

NAME OF TENDER:

REPLACEMENT OF ROOFING
AND CLADDING OF EXISTING
AC SHEETING WITH
GALVALUME PROFILE
SHEETING AT LIOC
TERMINAL, TRINCOMALEE.

Tender No:	LIOC/ ENG/ PT/ 03/ 2022-23
Due Date &Time :	26.01.2023 @ 14:00 Hrs

**TECHNICAL/ COMMERCIAL &
PRICE BID**



TENDER NO: LIOC/ ENG/ PT/ 03/ 2022-23

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REF: LIOC/ ENG/ PT/ 03/ 2022-23

DATE: 02/01/2023

M/S. _____

Dear Sirs,

SUBJECT: REPLACEMENT OF ROOFING AND CLADDING OF EXISTING AC SHEETING WITH GALVALUME PROFILE SHEETING AT LIOC TERMINAL, TRINCOMALEE

Dear Sir,

1.0 Following documents forming a part of the mentioned tender are enclosed in single set:

S/N	DESCRIPTION
PART A: TECHNICAL/ COMMERCIAL BID	
1	Notice Inviting Tender
2	Form of tender & Appendix
3	Technical bid Abstract
4	Abbreviations and notations
5	List of documents in support of qualifying norms
6	Particulars of Bid Bond and tender fee
7	Statement of credentials
8	Undertaking towards documents submission
9	Declaration for downloading documents from web site
10	Declaration to be signed and submitted with details
11	List Of Directors Of LIOC
12	Proforma of declaration for Holiday/ Blacklisting
13	Special terms and conditions of contract
14	Terms and conditions - Safety
15	Technical Specifications
16	Form of Agreement
17	Conditions of Contract Part I & Part II
18	Format for Bid Bond
19	Format for Performance Bond
PART B: PRICE BID	
20	Price bid

2.0 We request you to submit your lowest quotation for the work contained in the tender. Your offer complete in all respects must be submitted so as to reach this office of LIOC on or before **26.01.2023 at 14:00 hrs.** Offer may please be dropped in Engineering tender box kept in our office at address given below.

**LANKA LIOC PLC,
LEVEL 20, WEST TOWER, WORLD TRADE CENTRE,
ECHELON SQUARE, COLOMBO - 01, SRI LANKA**

3.0 Bid Bond: The bid bond for **LKR 971,907.78/-** in the form of demand draft (drawn in favor of Lanka IOC PLC payable at Colombo) or Bank Guarantee (in the strictly as per the format enclosed) must be submitted strictly in the Technical Bid cover. However, the empanelled parties are exempted from this.

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SEAL



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4.0 Tender Fee: A tender fee of LKR 5,000/- by Demand draft only (in favor of Lanka IOC PLC payable at Colombo) shall be applicable. However no tender fee in case of downloading from company's web site.

5.0 Submission of Tender Documents:

Tender Envelope must be super scribed duly indicating the tender number, due date and time of opening, name of work tendered, address of tenderer. It must be noted that the Technical bid (named as COVER A) & Price bid (named as COVER B) shall be enclosed in separate covers and sealed. The two covers (COVER A & COVER B) in sealed condition containing the above must be enclosed in an outer cover (named COVER C) and sealed and submitted. The outer cover (COVER C) must be super scribed duly indicating the tender number, due date and time of opening, name of work tendered, name and address of tenderer. Non-submission of the tender documents in the manner prescribed above will render the offer liable for rejection.

5.1. Tenderers to note that LIOC shall not be responsible for the postal delays in dispatch and receipt of tender documents. Tenderers must also note that all pages of tender along with drawings issued must be signed with stamp and submitted as part of submission of tender.

Thanking You,

Yours Faithfully,
For LANKA IOC PLC.,

FOR SR. VICE PRESIDENT (ENGG)

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Lanka IOC PLC

NOTICE INVITING TENDER

Tender no: LIOC/ ENG/ PT/ 03/ 2022- 23

Lanka IOC PLC invites sealed tenders in prescribed tender form under two bid system from bonafide contractors as per following details.

NAME OF WORK	SALE PERIOD (BOTH DAYS INCLUSIVE)	CONTACT PERSON
REPLACEMENT OF ROOFING AND CLADDING OF EXISTING AC SHEETING WITH GALVALUME PROFILE SHEETING AT LIOC TERMINAL, TRINCOMALEE	02 nd Jan' 2023 From 0900 Hrs To 26 th Jan' 2023 Up to 1400 Hrs	SENIOR VICE PRESIDENT (ENGG.) TEL: +94 11 2475707 Email: shashankj@lankaio.com JNR. EXEC. (ENGG.) TEL: +94 11 2475728 Email: buwaneka@lankaio.com

Please visit our website www.lankaio.com for further details on this tender.

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NOTICE INVITING TENDER

1	Name of work	:	REPLACEMENT OF ROOFING AND CLADDING OF EXISTING AC SHEETING WITH GALVALUME PROFILE SHEETING AT LIOC TERMINAL, TRINCOMALEE
2	Place of Work	:	LANKA IOC TERMINAL, TRINCOMALEE
3	Tender Ref	:	LIOC/ ENG/ PT/ 03/ 2022-23
4	Tender Fee	:	LKR 5,000/- (non refundable / non transferable) Demand draft drawn in favour of Lanka IOC PLC payable at Colombo. Tender fee not applicable if downloaded from the www.lankaio.com
5	Bid Bond	:	LKR 971,907.78 (By way of DD or BG as per format)
5A	Mode of submission of bid bond	:	A. By Demand draft in favour of Lanka IOC PLC payable at Colombo B. By Bank Guarantee in favour of Lanka IOC PLC issued by any MNC/reputed Bank in Sri Lanka.
Sale Of Tenders (between 0900 Hrs to 1700 Hrs on working days)			
6	a) Starts On	:	02 nd Jan' 2023 at 0900 Hrs
	b) Closes On	:	26 th Jan' 2023 at 1400 Hrs
7	Pre Bid Quarries	:	Party can make site visit before their quote, any quarries arise please send it before 17 th Jan 2023 at 10 a.m. (Details of meeting will be shared).
8	Tender Submission Address	:	SR. VICE PRESIDENT (ENGG), LANKA IOC PLC, LEVEL 20, WEST TOWER, WORLD TRADE CENTRE, ECHELON SQUARE, COLOMBO - 01, SRI LANKA
9	Due Date And Time	:	
	a) Submission Of Tenders	:	26 th Jan' 2023 @ 14:00 Hrs
	b) Opening Of Tenders (Technical Bid Only)	:	26 th Jan' 2023 @ 15:00 Hrs
10	Verification Of Original Documents	:	27 th ,30 th , 31 st of Jan 2023
11	Work Completion Time	:	16 Weeks
12	Number of parties to be selected	:	1 NO

Sealed tenders in two bid system (a) Technical bid with commercial terms and (b) Price Bid are invited from reputed, established and financially sound parties for 'Replacement of Roofing and Cladding of Existing AC Sheeting with Galvalume Profile Sheeting at LIOC Terminal, Trincomalee.'

The prequalifying parameters are not applicable to empanelled parties. However new parties require to meeting the following qualifying parameters as per details mentioned below,

QUALIFYING PARAMETERS:

Parties who satisfy the following qualification parameters as per the details given below only need apply.

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SL	QUALIFYING PARAMETERS
1.	Similar works: Value of similar works shall be as per following. 1. 3 similar work orders each of value not less than LKR 38.87 OR 2. 2 similar work orders each of value not less than LKR 48.59 Mil OR 3. Single similar work order of value not less than LKR 77.75 Million in any of the last 5 years ending 31/ 12/ 2022 .
2.	Average Annual Financial turnover during last 3 financial years ending 30 rd Nov' 2022 ie. 2020-21, 2021-22 and 2022-23 shall be at least LKR 29.15 Million . Note: In case the turnover for any of the above years is not furnished then, the turnover shall be taken as ZERO while computing average turnover.
3	Business Registration and VAT (If applicable) registration certificates. Proof of only submission of application for VAT registration shall not be considered as valid document.

Definition of Similar works:

“Experience in successful completion of:

- a) structures, warehouses, and other industrial structures including roofing and cladding works using color coated/ Zinc aluminum sheeting works in Sri Lanka,
or
- b) repairs and replacement of structures, warehouses and other industrial structures including roofing and cladding works using color coated/ Zinc aluminum sheeting works in Sri Lanka”.

Note:

- a. Proof of works completed as per qualifying parameters mentioned above shall be supported by copies of work orders, approved drawings, final bill copies/ work completion certificates, etc indicating date of work order, date of completion of works, nature of works and value of works completed etc.
- b. In case of works taken up prior to the qualifying period (5 years ending 31/ 05/ 2020) are completed during the qualifying period then, the cost of works completed in the qualifying period shall be reckoned for the purpose of qualification. Proof of turn over shall be supported by copies of Profit and Loss account statements, income statements & balance sheet indicating therein Professional receipts.

TENDER FEE:

Tender documents (non transferable) can be obtained from Engineering department, Lanka IOC PLC, 20th floor, West Tower, Echelon Square, Colombo, Sri Lanka by way of a request letter together with tender fee for **LKR 5,000/-** by way of Demand Draft drawn in favour of LANKA IOC PLC payable at COLOMBO.

LIOC shall not be responsible for any Postal / Courier delays if document is sought by post. The tender documents can also be downloaded from our web site **www.lankaio.com** during the sale period. In such case, the tenderers must ensure that all the documents are downloaded and the responsibility of the same shall vest with the individual tenderer. Before downloading the tender documents from the website, the tenderer should register in the website by giving the correct name of the firm, address and all details as required. It shall be the responsibility of the tenderer to ensure that they register with the web site well in advance and download the documents before due date and time of close of sale. In case, the name and address in which the tenderers have registered at the website does not match with the name and address of in which they have quoted, their tender shall be rejected outright.

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The tender documents downloaded are not transferable and can be used only by the registered tenderer who has downloaded the documents. Hence any tender submitted by the tenderers who have neither bought the tender nor downloaded the same shall be rejected outright. **In case, the tenders are downloaded, the tenderers are NOT required to submit the Tender Fee for LKR 5,000/- along with the Technical Bid documents.**

Tenders marked “Technical Bid with Commercial Terms without Price” shall be opened on due date and time mentioned in presence of Bidders at the above-mentioned address. Lanka IOC PLC reserves the right to accept / reject any or all tenders without assigning any reason whatsoever.

Tenders received after the due date and time shall be rejected outright.

BID BOND:

Tenderers are requested to submit bid bond of **LKR 971,907.78** in the form of Demand Draft/ BG to be issued by any scheduled bank in Sri Lanka in favour of Lanka IOC (as per format attached with this tender). The BG towards bid bond to be issued by the banks should be valid for a period of 4 months (120 days) from the date of opening of technical/ commercial bids.

Tenders received without bid bond shall be rejected outright.

The bid bond of unsuccessful tenderers shall be returned after finalization of tender and after submission of original cash receipts by the tenderers. Bid bond of successful tenderer shall be returned upon finalization of tender and on acceptance of the PO placed by LIOC.

Tenderers may note that the bid bond shall be forfeited in case of following situations:

- Canvassing of information or submission of forged/ false documents/ information by tenderers.
- Unilateral withdrawal or revision of the offer by the tenderer during the validity period of the offer.
- Backing out after placement of work order.

Bid bond shall not carry any interest.

Tenders marked “Technical Bid with Commercial Terms without Price” shall be opened on due date and time mentioned in presence of Bidders at the above mentioned address. Lanka IOC PLC reserves the right to accept / reject any or all tenders without assigning any reason whatsoever.

Tenders received after the due date and time shall be rejected outright.

PROCEDURE FOR SELECTION OF CONTRACTOR:

- A. **Pre-bid quarries:** Party can make site visit before their quote, any quarries arise please send it before 17th Jan 2023 at 10 a.m. vide mail.
- B. **Submission of Documents towards qualifying parameters:-** Tenderer will be required to fill in and enclose documents in support of qualifying parameters together with relevant documents as given in the Statement of Credentials sheet attached. **OFFER OF THOSE TENDERERS NOT ENCLOSING ALL RELEVANT DOCUMENTS TOWARDS QUALIFYING PARAMETERS ARE LIABLE FOR REJECTION**
- C. **Verification of Original Documents:-** Tenderers are required to report on the specified dates mentioned in the tender along with all original documents, copies of which have been submitted with the Technical Bid towards qualification. No separate communication will be

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issued to tenderers in this regard. The Bids of the Tenderers who do not report for verification of original documents on date mentioned may be summarily rejected.

- D. **Technical Qualification:-** Tenderer will be considered as technically qualified based on meeting qualifying parameters and after verification of original documents towards the same as stipulated above. In the event, document submitted by the tenderer is found to be forged or incorrect, such tenderer shall be rejected and bid bond submitted shall be forfeited immediately. Such tenderer is also liable to be put on Holiday List by LIOC. Parties who have carried out the work on sub contract basis shall not be eligible to participating in the tender.
- E. **Price Bid Opening & Finalization of parties:** Tenderers are required to quote fixed rates as given in the Price Schedule. Price Bid of only technically qualified parties shall be opened, after intimation to successful tenderers. Status of tenderers shall be arrived at based on the price quoted by individual tenderers and arranged from lowest bidder to highest bidder in terms of quotation. In case of identical rates received, parties having higher annual average turnover in the last 3 financial years ie as worked out for qualifying criteria shall get precedence.

Once the lowest rate (L1) is established, reverse auction chance will be given to all successful bidders then the contract to be finalized with the lowest rate (L1) party with or without negotiation on sole discretion of LIOC.

ACCEPTABLE RATES & AWARD OF CONTRACT:

The parties are required to quote their lowest rates on individual items of the attached Schedule of Work.

A merit list based on the total quoted rate of the bidders in ascending order shall be prepared to decide enlistment.

The **lowest acceptable rate** shall be offered to the parties serially as per the above merit list. The lowest acceptable rate shall be treated as the rate acceptable to Lanka IOC PLC taking into consideration abnormal quotes. In other words, abnormally low & high quotes can be rejected.

LIOC reserves the rights to negotiate with the tenderer. The tenderer shall confirm the negotiation within the stipulated time. If the tenderer fails to comply, LIOC reserves the right to reject the tender at their discretion.

The contract shall be finalized with **maximum of ONE (01) party**.

The Tenderers are advised to submit their offer strictly adhering to the terms and conditions and specifications contained in the Tender document and not to stipulate any deviations. Failure to do so will result in rejection of the Tender outright notwithstanding their status on quoted rates.

Canvassing of information or submission of forged or false documents / information by any Tenderer shall make their offer invalid. In addition, action shall also be taken by Lanka IOC PLC for forfeiture of bid bond as well as putting the Tenderer on Holiday list.

The successful tenderer will have to execute an agreement with LIOC PLC, covering all aspects to the contract, in the form prescribed, immediately before commencement of work. Intending tenders should acquaint themselves with provision of the agreement before sending the tenders.

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Tenders should reach ENGINEERING DEPARTMENT, LANKA IOC PLC, LEVEL 20, WEST TOWER, WORLD TRADE CENTRE, ECHELON SQUARE, COLOMBO - 01 (SRI LANKA) before due date and time mentioned above.

SENIOR VICE PRESIDENT (ENGG)

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FORM OF TENDER

NOTE: The Appendix forms parts of Tender; Tenderers are required to fill up all the blank spaces in this Tender Form and Appendix.

To: Lanka IOC PLC
20, West Tower,
World Trade Centre,
Echelon Square,
Colombo 01.

1. I/We,..... Of
the undersigned, having examined the Form of Agreement, the Conditions of Contract, Form of Tender, Drawings, Specifications, Priced Bills of Quantities and the Schedule of Rates and Prices, do hereby offer and undertake to execute, complete and maintain the whole of the said works referred to in the schedule of the Form of Agreement in conformity with the said Drawings, Specifications and all other work in connection therewith and incidental falls pertinent thereto, to your entire satisfaction and strict accordance with the Conditions of Contract, at the rate and prices set forth in the said Priced Bill of Quantities and/or Schedule of Rate and Prices at the amount given at the end of the Priced Bills Of quantities or such other sums as may be ascertained in accordance with the Conditions of Contract.
2. And, I/We do hereby undertake to commence the works within **Seven (07) days** from the last date of acceptance of this Tender, if any, or at the instance of the Engineer's order to commence, and to complete and deliver the whole of the works as aforesaid duration calculated from the last day of the aforesaid period in which works are to be commenced.
3. And further, I/We do hereby undertake to obtain the guarantee of a Bank with your approval, to be jointly and severally bound with us in a sum not exceeding ten percent (10%) of the aforementioned sum for the due performance of the contract under the terms of a Bond to be approved by you.
4. And I/We further agree, in the event of my/our failing to execute the said agreement or the said Bond, if required within **Seven (07) days** of my/our being called upon to do so, at the latest then any acceptance of this tender by you, may be revoked by you on behalf of the Employer and that I/We shall be held responsible for all and any damages suffered by the Employer in consequence of such delay or failure.
5. Unless and until the formal agreement is prepared and executed, I/We do hereby agree, that this tender together with your written acceptance thereof, shall constitute a binding contract between the two parties.
6. I/We understand that you are not bound to accept the lowest or any tender you may receive.
7. I/We further undertake to abide by this tender for a period of **120 days** from the last date fixed for "receiving of tenders" and that the same shall remain binding upon me/us and may be accepted at any time before the expiration of such period.

In witness whereof, I/We do set my hand/our respective hands hereto at
on this Day of Two Thousand and Twenty

Signature of Tenderer

SIGNATURE OF TENDERER
SEAL



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in the capacity of and/or duly authorised to sign

this tender for and on behalf of

Signature

Seal & Address

SIGNATURE OF TENDERER
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APPENDIX TO FORM OF TENDER

	Clause	
Amount of Bid-Bond	10	LKR 971,907.78/-
Period of Completion from Work order	41	16 Weeks
Amount of Liquidated damages	47 (1)	1% per week or part thereof
Limit of Liquidated damages	47 (1)	10% of the Work Order
Amount of bonus (if any)	47 (3)	None
Period of Maintenances	49	01 year
Percentage of adjustment of		
Provisional sums	59 (4) (c)	Ten (10) percent
Mobilization Advance	60 (1)	Nil
Percentage of Retention	60 (4) (a)	10% (TEN PERCENT) SD ONLY
Time within which payment to be made after certificate	60 (7)	14 days

In witness whereof, I/We do set my hand/our respective hands hereto at

on this Day of Two Thousand and Twenty

Signature of Tenderer

in the capacity of and/or duly authorized to sign

this tender for and on behalf of

Signature

Seal & Address

SIGNATURE OF TENDERER
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IMPORTANT GUIDELINES TO TENDERERS

1.0 SUBMISSION OF TENDER:

1.1 Tender documents should be submitted only in the prescribed tender schedule form supplied by the LIOC. The tender should be submitted in cover/s (Sealed) boldly superscribed on the outer cover, Tender Number, Closing date and time so as to reach the concerned authority as laid down in the Tender Form. The tender is to be dropped in the Tender Box kept at the concerned authority's office as specified in the tender document. The tender should reach the concerned authority as laid down in Tender Form, before the Closing date and time. Lanka IOC shall not be responsible for any postal delays; delay in transit etc. and request for extension of due date and time on such grounds shall not be entertained.

1.2 Tender documents are not transferable.

2.0 TENDER FEE

2.1 Tender fee of **LKR 5,000/-** (Rs. Two Thousand Five Hundred only) drawn in favour of Lanka IOC PLC payable at Colombo should be submitted by Crossed Demand Draft / Bankers Cheque should be submitted to LIOC.

3.0 STUDY OF TENDER DOCUMENTS AND VISIT TO SITES

3.1 Tenderers should study the Tender Documents carefully before quoting. The tenderers should visit the site at their own cost and acquaint themselves with the site conditions. The tenderers are also expected to know about the availability of water, electricity, approach road-cum-construction materials, as per specifications and any other ancillary facilities since these are to be provided / arranged by the tenderers (Unless specified otherwise) at their cost to execute the works. All these factors must be taken into account while quoting.

4.0 FILLING OF TENDER DOCUMENTS

4.1 Tenderers must note that the rates in price bid documents to be quoted must be in ink/type. In case of correction, the original figure must not be overwritten or obliterated by use of white ink. In case white fluid (ink) is used, the offers received from such tenderers shall be liable to be rejected notwithstanding the status of the tenderers upon opening of price bids.

4.2 Every page of Tender Documents shall be signed by the Tenderer at the end of last entry there on. One complete set of drawings should be signed and returned by the Tenderers along with the Tender Documents.

4.3 All tenders and subsequent communication if any should be submitted in cover (Seal with tag) boldly superscribed on the outer cover, tender number, Closing date and time and sent by Registered post so as to reach the office of LIOC as laid out in the tender form before the closing date and time or dropped in the tender box kept in the concerned authority's office as laid out in the tender form before the closing date and time with the permission of the concerned authority.

4.4 The rates Quoted should be inclusive of all materials, labour, equipments, lift, lead, taxes, duties etc. required in connection with completion of work to the entire satisfaction of LIOC. All the materials are to be supplied by the contractor, unless otherwise specified.

4.4.1 VAT alone on the rates quoted shall be payable at prevailing percentage on the amount quoted for the items contained in the price schedule(If applicable).

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5.0 SUBMISSION OF PRICE:

- 5.1 The Price bid shall be submitted only in LIOC's format enclosed as a strictly in the manner prescribed therein. Rate in terms of a single Percentage shall be quoted only on the Grand Total indicated in the price schedule and not on individual items. It may be carefully noted that if price bid is not enclosed in LIOC format and/or any counter condition(s) are incorporated / submitted with the Price bid, the tender shall be treated as invalid, repeat invalid and shall result in rejection of the offer received notwithstanding the financial position of the tenderer based on the rates quoted for the tender.
- 5.2 Tenderer should clearly indicate their offer in the appropriate space given in the ` schedule of items in the price bid and not at any other place.
- 5.3 Tenderers should quote their total both in figures and words in the appropriate spaces provided for in the offer page for all items of the tender schedule.
- 6.0 Non-submission of the tender in the above manner may lead to rejection of the tender. Date and time for receipt and opening of tenders decided by LIOC shall be final and request for change will not be entertained. Please note that tenders shall be opened on the due date in the presence of intending tenderers or their authorized representatives only who shall have necessary authorization letter with them with signature duly attested by Proprietor/Partner/Director of firm as the case may be.
- 7.0 In the event of identical rates received from more than one tenderer, then the tender shall be finalized in favor of the tenderer whose average annual financial turnover for the 3 preceding financial years worked out to 3 decimal places is higher. For this purpose, the tenderers must submit copies of audited P&L account statements for the financial years 20-21, 21-22 & 22-23. Tenderers must also note that the turnover for any particular year shall be taken as ZERO in case turnover details for the year is not submitted.
- 8.0 Power of attorney or Authorization of the person signing the tender documents should be attached, without fail, along with tender document.
- 9.0 The tenders received without Bid Bond & Tender Fee will be rejected.

10.0 ACCEPTANCE OF TENDER:

Non-submission of all documents or incomplete submission of any document may result in rejection of the tender. It is therefore necessary to submit all the documents in full, duly filled and signed. Incomplete tenders, conditional tender, tenders received late or tender not conforming to the terms and conditions prescribed in the tender documents or not accompanied by the requisite Bid Bond / Cost of tender documents will be rejected. Requests for adjustment of pending bills or any other amount towards Earnest Money deposit will not be entertained. The Company is not bound to accept the lowest tender and reserves the right to reject any or every tender without assigning any reason whatsoever and or to carry out negotiations with the tenderers in the manner considered suitable by the LIOC.

SR V P (ENGG)

SIGNATURE OF TENDERER
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ABBREVIATIONS & NOTATIONS

UNLESS OTHERWISE SPECIFIED FOLLOWING NOTATIONS/ ABBREVIATIONS SHALL BE APPLICABLE TO DOCUMENT

MM/mm	- MILLIMETER
SQMM/sqmm/mm ²	- SQUARE MILLIMETER
CM/cm	- CENTIMETER
SQCM/Sqcm	- SQUARE CENTIMETER
SFT/sft	- SQUARE FEET
M/m/rm/RM	- METRE / RUNNING METRE/ LINEAR METER
SQM/sqm/m ²	- SQUARE METRE
CUM/cum/m ³	- CUBIC METRE
KG/kg	- KILOGRAM
MT	- METRIC TONNE
MS	- MILD STEEL
DIA/dia/Φ	- DIAMETER
NO (S) / Nos. / nos.	- NUMBER(S)
RCC	- REINFORCED CEMENT CONCRETE
E-I-C	- ENGINEER - IN - CHARGE
IS/BIS	- INDIAN STANDARD
API	- AMERICAN PETROLEUM INSTITUTE
JOB	- JOB LUMPSUM
EMD	- EARNEST MONEY DEPOSIT
ISD	- INITIAL SECURITY DEPOSIT
BG	- BANK GUARANTEE

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PARTICULARS OF TENDER FEE

DEMAND DRAFT NO:

DATED.....

ON BANK.....

FOR LKR.5,000/- (BY WAY OF DEMAND DRAFT PAYABLE AT COLOMBO).

PARTICULARS OF BID BOND

DEMAND DRAFT NO:

DATED.....

ON BANK.....

FOR LKR 971,907.78/- (BY WAY OF DEMAND DRAFT PAYABLE AT COLOMBO).

OR

BANK GUARANTEE NO:

DATED.....

ON BANK.....

FOR LKR 971,907.78/- (AS PER FORMAT ENCLOSED).

The bid bond shall be valid for a period of (120 days) from the date of opening of tenders.

SIGNATURE OF TENDERER
SEAL



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UNDERTAKING TOWARDS DOCUMENTS SUBMISSION

We confirm that we have quoted the rates in this tender considering Inter-alia the:

1. Price Bid document
2. Special Terms and Conditions of Contract
3. Technical Specifications & Scope Of Services
4. Drawings
5. Terms & Condition - Safety
6. Form Of Agreement
7. Conditions of contract (Part I & Part II)
8. All other documents forming part of tender

We certify that, we have received the complete Tender Documents as mentioned and have studied the same thoroughly before submitting the Bid. We accept all the terms & conditions specified therein.

Signature of the Tenderer/ Authorized Representative

Name & Address: _____

Seal: _____

Telephone Nos.: _____

Date:

Place:

SIGNATURE OF TENDERER
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PROFORMA OF DECLARATIONS TO BE FURNISHED BY THE TENDERERS

DECLARATION - 'A'

We declare that we have complied with the Conditions of Contract (Part I & II)

Date :

Place :

Tenderer's signaturer
Seal

DECLARATION - 'B'

We declare that we do not have any employee who is related to any officer of LIOC PLC

OR

We have the following employees working with us who are near relatives of the Officer Director of LIOC

Name of the employee of the Tenderer	Name & designation of the Officer of LIOC

Date :

Place :

Tenderer's Signature
Seal

DECLARATION - 'C'

The Tenderer is required to state whether he is a relative of any Director of LIOC or the Tenderer is a firm in which any Director of LIOC or his relative is a partner or any other partners of such a firm or alternately the Tenderer is a private company in which Director of LIOC is a member or Director.

S/N	PARTICULARS	DETAILS
1	Name of the Tenderer and his relations with the Director in LIOC.	
2	Name of the Director of LIOC who is related to the Tenderer.	
3	Name of the Director of LIOC who is a member or a Director of the firm.	

Date :

Place :

Tenderer's
Signature & Seal

SIGNATURE OF TENDERER
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DECLARATION - 'D'

Tenderer is required to state whether they have employed any retired Director and above rank officer of LIOC in their firm. If so, details hereunder to be submitted.

S/N	PARTICULARS	DETAILS
1	Name of the person	
2	Post last held in LIOC	
3	Date of retirement	
4	Date of employment in the firm	

Date :
Place :

Tenderer's
Signature & Seal

N.B.

- A separate sheet may be attached, if the above is not sufficient.
- Strike out whichever is not applicable. If the tenderer employs any person subsequent to signing the above declaration and the employee/s so appointed happens to be the near relatives of the Officer/Director of LIOC, the tenderer should submit another declaration furnishing the name/s of such employee/s who is/are related to the officer/s of LIOC
- List of Directors of LIOC board is attached.

SIGNATURE OF TENDERER
SEAL



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LIST OF DIRECTORS OF LANKA IOC PLC

SN	NAME OF THE DIRECTORS & ADDRESS
01	Mr. Ranjan kumar Mohapatra , Chairman LIOC, Director (HR) Indian Oil Corporation Limited, Indian Oil Bhavan, G-9, Ali Yavar Jung Marg, Bandra (East), <u>Mumbai (India) - 400 051.</u>
02	Mr. Vigyan Kumar , Director LIOC, LIOC, ED (Retail Sales), Indian Oil Corporation Limited, Indian Oil Bhavan, G-9, Ali Yavar Jung Marg, Bandra (East), <u>Mumbai (India) - 400 051.</u>
03	Mr. D.R.Paranjape , Director/ LIOC, CGM (Finance), Indian Oil Corporation Limited, (Marketing Division), Indian Oil Bhavan, G-9, Ali Yavar Jung Marg, Bandra (East), <u>Mumbai (India) - 400 051.</u>
04	Mr. Manoj Gupta , Managing Director, LIOC, 20 th Floor, West Tower, World Trade centre, Colombo - 01, Sri Lanka.
05	Prof. Lakshman R. Watawala , Director, Lanka IOC PLC, No: 102/ 5, Barnes Place, Colombo - 07, Sri Lanka.
06	Mr. Amitha Goonaratne , Director, Lanka IOC PLC, No 110, Noris Canal Road, Colombo - 10, Sri Lanka.

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SPECIAL TERMS & CONDITIONS OF CONTRACT

1.0 BID BOND:

- 1.1. Tenderers are requested to submit bid bond of **LKR 971,907.78/-** in the form of Demand Draft/ BG to be issued by any scheduled bank in Sri Lanka in favour of Lanka IOC (as per format attached with this tender). The BG towards bid bond to be issued by the banks should be valid for a period of 4 months (120 days) from the date of opening of technical/ commercial bids.
- 1.2. Tenders received without bid bond shall be rejected outright. Tenderers who have submitted permanent bid bond are exempted from submission of bid bond. Such tenderers may please enclose copy of cash receipt issued by Lanka IOC towards the permanent bid bond.
- 1.3. The bid bond of unsuccessful tenderers shall be returned after finalization of tender and after submission of original cash receipts by the tenderers. Bid bond of successful tenderer shall be returned upon finalization of tender and on acceptance of the PO placed by LIOC.
- 1.4. Tenderers may note that the bid bond shall be forfeited in case of following situations:
- Canvassing of information or submission of forged/ false documents/ information by tenderers.
 - Unilateral withdrawal or revision of the offer by the tenderer during the validity period of the offer.
 - Backing out after placement of work order.
- 1.5. Bid bond shall not carry any interest.

2.0 TENDER FEE:

- 2.1. The intending tenderers must submit tender fee of **LKR 5,000/-** towards purchase of tender document from the office of LIOC. The tender fee shall be in favour of LANKA IOC PLC payable at COLOMBO.
- Non submission of the Tender fee shall render the tender submitted liable for rejection. The tender fee is non refundable.

3.0 COMPLETION PERIOD:

- 3.1. Entire works shall be completed in a duration of **16 Weeks** from the date of handing over the site, which will be taken from the date of issue of work order or the actual date of handing over of the site whichever is earlier, failing which liquidated damages calculated @ 1% of the value of work order per week or part thereof, subject to a maximum of 10% rounded off to nearest LKR 100.00 for delay beyond due date will be recovered from the contractor. This will be in addition to and without prejudice to the other rights available to LIOC under said works contract and the General conditions of the Works Contract.

4.0 COMPLETION OF CONTRACT:

- 4.1. Acceptance of a facility(s) by the LIOC does not constitute final completion of the contract. The contract shall be deemed to be executed in full and final measurement certified only when the contractor has fully discharged all obligations in terms of all contract documents.

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5.0 VALIDITY OF TENDER:

- 5.1. The tender will be valid for a period of 120 days from the date of opening the tender which will be taken as the date of opening tender.

6.0 SECURITY DEPOSIT/ PERFORMANCE BOND:

- 6.1. As per relevant clauses of Conditions of Contract, the successful tenderer shall pay security deposit up on placement of work order equivalent to 10% of the work order value including VAT in any of the following modes.

A. INITIAL SECURITY DEPOSIT:

The successful tenderer within 10 days of receipt of acceptance of tender issued by owner shall deposit initial security deposit in an amount equal to 2.5% (Two and a half percent) of the total work order value in any of the following modes.

- a. Demand draft drawn in favour of LANKA IOC PLC payable at Colombo.
- b. If the bid bond has been made in cash or DD, the contractor may be permitted to adjust the same towards the initial security deposit and pay balance in the manner stipulated in (a) above.

Balance security deposit will be recovered at the rate of 10% of gross certified value of work from incoming running bills till such time entire security deposit is recovered.

B. BANK GUARANTEE/ PERFORMANCE BOND:

Entire amount of security deposit (worked out on the basis of work order value) should be covered by BG/ performance bond as per the format issued by LIOC and should be submitted prior to commencement of work. The BG will be valid for a period of 12 months beyond the date of satisfactory completion of all works. This BG shall be submitted directly by the bankers under their covering letter to the office of LIOC in a sealed cover.

- 6.2. The security deposit collected as per the terms shall be released after a period of 12 months from the date of successful completion of works subject to the relevant clauses of the conditions of contract and agreement. In case required, the BG towards SD shall be extended by the tenderer at no extra cost to LIOC in order to cover the extended time for completion of works and defect liability period of 12 months thereon. The SD shall not carry any interest.
- 6.3. Forfeiture of Security Deposit: All sums of compensation or other sums of money payable by the Contractor may be deducted from SD. In the event of SD being reduced from the original quantum due to recoveries as aforesaid the contractor shall within 15 days of such recoveries, make good deficiency in SD either by cash or by way of Demand Draft.
- 7.0 The tenderers must note that the rates and amount indicated in the schedule of works shall be applicable for all leads and lifts and reach involved. The LIOC also reserves the right to operate or not operate or partly operate any item mentioned in the schedule. The rates quoted for all items below the ground level shall be inclusive of adequate shoring, shuttering, bailing out sub soil water (if found necessary) etc complete. The successful tenderer shall be responsible for implementation of all precautionary measures for ensuring safety for all materials and labor till such time the work is completed in all respects and handed over to the LIOC.
- 7.1. LIOC reserves the right to accept any tender in whole or in part and reject any or all tenders without assigning any reasons. The LIOC reserves the right to accept more tenders

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in part. The LIOC also reserves the right to accord purchase/ price preferences to the public enterprises and Joint ventures of the LIOC as per the prevailing policy. Decision of the LIOC in this regard will be final.

8.0 Any additional work that may become necessary during course of execution of works as authorized by our site in charge shall be immediately got approved prior to taking up the work duly forwarding the details, nature of works etc as per relevant clause of tender.

9.0 In case the contractor fails to adhere to the time limit specified above or if the rate of progress is considered not satisfactory, the LIOC will be at liberty to terminate the contract and get the same executed by any other agency entirely at the cost and risk of the original contractor and in line with provisions available under tender.

10.0 Tenderers are advised to inspect the site and ascertain the site conditions including leads/ lifts involved/ accessibility etc prior to quoting the rates.

The work descriptions and specifications are as per enclosed documents.

11.0 **Location of site: Lanka IOC terminal Trincomalee.**

12.0 The tenderers are requested to inspect the site and ascertain themselves with the site conditions, approach, power, water, lead etc. prior to quoting the rates.

13.0 **WATER SUPPLY:**

13.1. The contractor shall arrange water required for the work at his own cost with all leads and lifts. LIOC shall not be responsible for supplying water and Contractor shall ensure timely and adequate supply of water to meet the schedule. Contractor should install approved metering device at their cost and prevailing rates shall apply for the quantity of water consumed.

14.0 **POWER SUPPLY:**

14.1. The contractor shall make his own arrangement for power required for the work at his cost. DG set of suitable capacity may be installed and operated by the contractor at his cost. LIOC shall not be responsible for power supply and contractor shall ensure proper supply of electricity to meet the schedule. Only flameproof cable and fittings of LIOC approved makes shall be allowed for tapping the power. Contractor should install approved metering device at their cost and prevailing rates shall apply for the quantity of power consumed.

14.2. The electrical works shall be carried out through Licensed Electrical personnel only.

15.0 **CONTRACTOR'S SCOPE OF SUPPLY:**

15.1. All materials including pipes, valves, bends, structural steel, consumables, testing appliances, tools and tackles necessary for completing the work shall be procured & supplied by the Contractor at his own cost unless otherwise specified in the schedule. No claim/ delay on this account will be entertained by the LIOC.

15.2. LIOC reserves the right in selection of best makes of materials to be procured by the contractors & contractor shall procure the same only up on the approval by site in charge.

16.0 **MATERIALS/ EQUIPMENTS:**

16.1. All materials/equipments required for execution of work must be got approved by our site representative before they are brought to the site and also before being actually put to

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use. All facilities for prior inspection of materials/ equipments and subsequent inspection of work by our site engineer must be made available.

17.0 MATERIALS WITHOUT APPROVAL:

17.1. Any material brought without prior approval will be entirely at the risk and cost of the contractor.

17.2. If contractor brings defective/ sub standard materials to site, it shall be the responsibility of the contractor for the removal and disposal of the same at his cost. The LIOC shall not entertain any claim from the contractor in this account in case the contractor fails to remove such materials within 14 days after issuing notice in writing to the contractor. LIOC reserves the right to dispose such materials at the entire risk and cost of the contractor.

18.0 Work order quantities are approximate and payment shall be made as per actual measurements. The contractor is not entitled to for any sort of compensation towards materials procured/ stored in excess of the measured quantity if any.

19.0 Excess quantities over and above that mentioned in the work order or extra items or deviation in work order should not be carried out by the contractor unless he has been asked to do so in writing and if carried out without such written approval, the same will be at risk and cost of the contractor.

20.0 Detailed measurement of works carried out shall be jointly taken by the contractor and our site engineer at every stage of work before proceeding to the next stage.

21.0 Entire works shall be carried out under the supervision of the authorized representative of the LIOC.

22.0 FIRM PRICE:

22.1. Once the offer is accepted and agreement executed, the rates shall be valid till the completion of works in all respects and no escalation whatsoever will be entertained on any grounds. Similarly no variation or reimbursement shall be entertained due to revisions in statutory tax or levies imposed by the Government of Sri Lanka. VAT if payable shall be to LIOC account.

23.0 SAFETY AND SECURITY OF MATERIALS:

23.1. The responsibility of the materials and equipment brought or installed by the contractors (till they are handed over to LIOC) will remain with the contractor and any claim of whatsoever nature due to any loss or otherwise will not be entertained. The contractor will have to handover completed job in its entirety as per work order.

24.0 LIOC SUPPLIED MATERIALS:

24.1. The pipes, fittings, and any other materials to be supplied by the LIOC will be supplied anywhere within the premises. The transporting and handling of the same to actual location of installation will be contractor's responsibility for which no extra payment will be made. Any damage caused to our equipment/ property while handling and installing the will have to be made good by the contractor at his risk and cost.

25.0 SAFETY OF LIOC SUPPLIED MATERIALS:

25.1. LIOC supplied items are handed over to the contractor, the safety of the same shall be the contractor's responsibility.

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26.0 SECURITY OF CONTRACTOR'S MATERIALS:

26.1. LIOC shall not be responsible for security of contractor's materials/ equipment.

Observation of rules:

26.2. In case the contract works is to be done within the terminal/ depot/ installation the contractor shall have to observe all local rules for safety/ security/ gate passes etc as advised by the location-in-charge/ site engineer.

27.0 STORAGE SPACE:

27.1. No covered space shall be released for storage/ stacking of contractor's materials. The contractor shall make his own arrangement for the same.

28.0 MEASUREMENTS FOR WORKS/RECORD MEASUREMENTS/ BILLS:

28.1. All the payment for quantities certified in the running account/ final bill shall be as per the details recorded in the standard measurement book of the LIOC and jointly signed by the Contractor/ site engineer of LIOC.

28.2. Method of measurement shall be strictly in accordance with the technical specification for this work.

28.3. The payment shall be as per the details entered in the standard Measurement Certificate bills of the LIOC.

29.0 PAYMENT TERMS:

29.1. **Mobilization advance:** Nil

29.2. **Running Bills:** Up to 95% of the item rate on progressive completion of works in the running bills. The payment to be made shall be after deducting the applicable LD amount and / or SD amount if any.

29.3. Balance 5% in final bill upon successful completion of all works and handing over the facilities. Prior to certification of final bills, the contractor shall submit Quality Assurance Report including necessary MTC of bought out materials, Test reports, Warrantees & Guarantees etc. as per the specifications.
VAT at actual shall be payable for bills.

30.0 The rates include all leads & lift unless and otherwise specified & cost of all material labour, taxes, transport charges on materials at all levels, and overhead expenditure.

31.0 In case of any variation between the clauses stipulated in the special terms and those stipulated in general terms, works contract etc., the stipulations in the special terms and conditions shall take precedence.

32.0 ON ACCOUNT PAYMENTS:

32.1. On Account Bills shall be paid for the work done, measured and certified.

33.0 LIQUIDATED DAMAGES FOR DELAY IN COMPLETION OF WORKS:

33.1. The contractual price payable shall be subject to adjustment by way of liquidated damages at the rate of 1 % of PO value including VAT per week subject to a total of 10% of the PO.

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34.0 SPECIAL CLAUSE:

- 34.1. The contractor is required to take necessary care to protect to the existing nearby structure while carrying out his scope of work. Any damage caused to other property shall be rectified at his own cost.

35.0 WORKS IN OPERATING TERMINAL, INSTALLATION, AND DEPOTS:

- 35.1. If the work is required to be performed in the working terminals, depots, installations, under such circumstances, the progress of work is likely to be interrupted on account of the operations of the depot/ terminal/ RO/ consumer outlet etc. The work may at certain times have to be stopped on the instructions of our site representative. Under such circumstances, the contractor should co-operate with LIOC to avoid hindrance to the operations of the depot/ terminal/ installation. The working hours will be adjusted as per the LIOC's representative, from time to time. Rules and regulations of the depot/ installation/ terminal shall be strictly followed by the contractor.
- 35.2. The stoppage of work due to any reasons mentioned above shall not entitle the contractor for any claim of compensation whatsoever for idling of his labor/ machinery etc during such interruptions.

36.0 WORKS BY OTHER CONTRACTORS:

- 36.1. Along with works covered under this tender, tank fabrication/ erection works, civil works etc may be carried out simultaneously by other contractors. The successful tenderer should extend full co-operation to the contractors and the works should be carried out in such a way as not to affect the progress of works. Any damage caused should be rectified by the representative contractor at his own risk and cost.

37.0 GUARANTEE:

- 37.1. All equipment including components and sub-contracted items should be guaranteed by the Vendor within the defect liability period mentioned in the tender. In the event of any defect in the equipment or workmanship manifesting themselves, the tenderer will replace/ repair the equipment/ materials at Vendor's cost and risk on due notice, failing which the rejected equipment will be sent to the Vendor on Freight To Pay basis for free replacement.

38.0 TESTING OF MATERIALS/ WORKS:

- 38.1. The Contractor shall carry out the various tests as enumerated in the technical specifications of this tender document and the technical documents that will be furnished to him during the performance of the work and no separate payment shall be made unless otherwise specified in schedule of rates.
- 38.2. All the tests either on the field or at outside laboratories concerning the execution of the work and supply of materials by the Contractor shall be carried out by Contractor at his own cost.
- 38.3. The work is subject to inspection at all times by the Site Engineer/ Engineer-in-Charge/ representatives nominated by LIOC. The Contractor shall carry out all instructions given during inspection and shall ensure that the work is being carried out according to the technical documents and the relevant codes of practice furnished to him during the performance of the work.

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- 38.4. Any work not conforming to the execution drawings, specifications or codes shall be rejected forthwith and the contractor shall carry out the rectifications at his own cost.
- 38.5. All results of inspection & tests will be recorded in the inspection reports, proforma, which will be approved by the Site Engineer/ Engineer-in-Charge. These reports shall form part of the completion documents.
- 38.6. Inspection & acceptance of works shall not absolve the Contractor from any of his responsibilities under this Contract.

39.0 BILL OF QUANTITIES:

- 39.1. Bill of quantities are approximate and payment shall be made as per actual certified measurements. The contractor is not entitled for any sort of compensation towards excess materials procured / stored.
- 39.2. After the placement of the order the successful tenderer shall not be allowed to sublet or assign any part of the work order without LIOC's prior written consent.

40.0 AUTHORISED REPRESENTATIVE:

- 40.1. The successful tenderer within 10 days of receipt of acceptance of tender, name an engineer responsible for the job at site on behalf of the contractor. Bidder should give in writing to the LIOC, the name of his authorized and qualified engineer who will supervise the work and shall remain at the site during execution of the job.

41.0 ACCEPTANCE OF TENDER BY LIOC:

- 41.1. Incomplete tenders, conditional offer, tenders received late (i.e. after due date and time for opening) and tenders not conforming to the terms and conditions prescribed in the tender documents or not accompanied by the requisite Bid Bond will be rejected. Requests for adjustment of pending bills or any other amount towards Bid Bond will not be accepted. LIOC is not bound to accept the lowest tender and reserves the right to reject any or all tenders without assigning any reason whatsoever and or to carry out negotiations with the tenderers in the manner considered suitable to the Company.
- 41.2. The tenderers may have to attend to the office of LIOC for negotiations/ clarifications required by them in respect of their quotations without any commitment on the part of the Company.
- 41.3. In case of negotiation, the tenderer should send the confirmation of such negotiation so as to reach the office of the LIOC within 2 days from the date of negotiations failing which the LIOC reserves the right to ignore the quotation.

42.0 ACCEPTANCE OF WORK ORDER BY TENDERER:

- 42.1. After communication of the LIOC's acceptance of the contractor's tender, if the contractor fails to return the duplicate copy of the work order and agreement duly signed in token of their acceptance within 14 days, the Bid bond may be forfeited by the LIOC, without any further reference to the contractor.

43.0 EXECUTION OF AGREEMENT:

- 43.1. On acceptance of the quotation, the successful contractor will have to execute an agreement with the LIOC covering all aspects of the contract in standard specimen form

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attached, immediately before commencement of the works. The intending tenderers should acquaint themselves with the provisions of standard agreement prior to quoting.

44.0 POWER OF ATTORNEY:

- 44.1. When the party signing the agreement is not the sole proprietor, the necessary power of attorney authorizing the person who is acting on behalf of the firm should be produced before execution of the agreement.

45.0 EXECUTION OF WORK:

- 45.1. The contractor shall submit on receipt of the work order and before starting the work, shall submit a detailed construction programme (PERT/ MS PROJECT) chart adhering to the completion time quoted in the work order. The program thus submitted shall form a part of the contract and shall be binding on the contractor. However, the LIOC reserves the right to alter the programme if necessary. No claim whatsoever of the contractor on this account will be entertained.

46.0 NATURE AND SCOPE OF WORK:

- 46.1. The scope of work comprises of refurbishment of existing petrol shed and as per items contained in price schedule. Tenderers are advised to inspect the site and ascertain the site conditions including leads/ lifts involved/ approach to vehicles etc prior to quoting the amount.
- 46.2. Scope of design includes preparation of schematic designs to interpret the design required in consultation with LIOC and submit alternatives to LIOC to satisfy the requirement, preparation of design development document, preparation of detailed drawings, finalization of structural design and necessary documents, drawing. It will be the responsibility of the Contractor to provide at their cost preparation of design, development documents, preparation of construction document, preparation of working drawings, development drawings and documents for the entire projects.
- 46.3. The Design should be based on relevant BS Standards for Structural Steel & RCC Designs and best Engineering practices. The structural drawings including design and fabrication drawings including BOM must be submitted by Chartered Structural Engineer and approvals to be obtained from LIOC before commencement of works.
- 46.4. Scope of supply includes all the required materials unless/otherwise specifically mentioned in either price bid or special terms and conditions. It will be the responsibility of the Contractor to provide at their cost all required workers/labor, equipments, machinery and all materials so as to complete as per drawing and specification.
- 46.5. The work descriptions and specifications are as per enclosed documents.

47.0 METHOD OF WORK:

- 47.1. The contractor shall carry out works as per directions in the work order. The contractor shall not undertake on his own any change in the specifications mentioned in the tender documents and work order. In case of doubt, the contractor will refer the matter in writing and the contractor shall carry out the item of work as per clarifications given. In case of delay in getting such clarifications, the contractor will not be entitled for any claim on any account of idling of their labourers, machinery etc. In case the contractor carries out the work as per his own specifications not acceptable to the LIOC in such cases, the same will be required to be redone as per the specifications given by the LIOC at the contractor's risk

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and cost. In case of failure to re-do the work by the contractor, the LIOC reserves the right to get it done through any other agency entirely at the risk and cost of the contractor.

48.0 LIOC'S RIGHT:

- 48.1. The LIOC reserves the right to increase/ decrease the tendered quantity of any or every item and delete any item at any stage of work at the accepted rates. The contractor's claim for compensation or damages on account of these shall not be entertained.

49.0 REVISIONS:

- 49.1. The LIOC reserves the right to revise the specifications, drawings and designs at any stage of work. Such deviations shall be adjusted at the rates already contained in the work order or at the prevailing market rates, if the rates are not available in the work order.

50.0 MEASUREMENTS:

- 50.1. All works shall be measured as per the procedure laid down in relevant standards and final payment shall be as per the measured quantities and not as per work order quantities.

51.0 PROGRESS REPORT OF WORK:

- 51.1. Contractor shall report and submit progress report of the work fortnightly to the concerned office, which has awarded the contract.

52.0 MAINTENANCE OF INSTRUCTION BOOK:

- 52.1. The contractor at site will maintain an instruction book serially numbered having one original and two copies of each page so that our visiting officers/ site engineers can issue instructions regarding progress and quality of work to the contractor. The contractor or the contractor's representative will sign in the instruction book in token of receipt of and understanding of such instruction. The original copy of the instruction page shall be sent to the concerned engineer and second copy will be retained by the issuing person and the third copy shall be retained by the contractor.

53.0 CANCELLATION OF ORDER:

- 53.1. If the performance of the successful contractor is found to be not satisfactory, the LIOC reserves the right to cancel in part or whole of the contract and get the work executed through alternate agencies entirely at risk and cost of original contractor on whom the order was first placed. In such cases, the contractor should make good all losses that the LIOC may suffer on account of such cancellation of work orders.

54.0 ABANDONMENT OF WORK:

- 54.1. In case the contractor abandons the work, the LIOC shall issue the final notice to the contractor to be present at site for taking final measurements and in case the contractor does not report at site on due date and time as per the LIOC's notice, the LIOC's representative will take unilateral measurements of abandoned work which will be final & binding on the contractor. Balance works will be carried out by alternate agency to be appointed by LIOC entirely at risk and cost of the contractor.

55.0 STATUTORY RULES AND REGULATIONS:

- 55.1. The contractor will abide by the rules, regulations, bye laws and statutes etc. imposed by the government/ semi government and other local authorities for execution of job.

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56.0 OMISSIONS/ DELETIONS:

- 56.1. Any omission/ deletion noticed in the terms without the prior approval of the LIOC, shall result in rejection of the contractor's claim for payment of these items.

57.0 SITE CLEANING:

- 57.1. The Contractor shall take care for cleaning the working site from time to time for easy access to work site and also from safety point of view.
- 57.2. Working site should be always kept cleared upto the entire satisfaction of the Engineer-in-Charge. Before handing over any work to owner the contractor in addition to other formalities to be observed as detailed in the document, - shall clear the site to the entire satisfaction of Engineer-in-Charge.

58.0 MISCELLANEOUS REQUIREMENTS:

- 58.1. It shall be contractor's responsibility to obtain approval for any revision and/or modifications decided by the contractor from the Owner/Engineer-in-Charge before implementation. Also, such revisions and/or modification if accepted / approved by the Owner/Engineer-in-Charge shall be carried out at no extra cost to the owner.
- 58.2. Any changes required during and/or after approval for detailed construction drawings due to functional requirements or for efficient running of system keeping the basic parameters unchanged and which has not been indicated by the Contractor in the data / drawings furnished along with the offer, will be carried out by the contractor at no extra cost to the owner.
- 58.3. All expenses towards mobilization & demobilization including bringing in equipment, clearing the site etc. shall be deemed to be included in the prices quoted and no separate payments on account of such expenses shall be entertained.
- 58.4. It shall be entirely Contractor's responsibility to provide, operate & maintain necessary construction equipments, scaffoldings and safety gadgets, cranes and other lifting tackles, tools and appliances to perform the work in a workman like and efficient manner & complete all jobs as per time schedules.
- 58.5. Preparing approaches and working area for movement and operation of the cranes, levelling the areas for assembly and erection shall also be the responsibility of the Contractor. The Contractor shall acquaint himself with access availability, existing facilities, local labour etc. to provide suitable allowances in his quotation. The Contractor, at his own cost, may have to build temporary access roads to aid his own work which shall also be taken care while quoting for the work
- 58.6. The procurement and supply in sequence and at the appropriate time of all materials & consumables shall be entirely the Contractor's responsibility. Rates for execution of work will be inclusive of supply of all these items.

59.0 SAFETY PRECAUTIONS & HOT WORK:

- 59.1. Since works have to be carried out in petroleum storage and distribution establishment/ petrol sheds, the contractor should ensure that day to day operations, safety and security of the location are not affected in any way on account of the works being carried out. In case of any damage to our properties due to the negligence on the part of the contractor or

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their workmen, the contractor will be held responsible and liquidated damages as assessed by the LIOC would be recover from them.

When hot works are involved, the following safety precautions have to be strictly observed before commencement of works.

- All hot works operations should be carried out under the supervision of our representative and also under the supervision of responsible representative of the contractor.
- All hot work operations should be undertaken only after issue of hot work permits by the location in charge on day to day basis.
- It should be ensured that the tanks, pipes, containers where the hot work is required are gas freed and properly checked to this effect with explosive meters.
- It should be ensured that the surrounding area is free from oil, rags, oil spillage and other sources of ignition and the area is cleaned/ sprinkled with sand or dry earth. It should also be ensured that metallic trays filled with DCP powder are kept for collecting the welding arc/ hot metal cutting.
- Hot work should commence only after positioning the portable fire extinguishers and sand/ dry powder in readiness at site and hydrant system made available at the nearest point.
- Match boxes, lighters etc used for hot work should be kept in the custody of the supervisor only.
- If hot work has to be carried out in a place close to storage tanks or any other facility under operation, it is necessary to provide screen wall made of AC sheets to segregate the area to prevent sparks traveling to the hazardous area.
- It should be ensured that no workmen carries match boxes or any other source of ignition with them while entering the premises or inside the premises. After the hot work operation of the day, the following precaution should be taken.
 - ✓ Welding sets should be switched off and power mains disconnected. If the connection is taken from a temporary switch board the fuse carriers should be removed and handed over to the supervisor.
 - ✓ Gas cylinder and the cutting sets should be properly closed and the equipment removed to a safe place.
 - ✓ The site of work should be examined to ensure that it is free from hot splatters and any other source of ignition.
 - ✓ All the work men of the contractors should be moved out of the premises.

Contractor shall have to take all safety precaution for carrying out hot work in the premises after obtaining hot work permit from location in charge at his own cost as directed by the Engineer-In-Charge. Necessary safety equipment such as safety belts, helmets and other equipments are to be positioned by the contractor and use as per requirement.

- 59.2. Any casualty or damage caused to property or person by any untoward incidents while executing this contract will be at the contractor's risk and cost.
- 59.3. The contractor shall also abide by hot work permits to be taken on day to day basis from the location as per policy of the LIOC.
- 60.0 When the whole of the works have been completed and have satisfactorily passed any final test that may be prescribed by the contract shall be deemed to be a request by the contractor for the Engineer to issue a certificate of completion in respect of the work. The Engineer will issue the final completion certificate (Copy of the certified final bill) after successful completion of the guarantee period of 01 year.
- 61.0 Sealed tenders should be deposited in the tender box provided **only** at the office of **Sr. Vice President (Engineering), Level 20, West Tower, World Trade Center, Echelon square, Colombo 01** before 11:00 Hrs on due date.

SR. VICE PRESIDENT (ENGG.)

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LANKA IOC PLC,

I / We confirm that I / We have gone through the above conditions carefully and agree to abide by the same.

Signature of the Bidder

ADDRESS

DATE & SEAL

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TERMS & CONDITIONS - SAFETY

Since the works have to be carried out in Petroleum storage and distribution establishment, the contractors should ensure that day to day operations, safety & security of the location are not affected in any way on the account of the work being carried out. In case of any damage to LIOC properties due to negligence on the part of the contractor or their workmen, the contractor will be held responsible and liquidated damages as asserted by the corporation would be recovered from them.

When hot works are involved the following safety precautions have to be strictly observed before commencement of hot works.

- a. All hot works should be carried out under the supervision of LIOC representative and also under the supervision of a responsible representative of the contractor.
- b. All hot work operations should be undertaken only after issue of hot work permit by Site Engineer on a day to day basis.
- c. It should be ensured that the tanks, containers, pipelines etc. where hot work is required are gas free and properly checked to this effect with explosive meters.
- d. It should be ensured that surrounding area is free of oil rags, spillages and other sources of ignition and the area cleaned and sprinkled with dry sand / earth. It should also be ensured that metallic trays filled with DCP are kept for collecting the welding arc / hot metal cutting.
- e. Hot work should commence only after positioning the portable fire extinguishers and sand / dry powder in readiness at site and hydrant system made available at the nearest point.
- f. Match boxes, lighters etc. used for hot work should be kept in the custody of supervisor.
- g. If hot work has to be carried out in a place close to storage tanks or any other facility under operation, it is necessary to provide a screen wall made of AC sheets to segregate the area to prevent the sparks traveling to the hazardous area.
- h. It should be ensured that no workmen carry matchboxes or any other source of ignition with them while entering the premises or inside the premises. After the hot work operation of the day, the following precautions should be taken.
 - Welding sets should be switched off and the power mains disconnected. If the connection is taken from temporary switchboard, the fuse carriers should be removed and handed over to the supervisor.
 - Gas cylinders and cutting sets should be properly closed and the equipment removed to a safe place.
 - The site of work should be examined to ensure that it is free from hot splatters and any other source of ignition.
 - All the workmen of the contractor should be moved out of the premises.

Sr. Vice President (Engg.)
Lanka IOC PLC

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SAFETY PRACTICES DURING CONSTRUCTION

1.0 INTRODUCTION

- 1.1 Safety in Construction Management deserves utmost attention especially in the hydrocarbon industry, such as Exploration, Refineries, Pipelines and Marketing installations, Gas Processing units etc. Construction is widely recognized as one of the accident prone activities. Most of the accidents are caused by inadequate planning, failure during the construction process and/or because of design deficiencies. Besides property loss, accidents also result in injuries and fatalities to the personnel; same needs to be prevented.
- 1.2 The reasons for accidents during construction activities are related to unique nature of the industry, human behavior, difficult work-site conditions, extended odd duty hours, lack of training & awareness and inadequate safety management. Unsafe working methods, equipment failure and improper housekeeping also tend to increase the accident rate in construction.
- 1.3 Ensuring good quality of materials, equipment and competent supervision along with compliance of standard engineering practices shall go a long way to in built safety into the system.
- 1.4 The objective of this standard is to provide practical guidance on technical and educational framework for safety and health in construction with a view to:
- prevent accidents and harmful effects on the health of workers arising from employment in construction;
 - ensure appropriate safety during implementation of construction;
 - provide safety practice guidelines for appropriate measures of planning, control and enforcement.

2.0 SCOPE

- 2.1 This document specifies broad guidelines on safe practices to be adhered to during construction activities in oil industry. However, before commencing any job, specific hazards and its effects should be assessed and necessary corrective/preventive actions should be taken by all concerned. The document is intended only to supplement and not to replace or supersede the prevailing statutory requirements, which shall also be followed as applicable. The scope of this document does not include the design aspects and quality checks during construction.

3.0 DEFINITION

- 3.1 Definitions of various terminology are given below:

- *Adequate, appropriate or suitable* are used to describe qualitatively or quantitatively the means or method used to protect the worker.
- *Brace*: A structural member that holds one point in a fixed position with respect to another point; bracing is a system of structural members designed to prevent distortion of a structure.
- *By hand*: The work is done without the help of a mechanised tool.
- *Competent Authority*: A statutory agency having the power to issue regulations, orders or other instructions having the force of law.
- *Competent person*: A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill for the safe performance of the specific work. The competent authorities may define appropriate criteria for the designation of such persons and may determine the duties to be assigned to them.
- *Execution agency*:

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- Any physical or legal person, having contractual obligation with the owner, and who employs one or more workers on a construction site
- *Owner:*
- Any physical or legal person for whom construction job is carried out.
- It shall also include owner's designated representative/ consultant/ nominee/agent, authorized from time to time to act for and on its behalf, for supervising/ coordinating the activities of the execution agency.
- *Hazard:* Danger or potential danger.
- *Guard-rail:* An adequately secured rail erected along an exposed edge to prevent persons from falling.
- *Hoist:* A machine, which lifts materials or persons by means of a platform, which runs on guides.
- *Lifting gear:* Any gear or tackle by means of which a load can be attached to a lifting appliance but which does not form an integral part of the appliance or load.
- *Lifting appliance:* Any stationary or mobile appliance used for raising or lowering persons or loads.
- *Means of access or egress:* Passageways, corridors, stairs, platforms, ladders and any other means for entering or leaving the workplace or for escaping in case of danger.
- *Scaffold:* Any fixed, suspended or mobile temporary structure supporting workers and material or to gain access to any such structure and which is not a lifting appliance as defined above.
- *Toe-board:* A barrier placed along the edge of a scaffold platform, runway, etc., and secured there to guard against the slipping of persons or the falling of material.
- *Worker:* Any person engaged in construction activity.
- *Workplace:* All places where workers need to be or to go by reason of their work.

4.0 GENERAL DUTIES

4.1 GENERAL DUTIES OF EXECUTION AGENCIES

4.1.1 Execution agency should:

- Provide means and organisation to comply with the safety and health measures required at the workplace.
- Provide and maintain workplaces, plant, equipment, tools and machinery and organise construction work so that, there is no risk of accident or injury to health of workers. In particular, construction work should be planned, prepared and undertaken so that:
 - (a) dangers, liable to arise at the workplace, are prevented;
 - (b) excessively or unnecessarily strenuous work positions and movements are avoided;
 - (c) organisation of work takes into account the safety and health of workers;
 - (d) materials and products used are suitable from a safety and health point of view;
 - (e) working methods are adopted to safeguard workers against the harmful effects of chemical, physical and biological agents.
- Establish committees with representatives of workers and management or make other arrangement for the participation of workers in ensuring safe working conditions.
- Arrange for periodic safety inspections by competent persons of all buildings, plant, equipment, tools, machinery, workplaces and review of systems of work, regulations, standards or codes of practice. The competent person should examine and ascertain the safety of construction machinery and equipment.
- Provide such supervision to ensure that workers perform their work with due regard to safety and health of theirs as well as that of others.
- Employ only those workers who are qualified, trained and suited by their age, physique, state of health and skill.
- Satisfy themselves that all workers are informed and instructed in the hazards connected with their work and environment and trained in the precautions necessary to avoid accidents and injury to health.

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- Ensure that buildings, plant, equipment, tools, machinery or workplaces in which a dangerous defect has been found should not be used until the defect has been rectified.
- Organise for and remain always prepared to take immediate steps to stop the operation and evacuate workers as appropriate, where there is an imminent danger to the safety of workers.
- establish a checking system by which it can be ascertained that all the members of a shift, including operators of mobile equipment, have returned to the camp or base at the close of work on dispersed sites and where small groups of workers operate in isolation.
- Provide appropriate first aid, training and welfare facilities to workers and, whenever collective measures are not feasible or are insufficient, provide and maintain personal protective equipment and clothing in line with the requirement. They should also provide access to workers to occupational health services.
- Educate workers about their right and the duty at any workplace to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on working procedures adopted as may affect safety and health.
- Ensure that except in an emergency, workers, unless duly authorised, should not interfere with, remove, alter or displace any safety device or other appliance furnished for their protection or the protection of others, or interfere with any method or process adopted with a view to avoiding accidents and injury to health.
- Ensure that workers do not operate or interfere with plant and equipment that they have not been duly authorised to operate, maintain or use.
- Ensure that workers do not sleep, rest or cook etc in dangerous places such as scaffolds, railway tracks, garages, confined spaces or in the vicinity of fires, dangerous or toxic substances, running machines or vehicles and heavy equipment etc.
- Obtain the necessary clearance/permits as required and specified by owner.

4.2 GENERAL DUTIES OF OWNERS

4.2.1 Owners should:

- co-ordinate or nominate a competent person to co-ordinate all activities relating to safety and health on their construction projects;
- inform all contractors on the project of special risks to health and safety;
- Ensure that executing agency is aware of the owner's requirements and the executing agency's responsibilities with respect to safety practices before starting the job.

5.0 SAFETY PRACTICES AT WORK PLACES

5.1 GENERAL PROVISIONS

- All openings and other areas likely to pose danger to workers should be clearly indicated.
- Workers & Supervisors should use the safety helmet and other requisite Personal Protective Equipment according to job & site requirement. They should be trained to use personal protective equipment.
- Never use solvents, alkalis and other oils to clean the skin.
- Lift the load with back straight and knees bent as far as possible. Seek the help in case of heavy load.
- Ensure the usage of correct and tested tools and tackles. Don't allow the make shift tools and tackles.
- **No loose clothing should be allowed while working near rotating equipment or working at heights.**

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5.2 MEANS OF ACCESS AND EGRESS

5.2.1 Adequate and safe means of access (atleast two, differently located) to and egress from all workplaces should be provided. Same should be displayed and maintained.

5.3 HOUSEKEEPING

5.3.1 Ensure:

- Proper storage of materials and equipment;
- Removal of scrap, inflammable material, waste and debris at appropriate intervals.

5.3.2 Removal of loose materials, which are not required for use, to be ensured. Accumulation of these at the site can obstruct means of access to and egress from workplaces and passageways.

5.3.3 Workplaces and passageways, that are slippery owing to oil, grease or other causes, should be cleaned up or strewn with sand, sawdust, ash etc.

5.4 PRECAUTIONS AGAINST THE FALL OF MATERIALS & PERSONS AND COLLAPSE OF STRUCTURES

5.4.1 Precautions should be taken such as the provision of fencing, look-out men or barriers to protect any person against injury by the fall of materials, or tools or equipment being raised or lowered.

5.4.2 Where necessary to prevent danger, guys, stays or supports should be used or other effective precautions should be taken to prevent the collapse of structures or parts of structures that are being erected, maintained, repaired, dismantled or demolished.

5.4.3 All openings through which workers are liable to fall should be kept effectively covered or fenced and displayed prominently.

5.4.4 As far as practicable, guardrails and toe-boards should be provided to protect workers from falling from elevated workplaces.

5.5 PREVENTION OF UNAUTHORISED ENTRY

5.5.1 Construction sites located in built-up areas and alongside vehicular and pedestrian traffic routes should be fenced to prevent the entry of unauthorized persons.

5.5.2 Visitors should not be allowed access to construction sites unless accompanied by or authorised by a competent person and provided with the appropriate protective equipment.

5.6 FIRE PREVENTION AND FIRE FIGHTING

5.6.1 All necessary measures should be taken by the executing agency and owner to:

- Avoid the risk of fire;
- Control quickly and efficiently any outbreak of fire;
- Bring out a quick and safe evacuation of persons.
- Inform unit/fire station control room, where construction work is carried out within existing operating area.

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- 5.6.2 Combustible materials such as packing materials, sawdust, greasy/oily waste and scrap wood or plastics should not be allowed to accumulate in workplaces but should be kept in closed metal containers in a safe place.
- 5.6.3 Places where workers are employed should, if necessary to prevent the danger of fire, be provided with:
- Suitable and sufficient fire-extinguishing equipment, which should be easily visible and accessible;
 - An adequate water supply at sufficient pressure meeting the requirements.
- 5.6.4 To guard against danger at places having combustible material, workers should be trained in the action to be taken in the event of fire, including the use of means of escape.
- 5.6.5 At sites having combustible material, suitable visual signs should be provided to indicate clearly the direction of escape in case of fire.
- 5.6.6 Means of escape should be kept clear at all times. Escape routes should be frequently inspected particularly in high structures and where access is restricted.
- 5.7 LIGHTING
- 5.7.1 Where natural lighting is not adequate, working light fittings or portable hand-lamps should be provided at workplace on the construction site where a worker will do a job.
- 5.7.2 Emergency lighting should be provided for personnel safety during night time to facilitate standby lighting source, if normal system fails.
- 5.7.3 Artificial lighting should not produce glare or disturbing shadows.
- 5.7.4 Lamps should be protected by guards against accidental breakage.
- 5.7.5 The cables of portable electrical lighting equipment should be of adequate size & characteristics for the power requirements and of adequate mechanical strength to withstand severe conditions in construction operations.
- 5.8 PLANT, MACHINERY, EQUIPMENT AND HAND TOOLS
- 5.8.1 General Provisions
- Plant, machinery and equipment including hand tools, both manual and power driven, should:
 - ✓ Be of proper design and construction, taking into account health, Safety and ergonomic principles.
 - ✓ Be maintained in good working order;
 - ✓ Be used only for work for which they have been designed.
 - ✓ Be operated only by workers who have been authorised and given appropriate training.
 - ✓ Be provided with protective guards, shields or other devices as required.
 - Adequate instructions for safe use should be provided.
 - Safe operating procedures should be established and used for all plant, machinery and equipment.
 - Operators of plant, machinery and equipment should not be distracted while work is in progress.
 - Plant, machinery and equipment should be switched off when not in use and isolated before any adjustment, clearing or maintenance is done.

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- Where trailing cables or hose pipes are used they should be kept as short as practicable and not allowed to create a hazard.
- All moving parts of machinery and equipment should be enclosed or adequately guarded.
- Every power-driven machine and equipment should be provided with adequate means, immediately accessible and readily identifiable to the operator, of stopping it quickly and preventing it from being started again inadvertently.
- Operators of plant, machinery, equipment and tools should be provided with PPEs, including where necessary, suitable ear protection.

5.8.2 Hand tools

- Hand tools should be repaired by competent persons.
- Heads of hammers and other shock tools should be dressed or ground to a suitable radius on the edge as soon as they begin to mushroom or crack.
- When not in use and while being carried or transported sharp tools should be kept in sheaths, shields, chests or other suitable containers.
- Only insulated or non conducting tools should be used on or near live electrical installations.
- Only non-sparking tools should be used near or in the presence of flammable or explosive dusts or vapours.

5.8.3 Pneumatic Tools

- Operating triggers on portable pneumatic tools should be:
 - ✓ So placed as to minimise the risk of accidental starting of the machine.
 - ✓ So arranged as to close the air inlet valve automatically when the pressure of the operator's hand is removed.
- Hose and hose connections for compressed air supply to portable pneumatic tools should be:
 - ✓ Designed and tested for the pressure and service for which they are intended;
 - ✓ Fastened securely on the pipe outlet and equipped with the safety chain, as appropriate.
- Pneumatic shock tools should be equipped with safety clips or retainers to prevent dies and tools from being accidentally expelled from the barrel.
- Pneumatic tools should be disconnected from power and the pressure in hose lines released before any adjustment or repair is made.

5.8.4 Electrical Tools

- Low voltage portable electrical tools should generally be used.
- All electrical tools should be earthed, unless they are "all insulated" or "double insulated" tools which do not require earthing.
- All electrical tools should get inspected and maintained on a regular basis by a competent electrician and complete records kept.

5.8.5 Engines

- Engines should:
 - ✓ Be installed so that they can be started safely and the maximum safe speed cannot be exceeded.
 - ✓ Have controls for limiting speed.
 - ✓ Have devices to stop them from a safe place in an emergency.
- IC engines should not be run in confined spaces unless adequate exhaust ventilation is provided.
- When IC engines are being fuelled:

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- ✓ The engine should be shut off.
- ✓ care should be taken to avoid spilling fuel;
- ✓ No person should smoke or have naked light in the vicinity.
- ✓ A fire extinguisher should be kept readily available.
- Secondary fuel reservoir should be placed outside the engine room.

6.0 CONSTRUCTION ACTIVITIES

The various common activities in construction are as under:

- Excavation
- Scaffolding, Platforms & Ladders
- Structural Work, Laying of Reinforcement & Concreting
- Road Work (Laying of roads)
- Cutting /Welding
- Working in Confined Space
- Proof/Pressure Testing
- Working at Heights
- Handling & Lifting Equipments
- Vehicle Movement
- Electrical
- Demolition
- Sand/shot blasting/ spray painting

The safe practices to be followed during the implementation of above construction activities are given below:

6.1 EXCAVATION

6.1.1 All excavation work should be planned and the method of excavation and the type of support work required should be decided considering the following:

- The stability of the ground;
- The excavation will not affect adjoining buildings, structures or roadways;
- To prevent hazard, the gas, water, electrical and other public utilities should be shut off or disconnected, if necessary;
- Presence of underground pipes, cable conductors, etc.,
- The position of culvert/bridges, temporary roads and spoil heaps should be determined;

6.1.2 Before digging begins on site, all excavation work should be planned and the method of excavation and the type of support work required decided.

6.1.3 All excavation work should be supervised.

6.1.4 Sites of excavations should be thoroughly inspected:

- Daily, prior to each shift and after interruption in work of more than one day;
- After every blasting operation;
- After an unexpected fall of ground;
- After substantial damage to supports;
- After a heavy rain, frost or snow;
- When boulder formations are encountered.

6.1.5 Safe angle of repose while excavating trenches exceeding 1.5m depth upto 3.0m should be maintained. Based on site conditions, provide proper slope, usually 45°, and suitable bench of 0.5m width at every 1.5m depth of excavation in all soils except hard rock or provide proper shoring and strutting to prevent cave-in or slides.

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- 6.1.6 As far as possible, excavated earth should not be placed within one meter of the edge of the trench or depth of trench whichever is greater.
- 6.1.7 Don't allow vehicles to operate too close to excavated area. Maintain atleast 2m distance from edge of excavation. No load, plant or equipment should be placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endanger any person unless precautions such as the provision of shoring or piling are taken to prevent the sides from collapsing.
- 6.1.8 Adequately anchored stop blocks and barriers should be provided to prevent vehicles being driven into the excavation. Heavy vehicles should not be allowed near the excavation unless the support work has been specially designed to permit it.
- 6.1.9 If an excavation is likely to affect the security of a structure on which persons are working, precautions should be taken to protect the structure from collapse.
- 6.1.10 Barricade at 1m height (with red & white band/self glowing caution board) should be provided for excavations beyond 1.5m depth. Provide two entries/exits for such excavation.
- 6.1.11 Necessary precautions should be taken for underground utility lines like cables; sewers etc. and necessary approvals/clearances from the concerned authorities shall be obtained before commencement of the excavation job.
- 6.1.12 Water shall be pumped/ bailed out, if any accumulates in the trench. Necessary precautions should be taken to prevent entry of surface water in trenches.
- 6.1.13 During rains, the soil becomes loose. Take additional precaution against collapse of side wall.
- 6.1.14 In hazardous areas, air should be tested to ascertain its quality. No one should be allowed entry till it is suitable for breathing.
- 6.1.15 In case of mechanised excavation, precaution shall be taken to not to allow anybody to come within one meter of extreme reach of the mechanical shovel. The mechanised excavator shall be operated by a well-trained experienced operator. When not in operation, the machine shall be kept on firm leveled ground with mechanical shovel resting on ground. Wheel or belt shall be suitably jammed to prevent any accidental movement of the machine. Suitable precautions as per manufacturer guidelines should be taken for dozers, graders and other heavy machines.
- 6.1.16 In case of blasting, follow strictly rules for storage, handling and carrying of explosive materials and execution of blasting operation.
- 6.2 SCAFFOLDING, PLATFORMS & LADDERS**
- 6.2.1 Metal as material of construction**
- A scaffold should be provided and maintained or other equally safe and suitable provision should be made where work cannot safely be done on or from the ground or from part of a building or other permanent structure.
 - Scaffolds should be provided with safe means of access, such as stairs, ladders or ramps. Ladders should be secured against inadvertent movement.
 - Every scaffold should be constructed, erected and maintained so as to prevent collapse or accidental displacement when in use.
 - Every scaffold and part thereof should be constructed :

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- ✓ In such a way so as not to cause hazards for workers during erection and dismantling;
- ✓ In such a way so as guard rails and other protective devices, platforms, ladders, stairs or ramps can be easily put together;
- ✓ With sound material and of requisite size and strength for the purpose for which it is to be used and maintained in a proper condition.
- Boards and planks used for scaffolds should be protected against splitting.
- Materials used in the construction of scaffolds should be stored under good conditions and apart from any material unsuitable for scaffolds.
- Couplers should not cause deformation in tubes. Couplers should be made of drop forged steel or equivalent material.
- Tubes should be free from cracks, splits and excessive corrosion and be straight to the eye, and tube ends cut cleanly square with the tube axis.
- Scaffolds should be designed for their maximum load as per relevant code.
- Scaffolds should be adequately braced.
- Scaffolds which are not designed to be independent should be rigidly connected to the building at designated vertical and horizontal places.
- A scaffold should never extend above the highest anchorage to an extent which might endanger its stability and strength.
- Loose bricks, drainpipes, chimney-pots or other unsuitable material should not be used for the construction or support of any part of a scaffold.
- Scaffolds should be inspected and certified:
 - ✓ Before being taken into use;
 - ✓ At periodic intervals thereafter as prescribed for different types of scaffolds;
 - ✓ After any alteration, interruption in use, exposure to weather or seismic conditions or any other occurrence likely to have affected their strength or stability.
- Inspection should more particularly ascertain that:
 - ✓ The scaffold is of suitable type and adequate for the job;
 - ✓ **Materials used in its construction are sound and of sufficient strength;**
 - ✓ It is of sound construction and stable;
 - ✓ That the required safeguards are in position.
- A scaffold should not be erected, substantially altered or dismantled except by or under the supervision.
- Every scaffold should be maintained in good and proper condition, and every part should be kept fixed or secured so that no part can be displaced in consequence of normal use.
- If out-rigger scaffolding is to be used, it should be specifically designed and inspected before putting in use.

6.2.2 Lifting appliances on scaffolds

- When a lifting appliance is to be used on a scaffold:
 - ✓ the parts of the scaffold should be carefully inspected to determine the additional strengthening and other safety measures required;
 - ✓ any movement of the scaffold members should be prevented;
 - ✓ if practicable, the uprights should be rigidly connected to a solid part of the building at the place where the lifting appliance is erected.

6.2.3 Prefabricated scaffolds

- In the case of prefabricated scaffold systems, the instructions provided by the manufacturers or suppliers should be strictly adhered to. Prefabricated scaffolds should have adequate arrangements for fixing bracing.
- Frames of different types should not be intermingled in a single scaffold.
- Scaffolding shall be erected on firm and level ground.

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- All members of metal scaffolding shall be checked periodically to screen out defective / rusted members. All joints should be properly lubricated for easy tightening.
- Entry to scaffolding should be restricted.
- Erection, alteration and removal shall be done under supervision of experienced personnel.
- Use of barrels, boxes, loose bricks etc., for supporting platform shall not be permitted.
- Each supporting member of platform shall be securely fastened and braced
- Where planks are butt-joined, two parallel putlogs shall be used, not more than 100mm apart, to give support to each plank.
- Platform plank shall not project beyond its end support to a distance exceeding 4 times the thickness of plank, unless it is effectively secured to prevent tipping. Cantilever planks should be avoided.
- The platform edges shall be provided with 150mm high toe board to eliminate hazards of tools or other objects falling from platform.
- Erect ladders in the “four up-one out position”
- Lash ladder securely with the structure.
- Using non-slip devices, such as, rubber shoes or pointed steel ferules at the ladder foot, rubber wheels at ladder top, fixing wooden battens, cleats etc.
- When ladder is used for climbing over a platform, the ladder must be of sufficient length, to extend at least one meter above the platform, when erected against the platform in “four up-one out position.”
- Portable ladders shall be used for heights not more than 4mt. Above 4mt flights, fixed ladders shall be provided with at least 600 mm landings at every 6mt or less.
- The width of ladder shall not be less than 300mm and rungs shall be spaced not more than 300mm.
- Every platform and means of access shall be kept free from obstruction.
- If grease, mud, gravel, mortar etc., fall on platform or scaffolds, these shall be removed immediately to avoid slippage.
- Workers shall not be allowed to work on scaffolds during storms or high wind. After heavy rain or storms, scaffolds shall be inspected before reuse.
- Don't overload the scaffolding. Remove excess material and scrap immediately.
- Dismantling of scaffolds shall be done in a pre-planned sequential manner.

6.2.4 Suspended scaffolds/boatswain's chair

- In addition to the requirements for scaffolds in general as regards soundness, stability and protection against the risk of falls, suspended scaffolds should meet the following specific requirements.
 - ✓ Platforms should be designed and built with dimensions that are compatible with the stability of the structure as a whole, especially the length;
 - ✓ The number or anchorage should be compatible with the dimensions of the platform;
 - ✓ The safety of workers should be safeguarded by an extra rope having a point of attachment independent of the anchorage arrangements of the scaffold;
 - ✓ The anchorage and other elements of support of the scaffold should be designed and built in such a way as to ensure sufficient strength;
 - ✓ The ropes, winches, pulleys or pulley blocks should be designed, assembled, used and maintained according to the requirements established for lifting gear adapted to the lifting of persons according to national laws and regulations;
 - ✓ Before use, the whole structure should be checked by a competent person.

6.2.5 Bamboo Scaffolding

- In general, it should be avoided as far as possible. It should not be used in the unit/off-site areas and where hot work is to be done.

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6.3 STRUCTURAL WORK, LAYING OF REINFORCEMENT & CONCRETING

6.3.1 General provisions

- The erection or dismantling of buildings, structures, civil engineering works, formwork, falsework and shoring should be carried out by trained workers only under the supervision of a competent person.
- Precautions should be taken to guard against danger to workers arising from any temporary state of weakness or instability of a structure.
- Formwork, falsework and shoring should be so designed, constructed and maintained that it will safely support all loads that may be imposed on it.
- Formwork should be so designed and erected that working platforms, means of access, bracing and means of handling and stabilising are easily fixed to the formwork structure.

6.3.2 Erection and dismantling of steel and prefabricated structures

- The safety of workers employed on the erection and dismantling of steel and prefabricated structures should be ensured by appropriate means, such as provision and use of:
 - ✓ Ladders, gangways or fixed platforms;
 - ✓ Platforms, buckets, boatswain's chairs or other appropriate means suspended from lifting appliances;
 - ✓ Safety harnesses and lifelines, catch nets or catch platforms;
 - ✓ Power-operated mobile working platforms.
- Steel and prefabricated structures should be so designed and made that they can be safely transported and erected.
- In addition to the need for the stability of the part when erected, the design should explicitly take following into account:
 - ✓ The conditions and methods of attachment in the operations of transport, storing and temporary support during erection or dismantling as applicable;
 - ✓ Methods for the provision of safeguards such as railings and working platforms, and, when necessary, for mounting them easily on the structural steel or prefabricated parts.
- The hooks and other devices built in or provided on the structural steel or prefabricated parts that are required for lifting and transporting them should be so shaped, dimensioned and positioned as:
 - ✓ To withstand with a sufficient margin the stresses to which they are subjected;
 - ✓ Not to set up stresses in the part that could cause failures, or stresses in the structure itself not provided for in the plans, and be designed to permit easy release from the lifting appliance. Lifting points for floor and staircase units should be located (recessed if necessary) so that they do not protrude above the surface;
 - ✓ To avoid imbalance or distortion of the lifted load.
- Storeplaces should be so constructed that:
 - ✓ There is no risk of structural steel or prefabricated parts falling or overturning;
 - ✓ Storage conditions generally ensure stability and avoid damage having regard to the method of storage and atmospheric conditions;
 - ✓ Racks are set on firm ground and designed so that units cannot move accidentally.
- While they are being stored, transported, raised or set down, structural steel or prefabricated parts should not be subjected to stresses prejudicial to their stability.
- Every lifting appliance should:
 - ✓ Be suitable for the operations and not be capable of accidental disconnection;
 - ✓ Be approved or tested as per statutory requirement.
- Lifting hooks should be of the self-closing type or of a safety type and should have the maximum permissible load marked on them.
- Tongs, clamps and other appliances for lifting structural steel and prefabricated parts should:

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- ✓ Be of such shape and dimensions as to ensure a secure grip without damaging the part;
- ✓ Be marked with the maximum permissible load in the most unfavourable lifting conditions.
- Structural steel or prefabricated parts should be lifted by methods or appliances that prevent them from spinning accidentally.
- When necessary to prevent danger, before they are raised from the ground, structural steel or prefabricated parts should be provided with safety devices such as railings and working platforms to prevent falls of persons.
- While structural steel or prefabricated parts are being erected, the workers should be provided with appliances for guiding them as they are being lifted and set down, so as to avoid crushing of hands and to facilitate the operations. Use of such appliances should be ensured.
- A raised structural steel or prefabricated part should be so secured and wall units so propped that their stability cannot be imperiled, even by external agencies such as wind and passing loads before its release from the lifting appliance.
- At work places, instruction should be given to the workers on the methods, arrangements and means required for the storage, transport, lifting and erection of structural steel or prefabricated parts, and, before erection starts, a meeting of all those responsible should be held to discuss and confirm the requirements for safe erection.
- During transportation within the construction area, attachments such as slings and stirrups mounted on structural steel or prefabricated parts should be securely fastened to the parts.
- Structural steel or prefabricated parts should be so transported that the conditions do not affect the stability of the parts or the means of transport result in jolting, vibration or stresses due to blows, or loads of material or persons.
- When the method of erection does not permit the provision of other means of protection against fall of persons, the workplaces should be protected by guardrails, and if appropriate by toe-boards.
- When adverse weather conditions such as snow, ice and wind or reduced visibility entail risks of accidents, the work should be carried on with particular care, or, if necessary, interrupted.
- Structures should not be worked on during violent storms or high winds, or when they are covered with ice or snow, or are slippery from other causes.
- If necessary, to prevent danger, structural steel parts should be equipped with attachments for suspended scaffolds, lifelines or safety harnesses and other means of protection.
- The risks of falling, to which workers moving on high or sloping girders are exposed, should be limited by all means of adequate collective protection or, where this is impossible, by the use of a safety harness that is well secured to a strong support.
- Structural steel parts that are to be erected at a great height should as far as practicable be assembled on the ground.
- When structural steel or prefabricated parts are being erected, a sufficiently extended area underneath the workplace should be barricaded or guarded
- Steel trusses that are being erected should be adequately shored, braced or guyed until they are permanently secured in position.
- Load-bearing structural member should not be dangerously weakened by cutting, holing or other means.
- Structural members should not be forced into place by the hoisting machine while any worker is in such a position that he could be injured by the operation.
- Open-web steel joists that are hoisted singly should be directly placed in position and secured against dislodgment.

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6.3.3 Reinforcement

- Ensure that workers use Personnel Protective equipment like safety helmet, safety shoes, gloves etc.
- Don't place the hand below the rods for checking clear distance. Use measuring devices.
- Don't wear loose clothes while checking the rods.
- Don't stand unnecessarily on cantilever rods.
- For supplying of rods at heights, proper staging and/or bundling to be provided.
- Ensure barricading and staging for supplying and fixing of rods at height.
- For short distance carrying of materials on shoulders, suitable pads to be provided.
- While transporting material by trucks/trailers, the rods shall not protrude in front of or by the sides of driver's cabin. In case such protrusion cannot be avoided behind the deck, then it should not extend $1/3^{\text{rd}}$ of deck length or 1.5M whichever is less and tied with red flags/lights.

6.3.4 Concreting

- Ensure stability of shuttering work before allowing concreting.
- Barricade the concreting area while pouring at height/depths.
- Keep vibrator hoses, pumping concrete accessories in healthy conditions and mechanically locked.
- Pipelines in concrete pumping system shall not be attached to temporary structures such as scaffolds and formwork support as the forces and movements may effect their integrity.
- Check safety cages & guards around moving motors/parts etc. provided in concreting mixers.
- Use Personal Protective Equipment like gloves, safety shoes etc. while dealing with concrete and wear respirators for dealing with cement.
- Earthing of electrical mixers, vibrators, etc. should be done and verified.
- Cleaning of rotating drums of concrete mixers shall be done from outside. Lockout devices shall be provided where workers need to enter.
- Where concrete mixers are driven by internal combustion engine, exhaust points shall be located away from the worker's workstation so as to eliminate their exposure to obnoxious fumes.
- Don't allow unauthorised person to stand under the concreting area.
- Ensure adequate lighting arrangements for carrying out concrete work during night.
- Don't allow the same workers to pour concrete round the clock. Insist on shift pattern.
- During pouring, shuttering and its supports should be continuously watched for defects.

6.4 CUTTING/WELDING

6.4.1 Common hazards involved in welding/cutting are sparks, molten metal, flying particles, harmful light rays, electric shocks etc. Following precautions should be taken: -

- A dry chemical type fire extinguisher shall be made available in the work area.
- Adequate ventilation shall be ensured by opening manholes and fixing a shield or forced circulation of air etc, while doing a job in confined space.
- Ensure that only approved and well-maintained apparatus, such as torches, manifolds, regulators or pressure reducing valves, and acetylene generators, be used.
- All covers and panels shall be kept in place, when operating an electric Arc welding machine.
- The work piece should be connected directly to Power supply, and not indirectly through pipelines/structures/equipments etc.
- The welding receptacles shall be rated for 63 A suitable for 415V, 3-Phase system with a scraping earth. Receptacles shall have necessary mechanical interlocks and earthing facilities.

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- All cables, including welding and ground cables, shall be checked for any worn out or cracked insulation before starting the job. Ground cable should be separate without any loose joints.
- Cable coiling shall be maintained at minimum level, if not avoidable.
- An energised electrode shall not be left unattended.
- The power source shall be turned off at the end of job.
- All gas cylinders shall be properly secured in upright position.
- Acetylene cylinder shall be turned and kept in such a way that the valve outlet points away from oxygen cylinder.
- Acetylene cylinder key for opening valve shall be kept on valve stem, while cylinder is in use, so that the acetylene cylinder could be quickly turned off in case of emergency. Use flash back arrestors to prevent back-fire in acetylene/oxygen cylinder.
- When not in use, valves of all cylinders shall be kept closed.
- All types of cylinders, whether full or empty, shall be stored at cool, dry place under shed.
- Forced opening of any cylinder valve should not be attempted.
- Lighted gas torch shall never be left unattended.
- Store acetylene and oxygen cylinders separately.
- Store full and empty cylinders separately.
- Avoid cylinders coming into contact with heat.
- Cylinders that are heavy or difficult to carry by hand may be rolled on their bottom edge but never dragged.
- If cylinders have to be moved, be sure that the cylinder valves are shut off.
- Before changing torches, shut off the gas at the pressure reducing regulators and not by crimping the hose.
- Do not use matches to light torches, use a friction lighter.
- Move out any leaking cylinder immediately.
- Use trolleys for oxygen & acetylene cylinder and chain them.
- Always use Red hose for acetylene and other fuel gases and Black for oxygen, and ensure that both are in equal length.
- Ensure that hoses are free from burns, cuts and cracks and properly clamped.
- Avoid dragging hoses over sharp edges and objects
- Do not wrap hoses around cylinders when in use or stored.
- Protect hoses from flying sparks, hot slag, and other hot objects.
- Lubricants shall not be used on Ox-fuel gas equipment.
- During cutting/welding, use proper type goggles/ face shields.

6.5 WORKING IN CONFINED SPACES

6.5.1 Following safety practices for working in confined space like towers, columns, tanks and other vessels should be followed in addition to the safety guidelines for specific jobs like scaffolding, cutting/welding etc.

- Shut down, isolate, depressurise and purge the vessel as per laid down procedures.
- Ensure proper and accessible means of exit before entry inside a confined space.
- The number of persons allowed inside the vessel should be limited to avoid overcrowding.
- When the work is going on in the confined space, there should always be one man standby at the nearby manway.
- Before entering inside the vessels underground or located at lower elevation, probability of dense vapours accumulating nearby should also be considered in addition to inside the vessel.
- Ensure requisite O₂ level before entry in the confined space and monitor level periodically or other wise use respiratory devices.
- Check for no Hydrocarbon or toxic substances before entry and monitor level periodically or use requisite Personal Protective Equipment.

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- Ensure adequate ventilation or use respiratory devices.
- Depending upon need, necessary respirator system, gas masks and suit shall be worn by everyone entering confined space. In case of sewer, OWS or in the confined area where there is a possibility of toxic or inert gas, gas masks shall be used by everyone while entering.
- Barricade the confined spaces during hoisting, radiography, blasting, pressure testing etc.
- Use 24V flameproof lamp fittings only for illumination.
- Use tools with air motors or electric tools with maximum voltage of 24V.
- House keeping shall be well maintained.
- Safety helmet, safety shoes and safety belt shall be worn by everyone entering the confined space.
- Don't wear loose clothing while working in a confined space.
- In case of the vessels which are likely to contain pyrophoric substances (like Iron Sulphide), special care need to be taken before opening the vessel. Attempt should be made to remove the pyrophoric substances. Otherwise, these should be always kept wet by suitable means.
- The cutting torches should also be kept outside the vessel immediately after the cutting.
- The gas cylinders used for cutting/welding shall be kept outside.
- All cables, hoses, welding equipment etc., shall be removed from confined space at end of each work day, even if the work is to be resumed in the same space the next day.
- To the extent possible sludge shall be cleared and removed from outside before entering.
- No naked light or flame or hot work such as welding, cutting and soldering should be permitted inside a confined space or area unless it has been made completely free of the flammable atmosphere, tested and found safe by a competent person. Only non-sparking tools and flameproof hand lamps protected with guard and safety torches should be used inside such confined space or area for initial inspection, cleaning or other work required to be done for making the area safe.
- Communication should be always maintained between the worker and the attendant.

6.6 WORKING AT HEIGHTS

6.6.1 General Provision

- While working at a height of more than 3 meters, approved safety belt shall be used.
- While working at a height of more than 3 meters, permit should be issued by competent person before commencement of the job.
- Worker should be well trained on usage of safety belt including its proper usage at the time of ascending/descending.
- All tools should be carried in tool kits to avoid their falling.
- If the job is on fragile/sloping roof, roof walk ladders shall be used.
- Provide lifeline wherever required.
- Additional safety measures like providing Fall Arrestor type Safety belt, safety net should be provided depending upon site conditions, job requirements.
- Keep working area neat and clean. Remove scrap material immediately.
- Don't throw or drop material/equipment from height.
- Avoid jumping from one member to another. Use proper passageway.
- Keep both hands free while climbing. Don't try to bypass the steps of the ladder.
- Try to maintain calm at height. Avoid over exertion.
- Avoid movements on beam.
- Elevated workplaces including roofs should be provided with safe means of access and egress such as stairs, ramps or ladders.

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6.6.2 Roof Work

- All roof-work operations should be pre-planned and properly supervised.
- Roof work should only be undertaken by workers who are physically and psychologically fit and have the necessary knowledge and experience for such work.
- Work on roofs shouldn't be carried on in weather conditions that threaten the safety of workers.
- Crawling boards, walkways and roof ladders should be securely fastened to a firm structure.
- Roofing brackets should fit the slope of the roof and be securely supported.
- Where it is necessary for a person to kneel or crouch near the edge of the roof, necessary precautions should be taken.
- On a large roof where work have to be carried out at or near the edge, a simple barrier consisting of crossed scaffold tubes supporting a tubing guardrail may be provided.
- All covers for openings in roofs should be of substantial construction and be secured in position.
- Roofs with a pitch of more than 10 should be treated as sloping.
- When work is being carried out on sloping roofs, sufficient and suitable crawling boards or roof ladders should be provided and firmly secured in position.
- During extensive work on the roof, strong barriers or guardrails and toe-boards should be provided to stop a person from falling off the roof.
- Where workers are required to work on or near roofs or other places covered with fragile material, through which they are liable to fall, they should be provided with suitable roof ladders or crawling boards strong enough and when spanning across the supports for the roof covering to support those workers.
- A minimum of two boards should be provided so that it is not necessary for a person to stand on a fragile roof to move a board or a ladder, or for any other reason.

6.7 HANDLING AND LIFTING EQUIPMENT:

6.7.1 General Provisions

Following are the general guidelines to be followed with regard to all types of handling and lifting equipment in addition to the guidelines for specific type of equipments dealt later on.

- There should be a well-planned safety programme to ensure that all the lifting appliances and lifting gear are selected, installed, examined, tested, maintained, operated and dismantled with a view to preventing the occurrence of any accident;
- All lifting appliances shall be examined by competent persons at frequencies as per statute.
- Check thoroughly quality, size and condition of all lifting tools like chain pulley blocks, slings, U-clamps, D-shackles etc. before putting them in use.
- Safe lifting capacity of all lifting & handling equipment, tools and shackles should be got verified and certificates obtained from competent authorities before its use. The safe working load shall be marked on them.
- Check periodically the oil, brakes, gears, horns and tyre pressure of all moving equipments like cranes, forklifts, trailers etc as per manufacturer's recommendations.
- Check the weights to be lifted and accordingly decide about the crane capacity, boom length and angle of erection.
- Allow lifting slings as short as possible and check packing at the friction points.
- While lifting/placing of the load, no unauthorised person shall remain within the radius of the boom and underneath the load.
- While loading, unloading and stacking of pipes, proper wedges shall be placed to prevent rolling down of the pipes.
- Control longer jobs being lifted up from both ends.

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- Only trained operators and riggers should carry out the job. While the crane is moving or lifting the load, the trained rigger should be there for keeping a vigil against hitting any other object.
- During high wind conditions and nights, lifting of heavy equipments should be avoided. If unavoidable to do erection in night, operator and rigger should be fully trained for night signaling. Also proper illumination should be there.
- Allow crane to move on hard, firm and leveled ground.
- When crane is in idle condition for long periods or unattended, crane boom should either be lowered or locked as per manufacturer's guidelines.
- Hook and load being lifted shall remain in full visibility of crane operators, while lifting, to the extent possible.
- Don't allow booms or other parts of crane to come within 3 meters reach of overhead electrical cables.
- No structural alterations or repairs should be made to any part of a lifting appliance, which may affect the safety of the appliance without the permission and supervision of the competent person.

6.7.2 Hoists

- **Hoist shafts should be enclosed with rigid panels or other adequate fencing at:**
 - ✓ Ground level on all sides;
 - ✓ All other levels at all points at which access is provided;
 - ✓ All points at which persons are liable to be struck by any moving part.
- The enclosure of hoist shafts, except at approaches should extend where practicable at least 2mt above the floor, platform or other place to which access is provided except where a lesser height is sufficient to prevent any person falling down the hoistway and there is no risk of any person coming into contact with any moving part of the hoist, but in no case should the enclosure be less than 1mt in height.
- The guides of hoist platforms should offer sufficient resistance to bending and, in the case of jamming by a safety catch, to buckling.
- Where necessary to prevent danger, adequate covering should be provided above the top of hoist shafts to prevent material falling down them.
- Outdoor hoist towers should be erected on firm foundations, and securely braced, guyed and anchored.
- A ladderway should extend from the bottom to the top of outdoor hoist towers, if no other ladderway exists within easy reach.
- Hoisting engines should be of ample capacity to control the heaviest load that they will have to move.
- Hoists should be provided with devices that stop the hoisting engine as soon as the platform reaches its highest stopping place.
- Winches should be so constructed that the brake is applied when the control handle is not held in the operating position.
- It should not be possible to set in motion from the platform a hoist, which is not designed for the conveyance of persons.
- Winches should not be fitted with pawl and ratchet gears on which the pawl must be disengaged before the platform is lowered.
- Hoist platforms should be capable of supporting the maximum load that they will have to carry with a safety factor.
- Hoist platforms should be equipped with safety gear that will hold the platform with the maximum load if the hoisting rope breaks.
- If workers have to enter the cage or go on the platform at landings there should be a locking arrangement preventing the cage or platform from moving while any worker is in or on it.
- On sides not used for loading and unloading, hoist platforms should be provided with toe-boards and enclosures of wire mesh or other suitable material to prevent the fall of parts of loads.

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- Where necessary to prevent danger from falling objects, hoist platforms should be provided with adequate covering.
- Counterweights consisting of an assemblage of several parts should be made of specially constructed parts rigidly connected together.
- Counterweights should run in guides.
- Platforms should be provided at all landings used by workers.
- Following notices should be posted up conspicuously and in very legible characters:
- On all hoists:
 - ✓ On the platform: the carrying capacity in kilograms or other appropriate standard unit of weight;
 - ✓ On the hoisting engine: the lifting capacity in kilograms or other appropriate standard unit of weight;
- On hoists authorized or certified for the conveyance of persons:
- On the platform or cage: the maximum number of persons to be carried at one time;
- On every approach to the hoist and on the platform: prohibition of use by persons.
- Hoists intended for the carriage of persons should be provided with a cage so constructed as to prevent any person from falling out or being trapped between the cage and any fixed part of the structure when the cage gate is shut, or from being struck by the counterbalance weight or by articles or materials trailing down the hoistway.
- On each side in which access is provided, the cage should have a gate fitted with devices which ensure that the gate cannot be opened except when the cage is at a landing and that the gate must be closed before the cage can move away from the landing.
- Every gate in the enclosure of the hoist shaft which gives access from a landing place to the cage should be fitted with devices to ensure that the gate cannot be opened except when the cage is at that landing place, and that the cage cannot be moved away from that landing place until the gate is closed.

6.7.3 Lifting ropes

- Only ropes with a known safe working capacity should be used as lifting ropes.
- Lifting ropes should be installed, maintained and inspected in accordance with manufacturers' instructions.
- Repaired steel ropes should not be used on hoists.
- Where multiple independent ropes are used, for the purpose of stability, to lift a work platform, each rope should be capable of carrying the load independently.

6.8 VEHICLE MOVEMENT

- 6.8.1 Park vehicles only at designated places. Don't block roads to create hindrance for other vehicles.
- 6.8.2 Don't overload the vehicle.
- 6.8.3 Obey speed limits and traffic rules.
- 6.8.4 Always expect the unexpected and be a defensive driver.
- 6.8.5 Drive carefully during adverse weather and road conditions.
- 6.8.6 Read the road ahead and ride to the left.
- 6.8.7 Be extra cautious at nights. Keep wind screens clean and lights in working condition.
- 6.8.8 All vehicles used for carrying workers and construction materials must undergo predictive/preventive maintenance and daily checks.

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- 6.8.9 Driver with proper valid driving license shall only be allowed to drive the vehicle.
- 6.8.10 Routes shall be leveled, marked and planned in such a way so as to avoid potential hazards such as overhead power lines and sloping ground etc.
- 6.8.11 While reversing the vehicles, help of another worker should be ensured at all times.
- 6.8.12 An unattended vehicle should have the engine switched off.
- 6.8.13 Wherever possible one-way system shall be followed.
- 6.8.14 Barriers/fixed stops should be provided for excavation/openings to prevent fall of vehicle.
- 6.8.15 Load should be properly secured.
- 6.8.16 The body of the tipper lorry should always be lowered before driving the vehicle off.
- 6.8.17 Signs/signals/caution boards etc. should be provided on routes.

6.9 ELECTRICAL

6.9.1 General Provisions

- Only persons having valid licenses should be allowed to work on electrical facilities.
- No person should be allowed to work on live circuit. The same, if unavoidable, special care and authorisation need to be taken.
- Treat all circuits as "LIVE" unless ensured otherwise.
- Electrical "Tag Out" procedure "MUST" be followed for carrying out maintenance jobs.
- Display voltage ratings prominently with "Danger" signs.
- Put caution/notice signs before starting the repair works.
- All electrical equipment operating above 250V shall have separate and distinct connections to earth grid.
- Proper grounding to be ensured for all switch boards and equipment including Portable ones prior to taking into service.
- Make sure that electrical switch boards, portable tools, equipments (like grinding machine etc.) don't get wet during their usage. If it happens, stop the main supply, make the tools dry and then only use them. Check proper earthing.
- All temporary switch boards/ KIOSKS put up at work site should be suitably protected from rain and the level of same should be high enough to avoid contact with water due to water logging.
- Don't work wet on electrical system.
- Don't overload the electrical system.
- Use only proper rated HRC fuses.
- Industrial type extension boards and Plug sockets are only to be used.
- ELCB for all temporary connections must be provided. Use insulated 3-pin plug tops.
- All power supply cables should be laid properly and neatly so that they don't cause hindrance to persons working and no physical damage also takes place to the cables during various construction activities.
- All Power cables to be properly terminated using glands and lugs of proper size and adequately crimped.
- Use spark-proof/flame proof type electrical fittings in Fire Hazard zones.
- Check installations of steel plates/pipes to protect underground cables at crossings.
- Don't lay unarmored cable directly on ground, wall, roof or trees. All temporary cables should be laid at least 750 mm below ground and cable markers should be provided.

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Proper sleeves should be provided at road crossings. In case temporary cables are to be laid on wooden poles/steel poles, the minimum cable heights should be 4.5 M.

- Maintain safe overhead distance of HT cables.
- Don't connect any earthing wire to the pipelines/structures.
- Don't make any unsafe temporary connections, naked joints/wiring etc.
- Ensure that temporary cables are free from cuts, damaged insulation, kinks or improper insulated joints.
- Check at periodic intervals that pins of sockets and joints are not loose.
- Protect electrical wires/equipments from water and naked flames.
- Illuminate suitably all the work areas.
- All switchboards should be of MS structure only and incoming source should be marked.
- Hand lamps should not be of more than 24V rating.
- Fire extinguishers (DCP/CO₂/Sand buckets) should be kept near temporary switch boards being used for construction purposes. Don't use water for fighting electrical fires.
- Insulating mats shall be provided in the front and back end of switch boards.
- All parts of electrical installations should be so constructed, installed and maintained as to prevent danger of electric shock, fire and external explosion.
- Periodic checking/certification of electrical safety appliances such as gloves, insulating mats, hoods etc. to be done/witnessed along with maintaining a register at site signed by competent authority.
- A notice displaying following, should be kept exhibited at suitable places:
 - ✓ Prohibiting unauthorised persons from entering electrical equipment rooms or from handling or interfering with electrical apparatus;
 - ✓ Containing directions as to procedures in case of fire, rescue of persons in contact with live conductors and the restoration of persons suffering from electric shock;
 - ✓ Specifying the person to be notified in case of electrical accident or dangerous occurrence, and indicating how to communicate with him.
- No other cables/pipes to be laid in trench used for electrical cables.
- Utmost care should be taken while excavating Earth from cable trench to avoid damage or any accident.
- Sub-station floor cut-outs meant for switch board installations to be covered wherever installation is incomplete.

NOTE: A Residual Current Operated Circuit Breaker (RCCB) or Earth Leakage Circuit Breaker (ELCB), when installed, protects a human being to the widest extent. RCCB or ELCB should be provided as per Indian Electricity Rules.

6.9.2 Inspection and maintenance

- All electrical equipment should be inspected before taking into use to ensure suitability for its proposed use.
- At the beginning of every shift, the person using the electrical equipment should make a careful external examination of the equipment and conductors, especially the flexible cables.
- Apart from some exceptional cases, work on or near live parts of electrical equipment should be forbidden.
- Before any work is begun on conductors or equipment that do not have to remain live:
 - ✓ The current should be switched off by a responsible authorised person;
 - ✓ Precautions should be taken to prevent the current from being switched on again;
 - ✓ The conductors or the equipment should be tested to ascertain that they are dead;
 - ✓ The conductors and equipment should be earthed and short-circuited;
 - ✓ Neighboring live parts should be adequately protected against accidental contact.
- After work has been done on conductors and equipment, the current should only be switched on again on the orders of a competent person after the earthing and short-circuiting have been removed and the workplace reported safe.

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- Electricians should be provided with approved and tested tools, and personal protective equipment such as rubber gloves, mats etc.
- All conductors and equipment should be considered to be live unless there is a proof of the contrary.
- When work has to be done in dangerous proximity to live parts the current should be cut off. If for operational reasons this is not possible, the live parts should be fenced off or enclosed by qualified staff from the sub-station concerned.

6.9.3 Testing

- Electrical installations should be inspected and tested and the results recorded.
- Periodic testing of the efficiency of the earth leakage protective devices should be carried out.
- Particular attention should be paid to the earthing of apparatus, the continuity of protective conductors, polarity and insulation resistance, protection against mechanical damage and condition of connections at points of entry.

6.10 DEMOLITION

6.10.1 General provisions

- When the demolition of any building or structure might present danger to workers or to the public:
 - ✓ Necessary precautions, methods and procedures should be adopted, including those for the disposal of waste or residues;
 - ✓ The work should be planned and undertaken only under the supervision of a competent person.
- Before demolition operations begin:
 - ✓ Structural details and builders' drawings should be obtained wherever possible;
 - ✓ Details of the previous use should be obtained to identify any possible contamination and hazards from chemicals, flammables, etc.;
 - ✓ An initial survey should be carried out to identify any structural problems and risks associated with flammable substances and substances hazardous to health. The survey should note the type of ground on which the structure is erected, the condition of the roof trusses, the type of framing used in framed structures and the load-bearing walls;
 - ✓ A method of demolition should be formulated after the survey and recorded in a method statement having taken all the various considerations into account and identifying the problems and their solutions;
- All electric, gas, water and steam service lines should be shut off and, as necessary, capped or otherwise controlled at or outside the construction site before work commences.
- If it is necessary to maintain any electric power, water or other services during demolition operations, they should be adequately protected against damage.
- As far as practicable, the danger zone round the building should be adequately fenced off and sign posted. To protect the public a fence 2m high should be erected enclosing the demolition operations and the access gates should be secured outside working hours.
- The fabric of buildings contaminated with substances hazardous to health should be decontaminated. Protective clothing and respiratory devices should be provided and worn.
- Where plant has contained flammable materials, special precautions should be taken to avoid fire and explosion.
- The plant to be demolished should be isolated from all other plant that may contain flammable materials. Any residual flammable material in the plant should be rendered safe by cleaning, purging or the application of an inert atmosphere as appropriate.

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- Care should be taken not to demolish any parts, which would destroy the stability of other parts.
- Demolition activities should not be continued under adverse climatic conditions such as high winds, which could cause the collapse of already weakened structures.
- To prevent hazards parts of structures should be adequately shored, braced or otherwise supported.
- Structures should not be left in a condition in which they could be brought down by wind pressure or vibration.
- Where a deliberate controlled collapse technique is to be used, expert engineering advice should be obtained, and:
 - ✓ It should only be used where the whole structure is to come down because it relies on the removal of key structural members to effect a total collapse;
 - ✓ It should only be used on sites that are fairly level and where there is enough surrounding space for all operatives and equipment to be withdrawn to a safe distance.
- When equipment such as power shovels and bulldozers are used for demolition, due consideration should be given to the nature of the building or structure, its dimensions, as well as to the power of the equipment being used.
- If a swinging weight is used for demolition, a safety zone having a width of at least one-and-a-half times the height of the building or structure should be maintained around the points of impact.

6.10.2 Demolition of structural steelwork

- i) All precautions should be taken to prevent danger from any sudden twist, spring or collapse of steelwork, ironwork or reinforced concrete when it is cut or released.
- ii) Steel construction should be demolished tier by tier.
- iii) Structural steel parts should be lowered and not dropped from a height.

6.11 SAND/SHOT BLASTING/ SPRAY PAINTING

6.11.1 Sand blasting should be used only after approval from competent person.

6.11.2 Air Compressor used for sand/shot blasting/painting should have guard and positioned away from the work place.

6.11.3 Exhaust of the prime mover, if IC engine is used, should be directed away from the work place.

6.11.4 In case of motor driven compressor, the body of the motor as well as the compressor to be properly earthed.

6.11.5 The hoses used for compressed air should be of proper quality, and health of the same to be ensured through regular check/ test.

6.11.6 The operator of sand/shot blasting/painting should wear suitable PPE's including mask.

6.11.7 Adequate measures to be taken to suppress dust/spray particle.

6.11.8 Sand used for sand blasting should be suitably covered & protected from rain/moisture.

6.11.9 When these activities are done in confined places, adequate measure to be taken for proper ventilation.

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7.0 ADDITIONAL SAFETY PRECAUTION FOR UNITS WITH HYDROCARBONS

7.1 In addition to general safety precautions as outlined above for the activities in Clause 6.0, following additional safety precautions need to be taken for the sites within the operating area or nearby, where presence of Hydrocarbons cannot be ruled out.

- No job shall be carried out without a valid permit.
- Smoking should be prohibited in all places containing readily combustible or flammable materials and "No Smoking" notices be prominently displayed.
- In confined spaces and other places where flammable gases, vapours or dusts can cause danger, following measures should be taken:
 - ✓ Only approved type electrical installations and equipment, including portable lamps, should be used;
 - ✓ There should be no naked flames or source of ignition;
 - ✓ Oily rags, waste and clothes or other substances liable to spontaneous ignition should be removed without delay to a safe place;
 - ✓ Ventilation should be provided.
- Regular inspections should be made of places where there are fire risks. These include the vicinity of heating appliances, electrical installations and conductors, stores of flammable and combustible materials, welding and cutting operations.
- Welding, flame cutting and other hot work should only be done after issuance of work permit in line with the requirement after appropriate precautions, as required, are taken to reduce the risk of fire.
- Fire-extinguishing equipment should be well maintained and inspected at suitable intervals by a competent person. Access to fire-extinguishing equipment such as hydrants, portable extinguishers and connections for hoses should be kept clear at all times.
- All supervisors and a sufficient number of workers should be trained in the use of fire-extinguishing equipment, so that adequate trained personnel are readily available during all working periods.
- Audio means to give warning in case of fire should be provided where this is necessary to prevent danger. Such warning should be clearly audible in all parts of the site where persons are liable to work. There should be an effective evacuation plan so that all persons are evacuated speedily without panic and accounted for and all plant and processes shut down.
- Notices should be posted at conspicuous places indicating:
 - The nearest fire alarm;
 - The telephone number and address of the nearest emergency services.
- The work site shall be cleared of all combustible materials, as Sparks and molten metal coming from the welding job can easily ignite combustible materials near or below the welding site. If the combustible materials cannot be removed from the area, the same shall be properly shielded.
- A dry chemical type fire extinguisher shall be made available in the work area. Also fire protection facilities like running hoses etc. as per permit should be complied with.
- Wherever required, welding screens shall be put up to protect other equipment in adjoining areas against flying sparks. Material used should be metal/asbestos/water curtain.
- Welding or cutting of vessels/ equipments used in Hydrocarbon/ hazardous chemicals shall be done after proper gas freeing and verifying the same with the explosive-meter.
- The confined space/equipment shall be gas freed and cleaned.
- Absence of any toxic gas and any flammable gas above explosion limit shall be ensured with the help of gas detection instrument and explosive meter respectively.
- Used and hot electrode stubs shall be discarded in a metal bucket.
- Use approved and certified flame arrestors for vehicles.
- Work permit to be obtained, if construction work is carried out within existing operating area.

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8.0 FIRST AID

8.1 First aid facilities should be provided in line with various statutory regulations like factory act etc. However following care should be taken:

- First aid, including the provision of trained personnel should be ensured at work sites. Arrangement should be made for ensuring the medical attention of the injured workers. First aid box should be as per the Factory rules.
- Suitable rescue equipment, like stretchers should be kept readily available at the construction site.
- First-aid kits or boxes, as appropriate and as per statutory requirements, should be provided at workplaces and be protected against contamination by dust, moisture etc.
- First-aid kit or boxes should not keep anything besides material for first aid in emergencies.
- First-aid kits and boxes should contain simple and clear instructions to be followed, be kept under the charge of a responsible person qualified to render the first aid and be regularly inspected and stocked.
- Where the work involves risk of drowning, asphyxiation or electric shock, first-aid personnel should be proficient in the use of resuscitation and other life saving techniques and in rescue procedures.
- Emergency telephone numbers of nearby Hospitals, Police, Fire Station and Administration should be prominently displayed.

9.0 DOCUMENTATION

9.1 The intention of keeping documentation of all types of accident(s) is to prevent recurrence of similar accident(s).
All accidents (major, minor or near miss) should be investigated, analysed and recommendations should be documented along with implementation status.
All related data should be well-documented and further analysis highlighting the major cause(s) of accidents be done. This will help in identifying thrust areas and training needs for prevention of accidents.

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TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS

Unless otherwise specified in the Special Specifications, Bills of Quantities or Drawings the work shall conform to the following publications by the Institute for Construction Training And Development (ICTAD) - Sri Lanka of the Ministry of Housing, Construction and Public Utilities. (Formerly of the Ministry of Local Government, Housing and Construction)

1. Specification for Building Works - Sri Lanka (Volume I) - 1985 No. SCA/4 - Revision- Jul' 2004.
2. Specifications for Building Works - Sri Lanka (Volume II) - ICTAD Publication No. SCA/4/II Revised Edition - October 2001.
3. Specifications for Water supply, Sewerage & Storm water drainage works - Sri Lanka ICTAD Publication No. SCA/3/2, Revised Edition - April 2002
4. Specifications for Electrical & Mechanical works Associated with Building & Civil Engineering Sri Lanka - ICTAD Publication No. SCA/8 - 2nd Edition (Revised) August 2000.

As these are standard Specifications, it is likely that a number of specifications expressed will not apply to this project. The requirement of the above standard specifications applies only in respect of work shown in the Drawings and Bills of Quantities.

Special Specifications that follow shall be read in conjunction with the General Specification where applicable. Where the Special Specifications are in conflict with the General Specification, the Special Specifications shall prevail.

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FORM OF AGREEMENT

LIOC PLC

FORM OF AGREEMENT

THIS AGREEMENT is made and entered into on this day ofTwo Thousand Twenty between Lanka IOC PLC, herein after called and referred to as the Employer of the ONE PART and a Company duly incorporated under the Companies Ordinance and having it's registered office at , (hereinafter called and referred to as the Contractor which term or expression as herein used shall as and when the context so requires or admits of construction mean, and include the said Lanka IOC PLC , their heirs, successors and administrators) of the OTHER PART.

WHEREAS the Employer is desirous that the works more fully described in the documents attached hereto be executed, completed maintained and has accepted the tender dated by the Contractor for the execution, completion and maintenance of the said works.

NOW THIS AGREEMENT WITNESSED as follows: -

- (1) The words and expressions in the agreement shall have the meaning assigned to them in the conditions of contract, which is part and parcel of this agreement and hereinafter referred to.
- (2) The following documents shall be deemed to form, be read with and construed as part and parcel of this agreement
 - (a) The Tender aforesaid
 - (b) Letter of acceptance of the Tender
 - (c) Drawings
 - (d) Conditions of Contract - Parts I & II
 - (e) Tender schedule (Bills of Quantities)
 - (f) Specifications
 - (g) Memorandum of understanding if any
- (3) The Contractor shall execute, complete, commission, test, hand-over and maintain the works and remedy defects, in conformity in all respects with the provisions of the contract, more fully described in the Drawings, Tender schedule (Bills of Quantities), Specifications and Conditions of Contract aforesaid, in consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned.
- (4) The Employer shall pay the Contractor the Contract price at the times and in the manner described by the aforesaid Schedule of payments. In consideration of the execution, completion and maintenance of the works aforesaid.

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In witness whereof the party of the first part has set his hand hereunto and the party of the second part has caused its common seal be hereunto affixed and signed on the day and year aforementioned.

ON BEHALF OF EMPLOYER

ON BEHALF OF CONTRACTOR

.....

.....

.....

.....

Signed, sealed and delivered
by the said parties in the presence of :

Witnesses

(1)

(2)

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CONDITIONS OF CONTRACT PART I

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CONDITIONS OF CONTRACT PART I

L IOC PLC

CONDITIONS OF CONTRACT PART I

General Conditions of Contract shall be in accordance with the following publication by the Institute for Construction Training and Development (ICTAD)- Sri Lanka of the Ministry of Housing, Construction and Public Utilities. (Formerly of the Ministry of Local Government, Housing and Construction)

Conditions of Contract for works of Building & Civil Engineering in Sri Lanka (with Forms of Tender & Agreement) revised edition / January 1989 ICTAD Publication No. SCA/1.

Conditions of particular application are as per Conditions of Contract Part II.

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CONDITIONS OF CONTRACT PART II

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CONDITIONS OF CONTRACT PART II

L IOC PLC

CLAUSE 1 : Definitions and interpretations

1.1.1 : The Employer is

Lanka IOC PLC
20, West Tower,
World Trade Centre,
Echelon Square,
Colombo 01.

1.1.2 : Sub-clause 1.1.2 is deleted and the following is substituted therefore

The Contractor means the person who has contracted for the works herein specified and its successors and not any assignee of such person.

1.1.3 : Sub-clause 1.1.3 is deleted and the following is substituted therefore

Engineer or Architect or Consultant referred in this tender document is

the person appointed by the Employer to act as Engineer for the purpose of this contract.

1.1.14 : Sub-clause 1.1.14 is deleted and the following is substituted therefore

“Approved” and “Approval” means approved in writing including subsequent written confirmation of previous oral approval.

1.1.17 : The following new Sub-clause 1.1.17 is added

“Day” means calendar day.

1.2 : Sub-clause 1.2 is deleted and the following is substituted therefore

Words importing the singular only also include the plural and vice versa and words importing the masculine gender shall include the feminine and neuter genders.

CLAUSE 2 : Duties and Power of Engineer’s Representative

2(1) : The approval of the “Employer” is required before the “Engineer” can execute his duties in accordance with or as defined by the limits of the following clauses:

(a) Clause 4 Sub-letting
Consenting to the sub-letting of a part of the works if the value of such part exceeds one percent (1%) of the sum indicated in the letter of Acceptance

(b) Clause 51 Variations

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Ordering a variation if the value of such variation is likely to exceed one percent (1%) of the sum indicated in the letter of Acceptance or Rupees One Million, whichever is less.

(c) Clause 27 Fossils etc.

(d) Clause 40 Suspension of work

CLAUSE 5 : Language/s and Law

5.1 : The Language is English

5.2 : First sentence "Except..... of the Contract". In the clause 5.2 is deleted and the following is substituted therefore:-

"The provisions of each of the following documents shall always prevail over those of the documents listed below it [Eg: The document listed in (c) will prevail over the document listed in (f)]:-

- (a) The Contract Agreement (when completed)
- (b) The Letter of Acceptance
- (c) The Drawings
- (d) Part I of these Conditions
- (e) Part II of these Conditions
- (f) Tender schedule (Bills of Quantities)
- (g) Specifications
- (h) Any other document forming part of the contract.

CLAUSE 9 : Contract Agreement

The following sentence is added to Clause 9 as the last sentence:-

"The stamp duty on the contract agreement is payable by the Contractor".

CLAUSE 10 : Performance Bond

10(1) Delete Clause 10 and substitute as follows:

"The Contractor shall obtain security for the proper performance of the contract to a value of ten percent (10%) of the contract price and provide the Employer such security within fourteen (14) days after the receipt of the letter of acceptance. Such security or bond will be from a Licensed Commercial Bank in Sri Lanka in the form as annexed or any other form acceptable to the Employer. The costs of compliance with the requirements of this clause shall be borne by the Contractor".

10(2) The performance Security or Bond referred to in the Clause 10.2 shall remain valid until the issue of maintenance certificate in accordance with Clause 62(1).

CLAUSE 12 The following proviso is added:-

"PROVIDED however the Employer shall not be liable to pay any such additional costs if such conditions or obstructions are proved to be for reasons beyond its control.

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- CLAUSE 14 Programme to be furnished
- The programme shall be submitted within fourteen (14) calendar days after receipt of the Letter of Acceptance.
- CLAUSE 15 Construction Management Services
- 15(1) The portion of this clause starting from “The cost of in line 12 until the end of the clause is deleted and the following is substituted thereof:-
- “The cost of this service is deemed to be included in the rates and prices quoted by the contractor and shall not be claimed separately by the Contractor”.
- CLAUSE 19 Watching and Lighting
- Add the following paragraph to this clause at the end thereof: -
- “The Contractor shall indemnify the Employer in the event of any claim arising from any person as a result of the contractor not strictly adhering to the provisions of this clause.
- “In the event of any claim or loss arising against or payable by the Employer as a result of the Contractor’s failure or negligence to strictly adhere to the provision of this clause, the Contractor shall be liable to indemnify and keep the Employer indemnified by reimbursement of such claim or loss in a sum certified by the Engineer which sum shall be
- deductible from the monies due to the Contractor from the Employer on any bill”.
- CLAUSE 20 Care of works
- Clause 20(1)
- The word “accepted” occurring in line 30 of Sub-clause 20(1) be corrected to read “excepted”.
- Clause 20(2) shall be deleted and the following new clause 20(2) be substituted therefore:
- “20(2) The ‘excepted risks’ are (in the opinion of the Engineer) the risks for which the Contractor will not be able to obtain an insurance policy from an Insurance Company in Sri Lanka”.
- CLAUSE 21 Insurance of works etc.,
- The additional sum referred to in Clause 21(a) shall be ten percent (10%) of the amount stated in the letter of acceptance.
- CLAUSE 22 Damage to persons and property
- 22(1) Item (c) be amended to read as follows:-

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“Damage to property which is the unavoidable result of the execution or maintenance by the Contractor without negligence in accordance with the Contract.

- 22(2) The following proviso is added to the clause 22(2) at the end therefore: -
- “PROVIDED such claims proceedings damages coats charges and expenses arise solely due to the negligence of the Employer”.

CLAUSE 24

24.1 Accidents and injury to workmen

Add the words “arising in respect thereof or in relation thereto. The amount certified by the Engineer as due and payable to the Employer by way of such indemnification shall be paid by the Contractor or deducted from the monies due from the Employer to the Contractor” at the end of this clause.

CLAUSE 36

36(2) Clause 36(2) is amended to read as follows: -

“(2) All samples shall be supplied by the Contractor at its own costs.

CLAUSE 45 The following sentence be added at the end of this clause: -

“For the purpose of this clause statutory days of rest means all the Mercantile Holidays as declared by the Government of Sri Lanka”.

CLAUSE 47

47(3) - Deleted-

CLAUSE 52 A new Sub Clause 52(6) is added as follows:

52(6) “Notwithstanding any other provision of the contract, if the Contractor intends to claim any additional payments, not mentioned in the Bills of Quantities, pursuant to any clause of these conditions or otherwise, the Contractor shall give notice of intent in writing to the Engineer within Twenty Eight (28) days after the event giving rise to the claim has first arisen”.

52(7) A new Sub Clause 52(7) is added as follows: -

Upon happening of the event referred to in Clause 52(6), the Contractor shall keep records as may be necessary to support any claim it may make. The Engineer upon receipt of notice of a claim may instruct the Contractor to provide any records, as may be material to the claim. The Contractor shall permit the Engineer to inspect all records the Engineer considers relevant and supply copies of same when called for.

52(8) A Sub-Clause 52(8) is added as follows: -

“Within Twenty Eight (28) days giving notice under clause 52(6), the Contractor shall send to the Engineer an account giving detailed particulars

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of the amount claimed and the grounds upon which it is based (together with the available documentary proof).

CLAUSE 53 Sub Clauses 53(5), 53(6), 53(6(a)) & 53(7) are deleted.

CLAUSE 60 Sub Clause 60(1) is deleted and mobilization advance shall not be paid: -

60(1) - Deleted-

60(2)(c) The materials referred to in this Clause (for payment of materials at site) shall be limited to: -

- i. Steel
- ii. Aluminium components.

Monthly statements required in this Clause shall be submitted on or before the 10th day of the succeeding month.

60(7) Sub Clause 60(7) is amended as follows: -

In each of lines 5 and 14 the words and figures “ten (10)” be deleted and the following be substituted therefore: -

“Fourteen (14)”

CLAUSE 65

65(1) Last paragraph of this Clause “The Employee shall indemnify.connection therewith” is deleted.

65(5) This sub-clause be deleted and the following new sub-clause 65(5) be substituted therefore: -

65(5) The special risks are “ the excepted risks” within the meaning of the amended clause 20(2)”.

65(8) Items (d), (e) and (f) are deleted.

CLAUSE 66

66(1) The words “ The same as that.....hereof” in lines 8 to 11 be deleted and the word “payable” shall be substituted therefore.

CLAUSE 67 Clause 67 be deleted and the following new clause 67 be substituted therefore: -

67. - Deleted-

CLAUSE 68 The words “registered express” be inserted between the words “by” and “post” in the third line.

CLAUSE 70 Original Clause 70 is deleted and the following is substituted therefore: -

70(1) “The accepted tender will be treated as firm and inclusive of all expenses and taxes payable by contractor and applicable during the entire period of construction”.

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70(2) Notwithstanding any other provisions of this Contract, no variation howsoever in prices will be paid to or deducted from the contractor for fluctuation in prices of materials, components, skilled and unskilled labour and the Contractor will not be entitled to any variation in prices on account of changes in taxes, etc., for imported items/components.

70(3) The Employer will deduct from the monies due to the Contractor all statutory deductions if any deductible on account of the Contractor and remit to the relevant authorities. A certificate will be issued by the Employer stating the amount deducted and to whom such amounts have been paid. The Contractor shall furnish relevant Tax file numbers to the Employer.

CLAUSE 71 Clause 71 is deleted.

CLAUSE 72 Clause 72 is deleted.

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SPECIMEN PERFORMANCE BOND (SECURITY DEPOSIT/ BID BOND)

To:
M/s Lanka IOC PLC
Level-20, West Tower,
World Trade Centre,
Colombo-01.

1. In consideration of the Lanka IOC PLC, having its Registered Office at _____ (hereinafter called "the Company") having agreed to exempt _____ (hereinafter called "The said Contractor(s)/ Supplier(s)/ Seller(s)") from the demand under the terms and conditions of an Agreement dated _____ made between _____ and _____ for _____ (hereinafter called "the said Agreement"), of Security Deposit for the due fulfilment by the said Contractor(s)/ Supplier(s)/ Seller(s) of the terms and conditions contained in the said Agreement, on production of a bank Guarantee of Rs. _____ (Rupees _____) only. We, _____ hereinafter referred to as "the Bank" (at the request of _____ Contractor(s)/ Supplier(s)/ Seller(s) do hereby undertake to pay to the Company an amount not exceeding Rs. _____ against any loss or damage caused to or suffered or would be caused to or suffered by the Company by Reason of any breach by the said Contractor(s)/ Supplier(s)/ Seller(s) of any of the terms of conditions contained in the said Purchase Contract Agreement.

2. We _____ (indicate name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s)/ Supplier(s)/ Seller(s) of any of the terms or conditions contained in the said Agreement or by reason of Contractor(s)/ Supplier(s)/ Seller(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and this guarantee shall be restricted to an amount not exceeding Rs. _____

3. We undertake to pay to the Company any money so demanded not withstanding any dispute of disputes raised by the Contractor(s)/ Supplier(s)/ Seller(s) in any suit or proceeding pending before any court of Tribunal or Arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the Contractor(s)/ Supplier(s)/ Seller(s) shall have no claim against us for making such payment.

4. We, _____ further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till _____ office/ department at _____ certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s)/ Supplier(s)/ Seller(s) and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____ we shall be discharged from all liability under this guarantee thereafter.

5. We, _____ (indicate name of the Bank) further agree with the Company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said Contractor(s)/ Supplier(s)/ Seller(s) from time to time or

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to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s)/ Supplier(s)/ Seller(s) and to forebear or enforce any of the terms and conditions relating to the said Agreement and shall not be relieved from our liability by reasons of any such variation, or extension being granted to the said Contractor(s)/ Supplier(s)/ Seller(s) or forbearance act or omission on the part of the Company or any indulgence by the Company to the said Contractor(s)/ Supplier(s)/ Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provisions have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s)/ Supplier(s)/ Seller(s).

7. The Bank Guarantee is operable/ payable at Colombo branch.

8. We, _____ (indicate name of the Bank) lastly undertake not to revoke this guarantee its currency except with previous consent of the Company in writing.

Dated the _____ day of _____ 20__

FOR _____
(Indicate the name and address of the Bank)

PLACE:

DATE:

SIGNATURE OF TENDERER
SEAL