preparation of the Tender.

The Tenderer shall refer to the relevant Clauses of Pricing Preamble when pricing composite item of works.

The rate for each item must be comprehensive and must include for complying in all respects with the requirements of the aforesaid Specifications, these Pricing Preambles, cover all the obligations under the Contract, and all matters and things necessary for the proper construction, completion and the maintenance of the Works. No claim for additional payment shall be allowed for any error or misunderstanding by the Contractor of the work involved.

The rate for each item shall also include for all the following;

- (a) Labor and all connected costs;
- (b) Materials and goods including all connected costs;
- (c) Preliminaries, Preparatory works and setting out of particular item;
- (d) Complying with regulations of the Municipal Council and/or any other relevant authority under which particular item of work is to be executed;
- (e) Fitting and fixing materials and goods in position, including hoisting to any height or lowering to any depth and all temporary works, equipment and small tools;
- (f) Plant and equipment;
- (g) Handling of materials and working in situation where there is very restricted working space or no working space;
- (h) Square cutting and Waste of materials;
- (i) Forming of ends, angles, miters and junctions between straight and raking or curved work;
- (j) Protecting and cleaning;
- (k) All other incidental works and necessary works which are not described in the B.O.Q. but described in the aforesaid Specifications and or shown in the drawings for the proper completion of the relevant item of work, and
- (l) Establishment charges overheads and profits.

In addition to above, the rates for items of work in Substructure shall include for the works at depths extending below ground water table where applicable including excavation under water, removal and disposal of mud

and sand and preparation of place to a condition suitable for proper execution of the Works.

2. Preliminaries

2.1 General

Rates or prices quoted by the Tenderer shall include, but shall not be limited to the following Preliminaries items. No subsequent claims pertaining to Preliminary Work or services in connection with this Contract shall be entertained.

Allow for complying with the all requirements of the Conditions of Contract Part 1 & 11 and the Specification of the Works, including setting out of the Works providing required contract insurances, Performance Bond and guarantees, Programs, Samples of materials etc.

2.2 Plant and Equipment

Provide all plant and equipment (except which are necessary for Pile driving) necessary for the proper execution of the Works including mobilization of same.

- a) Mechanical plant and vehicles
- b) Non mechanical plant
- c) Equipment

2.3 Provide for Construction Management and Supervision

Provide for all costs incurred in complying with safety, and health and welfare regulations pertaining to all work people (including those employed by sub - contractors) employed at site.

Safeguard the Works, materials and plant against damage or theft including all necessary fencing, hoarding, watching and lighting for the security of the Works and the protection of the Public.

Provide clean fresh water for use on the Works, pay all charges in connection therewith, provide all temporary storage, plumbing and pay for service connection etc.

Provide all artificial lighting and power for use on the Works and pay all charges in connection therewith.

Provide for suitable storage facilities inside or outside of the site.

Clearing, cleaning up site on completion and leaving all in good order and handing over the Works to the satisfaction of the Engineer.

SECTION - 8 - 2: BILL OF QUANTITIES

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
1	Preliminaries				
	Rates or prices quoted by the Tenderer shall include, but shall not be limited to the following Preliminaries items. No subsequent claims pertaining to Preliminary Work or services in connection with this Contract shall be entertained.				
101	Allow for complying with the all requirements of the Conditions of Contract Part 1 & 11 and the Specification of the Works, including setting out of the Works providing required contract insurances, Performance Bond and guarantees, Programs, Samples of materials etc.	Sum	1		
102	Provide all plant and equipment (except which are necessary for Pile driving) necessary for the proper execution of the Works including mobilization of same. a) Mechanical plant and vehicles b) Non mechanical plant c) Equipment	Sum	1		
103	Provide for Construction Management and Supervision	Sum	1		
104	Provide for all costs incurred in complying with safety, and health and welfare regulations pertaining to all work people (including those employed by sub - contractors) employed at site.	Sum	1		
105	Safeguard the Works, materials and plant against damage or theft including all necessary fencing, hoarding, watching and lighting for the security of the Works and the protection of the Public.	Sum	1		
106	Provide clean fresh water for use on the Works, pay all charges in connection therewith, provide all temporary storage, plumbing and pay for service connection etc.	Sum	1		
107	Provide all artificial lighting and power for use on the Works and pay all charges in connection therewith.	Sum	1		
108	Provide for suitable storage facilities inside or outside of the site.	Sum	1		
109	Clearing, cleaning up site on completion and leaving all in good order and handing over the Works to the satisfaction of the Engineer.	Sum	1		
Sub-Total of Bill No. 1					

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
2	Demolition Work and site Preparation				
2.1	Demolition Work				
201	Carefully demolish existing 3.00 M wide reinforced concrete apron without damaging gabions laid under the apron. All demolished concrete to be transported away from the site to a point, identified by the contractor. All work to be done as per the Engineers instructions and according to the security regulations of the Ministry of Defense.	L.m	120		
202	Carefully remove all loose rubble in existing gabions up to a depth of 1.00 M from underside of the apron and remaining rubble surface to be leveled properly to receive new gabion boxes. All removed rubble or part of removed rubble to be stacked at site for re-use and or to be transported away from the site to a point identified by the contractor. All work to be carried out as per the engineer's instruction and according to the security regulations of the Ministry of Defense.	Cu.m	360		
2.2	Site Preparation				
203	Clear the existing ground to a width of 4.00 M. as shown in the drawing to form new gravel surfacing. All debris, excavated materials to be transported away from the site to a point identified by the contractor. All work to be completed to Engineer's approval.	Sum	1		
Sub-Total of Bill No. 2					

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
3	Quay Structure				
3.1	Piling Work Refer specification for the full description of material and workmanship.				
301	Mobilize piling equipment to site, set up, dismantle and demobilize upon completion of piling work.	Sum	1		
302	Supply deliver and drive steel sheet piles (type IV) approximately 15.0 deep as per the detail drawing. All work to be completed to the satisfaction of the Engineer.	Sq.m	1,800		
3.2	Excavation & Earthwork				
303	Excavate/dredge 95.0 m long and 11.50 m wide strip along the existing quay wall up to the depth of - 3.50 M.S.L and additional 1.00 m deep part to a width of 5.00 m from bottom level (-4.50 M.S.L) and 6.30 from -3.50 level as shown in the detail drawing. All excavated / dredged materials to be transported away from site to a point identified by the contractor. Prior approval to be taken from Fishery Harbor Officials before disposing excavated / dredged materials.	Cu.m	2,750		
304	Approved earth filling with imported granular earth in 150 mm thick layers under gravel surfacing and well rammed & consolidated to approval.	Cu.m	155		
305	Approved quality gravel filling between existing gabion wall and new kerb and well rammed & consolidated to approval of the Engineer.	Cu.m	36		
306	Approved quality imported gravel back filling between existing gabion wall and, concrete apron and sheet piles. Well rammed & consolidated to approval of the Engineer.	Cu.m	304		
307	Supply & well pack 100 - 300 Kg/pcs as scouring protection to the shape shown in detail drawing and to the approval of the Engineer.	Cu.m	670		
3.3	Concrete Work All concrete shall be grade 30 (other than blinding concrete) maximum aggregate size 20 mm and fill into formwork and well pack around bar reinforcement.				
308	50 mm thick grade 15 blinding concrete under apron and new kerb.	Sq.m	660		
309	200 mm thick grade 30 concrete paving (apron) between apron and new kerb including expansion joints as shown in the detail drawing.	Sq.m	624		
310	300 mm to 200 mm tapered and 750 mm high tapered concrete kerb laid as per detail.	L.m	120		
311	Concrete coping in grade 30 concrete 1200 mm wide at bottom and 1950 mm high as per the detail drawing.	Cu.m	295		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
	Work to be completed as per Engineer's instructions including necessary expansion joints etc.				
3.4	Formwork Form work shall be properly designed formwork as described in specification and it should be sufficiently strong and rigid and have an even smooth surface.				
312	To vertical sides and soffit of the coping.	Sq.m	544		
313	To sides of the kerb.	Sq.m	180		
3.5	Reinforcement Rates for reinforcements shall include for bending, tying, wire, spacer blocks etc. and all laps for BRC mesh.				
314	In apron BRC mesh No.	Sq.m	624		
315	In coping exceeding 10 mm but not exceeding 16 mm dia.	Kg	8,520		
3.6	Gabion Work				
316	Supply and lay PVC coated gabion boxes 1,500mm x 1,000 mm x 1,000mm high, on existing gabion wall as per the detail drawing.	No.	240		
317	Supply and well packed 150 - 225 mm rubble inside the gabion boxes (Measured under item 316) and complete tying the cover as per the Engineer's instructions.	Cu.m	360		
3.7	Miscellaneous Work				
318	Supply and fix 'H' beam 300 mm x 300 mm x 93 Kg/M to sheet piles as shown in the detail drawing.	L.m	120		
319	Supply and fix rubber fender, 'v' type, size 200H x1500L to sheet Piles as per the detail drawing and as per the Engineer's instructions.	No.	25		
320	Supply and fixed bollard 50 KN as per the specifications to the approval of the Engineer.	No.	13		
321	Supply & fix mooring rings (sus 25 mm dia.) as per the specifications & to the approval of the engineer.	No.	25		
Sub-Total of Bill No. 3					

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
4	Slipway				
4.1	Demolition Work				
401	Carefully demolish existing slipway without damaging any other structures. All demolished materials or part of demolished materials to be stacked at site for re-use and or to be transported away from the site to a point identified by the Contractor. All work to be carried out as per the Engineers instructions.	Sum	1		
4.2	Excavation and Earthwork				
402	Excavate/dredge approximately 12.00 m to 18.0 m wide strip not less than 60.00 m long up to the depth of - 6.00 M.S.L. as shown in the detail drawing No. P/034-Q-201 and as instructed by the Engineer. All excavated dredged materials to be transported away from site to a point identified by the Contractor. Prior approval to be taken from fishery Harbor Officials before disposing excavated/dredged materials.	Cu.m	5,000		
403	Supply & fill approved quality quarry run as shown on the detail drawing and to the approved of the Engineer.	Cu.m	175		
404	Supply and fill with approved selected materials as shown in the detail drawing to approval of the Engineer.	Cu.m	715		
405	Approved quality earth filling with imported selected granular earth in 150 mm thick layers, well rammed and consolidated to approval.	Cu.m	540		
406	Supply and pack 50-250 Kg/pc mixed rubble stones as shown in the detail drawing P/034/Q-202				
	(a) under concrete block slabs	Cu.m	260		
	(b) under retaining walls	Cu.m	260		
	(c) under winch house	Cu.m	55		
407	Supply & pack armor stones on quarry run filling as per detail drawing No. P/034/Q-202 and to the approval of the Engineer.	Cu.m	50		
4.3	Concrete Work				
	All concrete other than lean concrete shall be Gr.30, maximum aggregate size 20mm and fill in to formwork and well pack around bar reinforcement.				
408	Grade 15 concrete under slipway beams.	Cu.m	25		
409	Grade 15 concrete under kerb stones.	Cu.m	70		
410	In 1000 mm to 500 mm wide (tapered) and 1500 mm high top beam of the retaining wall as shown in the detail drawing No.P/034/Q/301 & P/034/Q/202.	Cu.m	25		
411	In 800 mm to 500 mm wide (tapered) and 1000 mm high slipway side beams as per the detail drawing No. P/034/Q/202 & 203 to the approval of the Engineer.	Cu.m	20		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
412	In capping beam on gabion.	Cu.m	25		
413	In 300mm thick paving slab.	Sq.m	60		
414	In winch house floor	Cu.m	53		
4.4	Formwork Form work shall be properly designed formwork as described in specification and it should be sufficiently strong and rigid and have an even smooth surface.				
415	To sides of the tapered concrete beam on the top of the retaining walls.	Sq.m	120		
416	To sides of the tapered side beams of the slipway.	Sq.m	96		
417	To sides of the capping beam.	Sq.m	55		
418	To sides of winch house floor.	Sq.m	30		
4.5	Reinforcement Rates for reinforcements shall include for bending, tying wire, spacer blocks etc.				
419	Steel reinforcements in tapered top beam of the retaining wall not exceeding 16 mm dia.	Kg	1,350		
420	Steel reinforcement in paving slab not exceeding 12 mm dia.	Kg	50		
421	Steel reinforcement in side beams of the slipway not exceeding 20 mm dia.	Kg	1,350		
422	Steel reinforcement in capping beams not exceeding 16 mm dia.	Kg	1550		
4.6	Pre-Cast Concrete Work				
423	Supply and lay pre-cast concrete block type 'A' size 2000 mm x 2000 mm x 1000 mm high as per the detail drawing No. P/034/Q/301 and to the approval of the Engineer.	No.	10		
424	Supply and lay pre-cast concrete block type 'B' as per the detail drawing No.P/034/Q/301 and to the approval of the Engineer..	No.	20		
425	Supply and lay 800 mm to 500 mm (tapered) wide and 1000 mm high pre-cast concrete slipway side beam shown in the detail drawing No.P.34/Q/202 & as instructed by the Engineer.	L.m	70		
426	Supply and lay 3000 mm long, 1900 mm wide and 300 mm high concrete block slabs on foundation rubble.	No.	50		
427	Supply & lay 500 mm to 300 mm (tapered) wide, 500 mm high pre-cast concrete kerb stones as shown in the detail drawing to approval of the Engineer.	L.m	136		
428	Supply & lay pre-cast concrete foot protection blocks as per the detail drawing No. P/034/Q/203 & as instructed by the Engineer.	No.	3		
429	Supply & lay pre-cast concrete transversal beams 500 mm x 500 mm in section.	L.m	25		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
4.7	Gabion Work				
430	Supply & lay PVC coated gabion boxes 3000 mm x 1000 mm high on rubble stones as per the detail drawing No. P/034/A/202, P/034/Q/301 and to the approval of the Engineer.	No.	49		
431	Supply & lay geotextile membrane as shown on the drawing No. P/034/Q/202 and to the approval of the Engineer.	Sq.m	90		
432	Supply & well pack 150-225 mm rubble inside the gabion boxes (measured under item 423) and complete tying the cover as per the Engineer's instructions.	Cu.m	147		
417 418					
4.8	Miscellaneous Work				
419	Supply & lay 100 mm thick asphalt surface course including primer coat.	Sq.m	800		
420	Supply & fix mooring rings as per the specification and to the approval of the Engineer.	No.	2		
421	Supply and fix guide rails as per the detail.	L.m	120		
4.9	Winch House				
422	Construction of winch house in accordance with the Drawings including concrete, formwork, reinforcement, masonry, plastering and rendering, roof, ceiling, doors and windows, electrical installations, plumbing work and miscellaneous works.	Sum	1		
4.10	Winch and Cradle				
423	Supply and fix of winch specified in the Specifications.	Sum	1		
424	Supply and install of cradle specified in the Specifications.	Sum	1		
Sub-Total of Bill No. 4					

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
5	Building Works				
5.1	Demolition and Rectifications				
501	Demolition and disposal/stacking for handing over to the Employer the existing office building.	Sum	1		
502	For providing claddings to the existing building – galvanized steel columns, frame and Zn/Al cladding.	Sum	1		
503	For providing rain water gutter and down pipe to the existing building - Zn /Al gutter including a supporting system.	Sum	1		
5.2	Excavation and Earthwork				
504	Earth excavation in foundation including disposal or stacking for re use as directed. Rate to include for supporting sides of excavation and dewatering.	Cu.m	170		
505	Supply lay and compact earth under floor or any other location.	Cu.m	25		
5.3	Concrete				
506	Supply, lay, compact & level concrete Grade 15 including curing etc.	Cu.m	16		
507	Supply, lay, compact & leveling concrete Grade 30 in foundation.	Cu.m	120		
508	Supply, lay, compact & leveling concrete Grade 30 in ground floor slab.	Cu.m	27		
509	Extra over to Item 508 in forming trowel finish.	Sq.m	125		
510	Supply, lay & compaction of concrete Grade 30 in columns up to 1st floor beams.	Cu.m	8		
511	Supply, lay, compact & level concrete Grade 30 in first floor slab & beams.	Cu.m	41		
512	Extra over to Item 3.6 in forming trowel finish and application of floor hardener.	Sq.m	120		
513	Supply, lay, compact & level concrete Grade 30 in walls up to 1st floor.	Cu.m	8		
514	Supply, lay, compact & level concrete Grade 30 in staircase and landings.	Cu.m	3		
515	Supply, lay, compact & level concrete Grade 30 in columns 1st floor to roof beams.	Cu.m	6		
516	Supply, lay, compact & level concrete Grade 30 in walls 1st floor to roof.	Cu.m	3		
517	Supply, lay, compact & level concrete Grade 30 in roof beams.	Cu.m	14		
518	Supply, lay, compact & level concrete Grade 30 in external pavements & steps.	Cu.m	3		
519	Making and fixing form work rough including striking - in foundation up to ground floor.	Sq.m	140		
520	Making and fixing form work rough including striking - in columns straight - ground floor to 1st floor.	Sq.m	63		
521	Making and fixing form work rough including striking - in columns - curved - ground floor to 1st floor	Sq.m	24		
522	Making and fixing form work rough including striking - in walls - ground floor to 1st floor	Sq.m	80		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
523	Making and fixing form work rough including striking - in stair case – Vertical.	Sq.m	7		
524	Making and fixing form work rough including striking - in stair case - soffit – horizontal.	Sq.m	4		
525	Making and fixing form work rough including striking - in stair case - soffit – sloping.	Sq.m	9		
526	Making and fixing form work rough including striking - in first floor slab – soffit.	Sq.m	165		
527	Making and fixing form work rough including striking - in first floor slab – vertical.	Sq.m	120		
528	Making and fixing form work rough including striking - in columns straight - 1st floor to roof beams.	Sq.m	47		
529	Making and fixing form work rough including striking - in columns - curved - 1st floor to roof beams.	Sq.m	18		
530	Making and fixing form work rough including striking - in walls - 1st floor to roof beam.	Sq.m	26		
531	Making and fixing form work rough including striking - in roof beams – vertical.	Sq.m	105		
532	Making and fixing form work rough including striking - in roof beams – soffit.	Sq.m	40		
533	Supply cut bend & fix for steel reinforcement- foundation and structure up to 1st floor slab.	Kg	30,000		
534	Supply cut bend & fix for steel reinforcement- 1st floor slab and above.	Kg	11,500		
5.4	Masonry Work				
535	Block work in ct mortar 1:4, 200 mm thick in ground floor.	Sq.m	120		
536	Block work in ct mortar 1:4, 150 mm thick in ground floor.	Sq.m	51		
537	Block work in ct mortar 1:4, 200 mm thick in first floor.	Sq.m	110		
538	Block work in ct mortar 1:4, 150 mm thick in first floor.	Sq.m	35		
539	Block work in ct mortar 1:4, 100 mm thick in ground floor.	Sq.m	38		
5.5	Roof Work and Roof Plumbing				
540	Construction of wooden roof frame work as detailed.	Sq.m	252		
541	Supply and lay cement tiles on timber frames fixed with stainless steel nails.	Sq.m	252		
542	Supply and fix ridge tiles including mortar bedding.	L.m	40		
543	Supply and fix timber valence board 20 x 300 mm including painting 1 coat primer and 2 or more coats paint.	L.m	70		
544	Supply and Zn/Al gutter 0.8mm thick fixed with stainless steel brackets fixed at 400mm C/C with S/S screws.	L.m	70		
545	Supply and fix PVC down pipes 100 mm dia complete with bend and other required fittings.	No.	8		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
5.6	Ceiling Work and Wood Paneling				
546	Supply and fix plaster board ceiling with aluminum frame including all accessories - Ground floor.	Sq.m	91		
547	Supply and fix edge beading 30 x 25 mm - ground floor.	L.m	76		
548	Supply and fix cement board ceiling with wood frame including all supporting work - Ground floor.	Sq.m	30		
549	Supply and fix plaster board ceiling with aluminum frame including all accessories - First floor.	Sq.m	34		
550	Supply and fix edge beading 30 x 25 mm - first floor.	L.m	33		
551	Supply and fix cement board ceiling with wood frame including all supporting work - first floor.	Sq.m	80		
552	Supply and fix ply board ceiling with wood frame including all supporting work - first floor.	Sq.m	55		
553	Supply and fix edge beading 30 x 25 mm - to ply board ceiling.	L.m	54		
554	Supply and fix cement board ceiling with wood frame including all supporting work - first floor – external.	Sq.m	65		
5.7	Doors, Windows and Aluminum Partitions				
555	Supply and fix timber doors (TD1) 1850 x 2500 as per detail including door frames, S/S hinges door closer, lock etc.	No.	1		
556	Supply and fix timber doors (TD2) 1200 x 2500 as per detail including, door frames, S/S hinges door closer, door lock etc.	No.	1		
557	Supply and fix ply wood door 40mm thick with doors (TD3) 900 x 2100 as per detail including door frame, S/S hinges door closer, door lock etc.	No.	8		
558	Supply and fix marine ply wood door 40mm thick with doors (TD4) 900 x 2100 as per detail including door frame, S/S hinges door closer, door lock etc.	No.	2		
559	Supply and fix marine ply wood door 40mm thick with doors (TD5) 600 x 2100 as per detail including door frame, S/S hinges door closer, door lock etc.	No.	3		
560	Supply and fix timber windows 2350x 1400 (TW1), 25 mm thick sashes, 100 x 75 mm frames, glazing thickness 4mm including all fittings etc.	No.	3		
561	Supply and fix timber windows 1750x 1400 (TW2), 25 mm thick sashes, 100 x 75 mm frames, glazing thickness 4mm including all fittings etc.	No.	1		
562	Supply and fix aluminum windows 1800 x 1700 (ALW1) as per details.	No.	6		
563	Supply and fix aluminum windows 2500 x 700 (ALW2) as per details.	No.	2		
564	Supply and fix aluminum windows 600 x 1700 (ALW3) as per details.	No.	1		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
565	Supply and fix aluminum windows 1200 x 1400 (ALW4) as per details.	No.	5		
566	Supply and fix aluminum windows 1850 x 1100 (ALW5) as per details.	No.	1		
567	Supply and fix aluminum windows 3700 x 1100 (ALW6) as per details.	No.	1		
568	Supply and fix aluminum windows 600 x 1100 (ALW7) as per details.	No.	1		
569	Supply and fix aluminum doors 600 x 2200 (ALD1) as per detail.	No.	4		
570	Supply and fix aluminum partitioning as per details.	Sq.m	25		
5.8 Wall Finishes					
571	Plastering interior walls 1:1:5 lime cement mortar ground floor.	Sq.m	150		
572	Plastering interior walls 1:1:5 lime cement mortar first floor.	Sq.m	250		
573	Plastering exterior walls 1:1:5 lime cement mortar first floor.	Sq.m	215		
574	Plastering curved columns 1:1:5 lime cement mortar ground floor.	Sq.m	24		
575	Plastering curved columns 1:1:5 lime cement mortar first floor.	Sq.m	19		
576	Extra over to Items 8.4 & 8.5 in forming top and bottom of columns as detailed.	No.	14		
577	Soffit plaster to staircase & landing.	Sq.m	12		
578	Tiling walls 150x150mm porcelain tiles including rendering & waterproofing walls prior to tiling - ground floor.	Sq.m	85		
579	Tiling walls 150x150mm porcelain tiles including rendering & waterproofing walls prior to tiling - first floor.	Sq.m	55		
580	Painting internal walls, soffits of staircase, landings and beams, rectifying defects with one or more layers of filler and painting to achieve required finish with two or more layers of emulsion paint.- ground floor.	Sq.m	162		
581	Painting internal walls, soffits of staircase, landings and beams rectifying defects with one or more layers of filler and painting to achieve required finish with two or more layers of emulsion paint.- first floor.	Sq.m	250		
582	Painting external walls, columns straight & curved , beams, rectifying defects with one or more layers of filler and painting to achieve required finish with two or more layers of weather shield paint.	Sq.m	239		
5.9 Floor Finishes					
583	Tiling floors 300x300mm porcelain tiles including rendering & waterproofing floors prior to tiling - ground floor.	Sq.m	32		
584	Tiling floors 300x300mm porcelain tiles including rendering & waterproofing floors prior to tiling - first floor.	Sq.m	50		
585	Tiling stair case & landings, vertical & horizontal, non slip tiles for the treads, 300x300mm porcelain tiles including rendering & waterproofing floors prior to tiling	Sq.m	14		

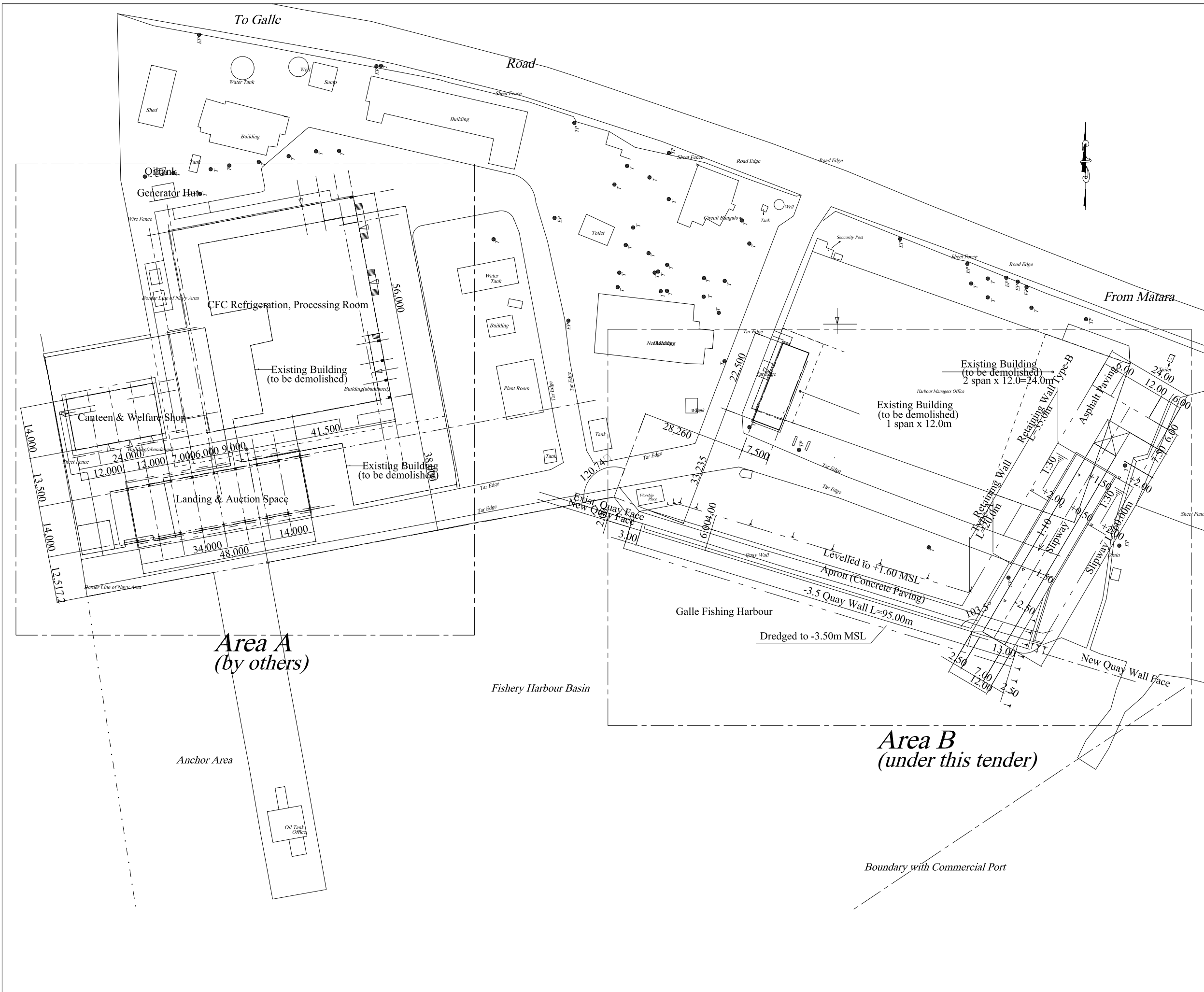
Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
586	Epoxy painting to floor - ground floor.	Sq.m	77		
587	Epoxy painting to floor - first floor.	Sq.m	115		
588	Supply & fix timber skirting 12x 60 mm - ground floor	L.m	57		
589	Supply & fix timber skirting 12x 60 mm - first floor	L.m	105		
5.10	Electrical Installations				
590	Supply and fix fans 1400 dia , 5 speed selection, thermal cut off,16 pole condenser motor with all accessories and new cabling as per drawing.	No.	9		
591	Supply and fix exhaust fan ventilating type, 150dia x 170CMHx300Pa, C/W metallic hood (Sus) including new cabling.	No.	7		
592	Supply and fix Type E - 40 W x2 (salt proof/ recessed) Fluorescent light with all fittings & accessories including new cabling as per drawing.	No.	39		
593	Supply and fix Type F - 20 W x1 (salt proof / water proof) Fluorescent light with all fittings & accessories including new cabling as per drawing.	No.	11		
594	Supply and fix Type I - 40 W x2 (salt proof / single reflector) Fluorescent light with all fittings & accessories including new cabling as per drawing.	No.	1		
595	Supply and fix Type I - 40 W x2 (salt proof / single reflector) Fluorescent light with all fittings & accessories including new cabling as per drawing.	No.	1		
596	Supply and fix one gang switches with accessories including connecting to the cabling system.	No.	19		
597	Supply and fix two gang switches with accessories including connecting to the cabling system.	No.	16		
598	Supply and fix single socket outlets 15 amp including new cabling.	No.	30		
599	Supply and fix double socket outlets 15 amp including new cabling.	No.	10		
600	Supply & fix distribution board with all accessories including cabling	Sum	1		
5.11	Air Conditioning and Ventilation				
601	Supply and fix split type air conditioners with all accessories & cabling 4200 BTU.	No.	1		
602	Supply and fix split type air conditioners with all accessories & cabling 1800 BTU.	No.	2		
603	Supply and fix split type air conditioners with all accessories & cabling 1200 BTU.	No.	5		
5.12	Plumbing Work				
604	Supply & fix low level suite with cistern, seat cover, stop valve flexible hose etc. (all items of approved quality) including connections to water supply system and sewerage system.	No.	6		

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
605	Supply & fix wash basin with waste plug & chain, pillar tap, flexible hose, angle valve, PVC trap etc. (all items of approved quality) including connection to water supply system and drainage system.	No.	6		
606	Supply & fix corner type wash basin with waste plug & chain, pillar tap, flexible hose, angle valve, PVC trap etc. (all items of approved quality) including connection to water supply system and drainage system.	No.	1		
607	Supply & fix bidet showers with angle valve etc. (all items of approved quality) including connections to water supply system.	No.	6		
608	Supply & fix shower heads with stop valve, flexible hose etc. (all items of approved quality) including connections to water supply system	No.	2		
609	Supply & fix stainless steel floor drains with lid including trap etc. (all items of approved quality) and connection to waste water system.	No.	5		
610	Supply and fix soap trays etc. (all items of approved quality) of approved quality.	No.	9		
611	Supply and fix toilet paper holders.	No.	6		
612	Supply & fix towel rails.	No.	8		
613	Supply and fix shower curtain with rod.	No.	2		
614	Supply & fix tooth brush holders.	No.	2		
615	Allow for all internal plumbing work for water supply, waste water and sewerage including supplying and fixing pvc pipes accessories, valves, traps etc. braking and making good block work, concrete for making recesses to fix pipes , making man holes.	Sum	1		
616	Supply and fix precast septic tank and soakage pit including all connections to the sewerage system.	No.	1		
5.13	Miscellaneous				
617	Supply and fix pantry cupboards including single drain stainless steel kitchen sink, sink tap, waste plug & chain, flexible hose angle valve and connection to the water supply system - ground floor	No.	1		
618	Supply and fix pantry cupboards including single drain stainless steel kitchen sink, sink tap, waste plug & chain, flexible hose angle valve and connection to the water supply system - and gas/electric cooking range with exhaust canopy including connection.	No.	1		
619	Supply and fix mirrors 375 x 400 mm.	No.	6		
620	Supply and fix stainless steel hand rails to stair case.	L.m	14		
621	Supply and fix stainless steel hand rails to balcony and landings.	L.m	23		
622	Allow for external drainage work including construction of man holes, supplying and fixing drainage pipes etc. system.	Sum	1		
Sub-Total of Bill No. 5					

Bill No.	Pay Item	Unit	Q'ty	Sri Lanka Rupees (Rs)	
				Unit Rate	Amount
	A. Sub Total Bill No. 1 up to 5			-----	
	B. Value Added Tax (15% of A)			-----	
	C. Tender Price (A + B)			-----	

THE PROJECT
FOR
RECONSTRUCTION OF QUAYWALL, SLIPWAY AND CFHC OFFICE BUILDING AT GALLE FISHERY HARBOR
DAMAGED BY TSUNAMI DISASTER

<i>LIST OF DRAWINGS</i>	
GENERAL	
P/034-G-001	PROJECT INFORMATION
P/034-G-002	EXISTING CONDITIONS (1)
P/034-G-003	EXISTING CONDITIONS (2)
QUAY STRUCTURES	
P/034-Q-001	GENERAL PLAN OF RECONSTRUCTION QUAY STRUCTURES
P/034-Q-101	QUAY WALL ARRANGEMENT
P/034-Q-102	TYPICAL SECTION AND COPING DETAIL
P/034-Q-103	MISCELLANIOUNS DETAILS
P/034-Q-201	SLIPWAY PLAN AND LONGI. SECTION
P/034-Q-202	SLIPWAY TYPICAL SECTIONS
P/034-Q-203	CONCRETE BLOCKS DETAIL
P/034-Q-301	RETAIN WALL DETAIL
BUILDING WORKS	
P/034-B-001	SITE PLAN
P/034-B-002	DEMOLITION WORKS
P/034-B-101	OFFICE BILDINGS FINISH SCHEDULE
P/034-B-102	GROUND FLOOR PLAN
P/034-B-103	1ST FLOOR PLAN
P/034-B-104	ELEVATION (1)
P/034-B-105	ELEVATION (2) AND SECTION
P/034-B-201	WINCH HOUSE



NOTE:
 1. All dimensions are in meter, unless indicated otherwise.
 All elevations are related to MSL.

EMPLOYER:

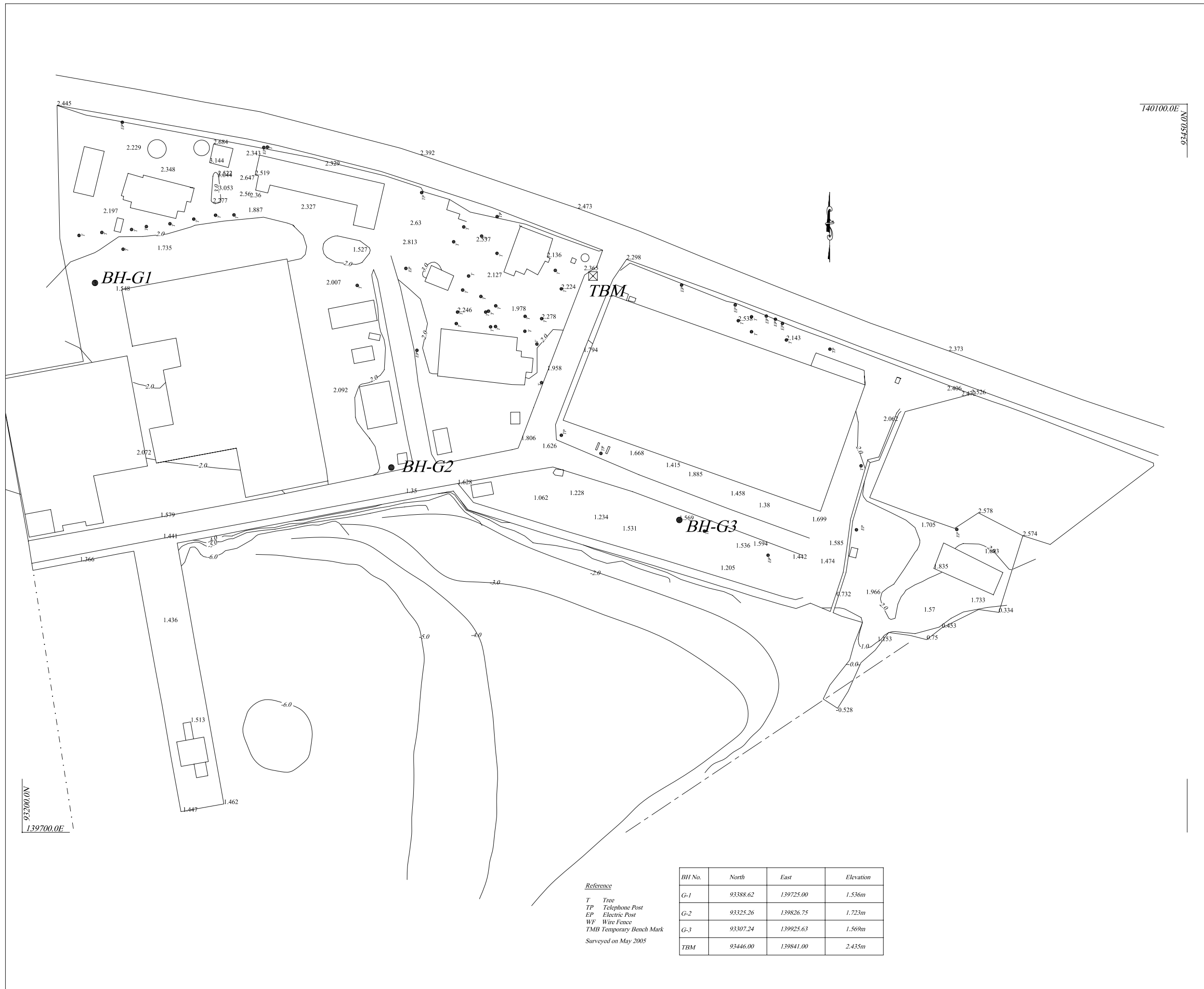
EXECUTING AGENCY:
 Ministry of Fisheries & Aquatic Resources
 Ceylon Fishery Harbour Corporation (CFHC)

PROJECT TITLE:
 Project for Reconstruction of Quaywall Structures and CFHC Office Building at Galle Fishery Harbor Damaged by Tsunami Disaster

DRAWING TITLE:
 General

Project Information

DATE:	SCALE: 1/1000
BY:	NO.
BY:	P/034-G-001
APPROVE BY:	



NOTE:

1. Horizontal Control: National Grid System is used.
2. All dimensions and elevations are in meter and related to MSL (Natural Survey Detam).
3. Survey
Topographic Condition is base on the natural condition survey for Galle fishery harbor carried out by JICA study team in May 2005. Bathymetric Survey is based on Sounding Map (2001) provided by CFHC.

EMPLOYER:

EXECUTING AGENCY:
 Ministry of Fisheries & Aquatic Resources
 Ceylon Fishery Harbour Corporation (CFHC)

PROJECT TITLE:
 Project for Reconstruction of Quaywall Structures and CFHC Office Building at Galle Fishery Harbor Damaged by Tsunami Disaster



DRAWING TITLE:
 General
 Exsiting Condition (1)
 Topography and Bathymetry

DATE:	SCALE: 1/1250
BY:	NO.
BY:	P/034-G-002
APPROVE BY:	





Reference
 T Tree
 TP Telephone Post
 EP Electric Post
 WF Wire Fence
 TMB Temporary Bench Mark
 Surveyed on May 2005

BH No.	North	East	Elevation
G-1	93388.62	139725.00	1.536m
G-2	93325.26	139826.75	1.723m
G-3	93307.24	139925.63	1.569m
TBM	93446.00	139841.00	2.435m

Symbol

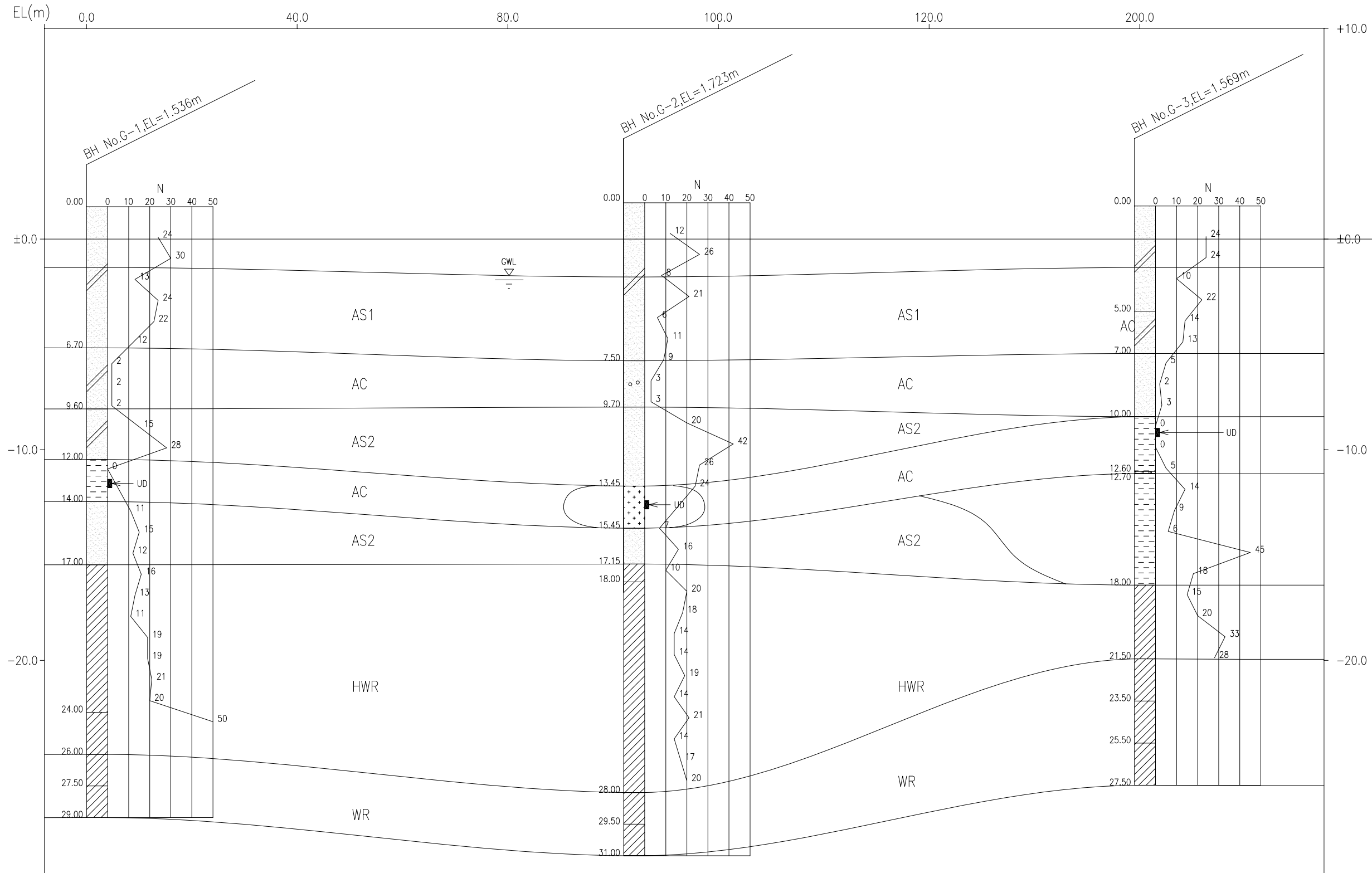
- N = N value (SPT)
- UD = Undisturbed Sample
-  Silty Sand
-  Silt

Geological Formation

-  AS Alluvial Sand (Silty Sand)
-  AC Alluvial Silt (Litolitic Red Soil)
-  HWR High Weathered Rock (Sand)
-  WR Weathered Rock (Grneisse)

NOTE:

1. All dimensions and elevations are in meter and related to MSL (Natural Survey Detam).
2. Survey Geological Investigation is base on the natural condition survey for Galle fishery harbor carried out by JICA study team in May 2005.



EMPLOYER:

EXECUTING AGENCY:

Ministry of Fisheries & Aquatic Resources
Ceylon Fishery Harbour Corporation (CFHC)

PROJECT TITLE:

Project for Reconstruction of
Quaywall Structures and CFHC Office Building
at Galle Fishery Harbor
Damaged by Tsunami Disaster

DRAWING TITLE:

General

Existing Condition (2)

Profile of Sub-Surface condition across

DATE:

SCALE:
1/200, V=1, H=4

BY:

NO.

BY:

P/034-G-003

APPROVE BY: