



KOLKATA PORT TRUST

KOLKATA DOCK SYSTEM
MECHANICAL & ELECTRICAL ENGINEERING DEPARTMENT
8, Garden Reach Road, Kolkata – 700 043

TENDER DOCUMENT

for

Work : “Electrical Installation work including Air-conditioning and CCTV Surveillance System associated with installation of Container Scanner”

Notice Inviting Tender No.: KoPT/KDS/Mech/SE-I/ADV/506 dated 05.11.2018

- Site inspection followed by pre bid meeting : 19. 11.2018 at 12.00 hrs.
- Start date of submission of e-tender : 21.11.2018 from 12.00 Hrs
- Closing date for e- Tender : 10.12.2018 up to 15.00 hrs.
- Date of opening of Techno commercial bid : 11.12.2018 at 15.00 hrs.

Tender Fee: 1770/- (Non-Refundable)
EMD : Rs. 1,03,435/- (Refundable)*

Chief Mechanical Engineer

TENDER DOCUMENT

KOLKATA PORT TRUST
KOLKATA DOCK SYSTEM

e-TENDER FOR “Electrical Installation work including Air-conditioning and CCTV surveillance System associated with installation of Container Scanner”.

NOTICE INVITING TENDER No. KoPT/KDS/Mech/SE-I/ADV/506 dated 05.11.2018

TENDER NOTICE:

Mechanical & Electrical Engineering Department of Kolkata Port Trust invites E-Tender under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) for “**Electrical Installation work including Air-conditioning and CCTV surveillance System associated with installation of Container Scanner.**”

Bid Document may be downloaded from KoPT website www.kolkataporttrust.gov.in and CPP Portal. Corrigenda or clarifications, if any, shall be hosted on the above mentioned websites only.

SCHEDULE OF TENDER (SOT)

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| TENDER NO. | KoPT/KDS/Mech/SE-I/ADV/506 dated 05.11.2018 |
| MODE OF TENDER | e-Procurement System (Online Part I - Techno-Commercial Bid and Part II - Price Bid through CPP Portal.) The intending bidders are required to submit their offer electronically through NIC’s CPP Portal for e-Procurement (GePNIC). No physical tender is acceptable by Kolkata Dock System. |
| Estimated value of Tender | Rs 51,71,749/- (Rupees Fifty One Lakhs Seventy One Thousand Seven Hundred & Forty Nine) |
| i) Earnest Money Deposit | The intending bidders should submit Earnest Money of Rs 1,03,435/- (Rupees One Lakh Three Thousand Four Hundred & Thirty Five). |
| ii) Tender Cost | The intending bidders should submit Tender cost of Rs.1770/- including GST. “ Tender Cost ” & “ EMD ” containing Banker’s cheque or Pay Order or Demand Draft from any of the Nationalized/ Scheduled Banks in India having branch in “ Kolkata ” drawn in favour of “ Kolkata Port Trust ” . |
| | Tender Fee and Earnest Money or NSIC /DIC Certificate, if applicable, are to be uploaded and must be physically submitted to the Chief Mechanical Engineer, Mechanical and Electrical Engineering Department, Kolkata Port Trust, 8, Garden Reach Road, Kolkata -700 043, before opening of tender document, failing which techno-commercial bid will not be opened. |

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| Date of NIT available to parties to download | 12.11.2018 at 14-00 hrs. |
| Date and time of site inspection & Pre-Bid meeting | 19.11.2018 at 12-00 hrs. |
| Date of starting of online submission of bid (Techno-Commercial Bid and price Bid) through CPP Portal | 21.11.2018 at 12-00 hrs. |
| Date of closing of online submission of Bid. | 10.12.2018 at 15-00 hrs. |
| Date and time of opening of Techno-Commercial Bid | 11.12.2018 at 15-00 hrs. |
| Date and time of opening of Price Bid | To be informed separately by letter or email or telephone. |

- Online tenders through NIC's CPP Portal for e-Procurement (GePNIC). Mode are invited by Kolkata Port Trust from GST registered domestic Contractors for executing the work.
- The tender document through NIC's CPP Portal for e-Procurement (GePNIC) is open from 12.11.2018 to 11.12.2018 and can be downloaded from the official website of KoPT and through NIC's CPP Portal for e-Procurement (GePNIC).
- The complete tender document can be downloaded from Kolkata Port Trust website: www.kolkataporttrust.gov.in [Tender→ Mechanical & Elect. Eng. Dept.] and NIC's CPP Portal for e-Procurement (GePNIC) and bidders are required to submit tender offer through NIC's CPP Portal for e-Procurement (GePNIC) on or before the due date and time of submission. The tenderer shall upload the scanned copy of the DD instruments towards the cost of EMD and bid documents set as proof of payment towards EMD and cost of Bid documents while submitting the tender electronically in the NIC's CPP Portal for e-Procurement (GePNIC).
- The tender offer shall have to be submitted by the Tenderer only through NIC's CPP Portal for e-procurement (GePNIC) mode as explained in the tender document.
- No physical tender is acceptable by Kolkata Dock System.
- Minutes of meeting /Corrigendum / addendum / clarifications, if any, shall be hoisted on the www.kolkataporttrust.gov.in. and <https://eprocure.gov.in/eprocure/app>.

List of Annexure

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Instructions to Tenderers

This is an e-procurement event of Kolkata Port Trust. The e-procurement service provider is NIC's CPP Portal for e-Procurement (GePNIC).

You are requested to read the terms & conditions of this tender before submitting your online tender. Tenderers who do not comply with the conditions with documentary proof (wherever required) will not qualify in the Tender for opening of price bid.

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| 1. | <p>Online tenders through NIC's CPP Portal for e-Procurement (GePNIC) mode are invited by Kolkata Port Trust from GST registered domestic Contractors for executing the work.</p> <p>The tender document through NIC's CPP Portal for e-Procurement (GePNIC) is open from 12.11.2018 (14:00 hrs) to 10.12.2018 (14:00 hrs) and can be downloaded from the official website of KoPT and through NIC's CPP Portal for e-Procurement (GePNIC).</p> <p>The complete tender document can be downloaded from Kolkata Port Trust website: www.kolkataporttrust.gov.in and NIC's CPP Portal for e-Procurement (GePNIC) and bidders are required to submit tender offer through NIC's CPP Portal for e-Procurement (GePNIC) on or before the due date and time of submission. The tenderer shall upload the scanned copy of the DD instruments towards the cost of EMD and bid documents set as proof of payment towards EMD and cost of Bid documents while submitting the tender electronically in the NIC's CPP Portal for e-Procurement (GePNIC).</p> <p>The tender offer shall have to be submitted by the Tenderer only through NIC's CPP Portal for e-procurement (GePNIC) mode as explained in the tender document.</p> |
| 2. | <p>The Techno-commercial Bid and the Price Bid shall have to be submitted online at https://eprocure.gov.in/eprocure/app</p> <p>(A). Part – I (Techno-Commercial bid): Would be opened electronically on specified date and time as given in the NIT. Bidder(s) can witness the opening of Techno-commercial Bid electronically.</p> <p>(B) Part – II (Price bid): Would be opened electronically of only those bidder(s) whose Part – I Techno-Commercial bid are acceptable by KoPT. Such bidder(s) will be intimated the date of opening of Part II (Price bid) through valid e-mail confirmed by them.</p> <p>The tenderers are advised to offer their best possible rates. There would generally be no negotiations. Bidders are requested to submit their most competitive prices while submitting the price bid.</p> |
| 3. | <p>All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.</p> |

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| 4. | <p>In case of any clarification, please contact KoPT (before the scheduled time of the e- tender). Contact person (KoPT):</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>1. Mr. Santanu Kr. Das Superintending Engineer (Elect)-I Mobile No. 9674720037 Email: santanudas@kolkataporttrust.gov.in</p> </div> <div style="width: 45%;"> <p>2. Mr. A.Sanyal. Executive Engineer (Electrical) Mobile No. 9674720093 asanyal@kolkataporttrust.gov.in</p> </div> </div> |
| 5. | <p>All notices /corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by KoPT. Hence, the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the stage of registration of vendor with NIC's CPP portal (i.e. Service Provider). Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).</p> |
| 6. | <p>E-tender cannot be accessed after the due date and time mentioned in NIT.</p> |
| 7. | <p>(e). MSEs registered with NSIC under Single Point Registration scheme/DIC are exempted from depositing Tender Fee and Earnest Money. But all the NSIC/DIC registered firms are not exempted from depositing Tender Fee and Earnest Money. Only those firms, having documents of such exemption for the entire tendered work (as per the Bill of Quantity) would be exempted. Documentary evidence must be uploaded for claim of such exemption, failing which their tender would be summarily be rejected.</p> <p>(f). The process involves Electronic Bidding for submission of Tender Document Fee and EMD, Techno- Commercial Bid as well as Price Bid.</p> <p>(g). The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.</p> <p>(h). All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as valid bid if it fulfills all the terms and conditions of the Tender Document.</p> <p>(i). It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.</p> <p>(j). KoPT reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.</p> <p>(k). No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms and conditions for the tender.</p> <p>(l). Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted in Indian Rupee Currency as per UOM indicated in the e-tender floor/tender document.</p> |

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| 8. | The e-tender shall be governed by the terms and conditions mentioned therein. |
| 9. | No deviation to the technical and commercial terms & conditions are allowed. |
| 10. | KoPT has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof. |
| 11. | The bidders <u>must upload</u> all the documents required as per Pre-qualification criteria and the documents enlisted under techno-commercial bid and Price-bid, failing which the tender shall lead to disqualification. Any other document uploaded which is not required as per the terms of the NIT shall not be considered. |
| 12. | The bid will be evaluated based on the filled-in technical and commercial formats uploaded. |
| 13. | The documents uploaded by bidder(s) will be scrutinized. In case any of the information furnished by the bidder is found to be false during scrutiny, EMD of defaulting bidder(s) will be forfeited. Punitive action including suspension and banning of business can also be taken against defaulting bidders. |
| 14 | Price bid must be filled-up in EXEL Sheet through CPP PORTAL (which is uploaded by KoPT). |
| 15 | EMD & Tender Fee should reach this office before opening of Tender document. |

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Terms and Conditions of Tender

Pre-qualification Criteria of the Bidders

The intending Tenderers shall satisfy the following conditions with supporting documents:

i) The firms must have average annual financial turnover during the last three years ending 31st March 2017, of the previous financial year of at least 30% of the estimated cost.

ii) The firms must have either of the following as experience of having successfully completed similar works during last seven years, ending on last day of month, previous to the one in which applications are invited:

a) Three similar completed works costing not less than 40% of the estimated value.

Or

b) Two similar completed works costing not less than 50% of the estimated value.

Or

c) One similar completed work costing not less than 80% of the estimated value.

Here “similar works” means “Supply, installation & commissioning of electrical installation work at office premises, residential complex, hospital building, factories, etc”.

Work experience as a subcontractor or supply contractor shall not be considered as requisite qualification. The Tenderer shall have to upload documents (certified copy), viz. order letter and proof of execution to establish his credentials.

OTHER INSTRUCTION:

1. Tender Fee and Earnest Money or NSIC /DIC Certificate, if applicable, are to be uploaded and must be physically submitted to the Chief Mechanical Engineer, Mechanical and Electrical Engineering Department, Kolkata Port Trust, 8, Garden Reach Road, Kolkata -700 043, failing which techno-commercial bid will not be opened. Details of which are as under -

- (a) Demand Draft/Pay Order/ Banker's Cheque from any Scheduled/ Nationalized Bank in original, for **Rs. 1770/-** (Rupees One Thousand Seven Hundred & Seventy only) as cost of Tender Document.
- (b) Demand Draft/Pay Order/ Banker's Cheque from any Scheduled/ Nationalized Bank in original, for **Rs 1,03,435/-** (Rupees One Lakh Three Thousand Four Hundred & Thirty Five only) as Earnest Money Deposit.
- (c) NSIC/DIC Certificate in case of Micro and Small Enterprises (MSEs) registered with NSIC (under single point Registration Scheme)/DIC having valid certificate.

2. In addition to above as mentioned in SI.No.1, following documents are to be **UPLOADED** :--
- (i) Last three years balance sheet and profit & loss account in support of Annual Financial turnover (i.e. 2014-15, 2015-16 and 2016-17), and the same should be audited as per relevant norms wherever required.
 - (ii) Self attested documentary evidence of successful completion of similar work as proof of fulfilling the Pre-qualification Criteria of the tender.
 - (iii) Copies of self attested valid GST Registration Certificate.
 - (iv) Copy of self attested ESI registration certificate, OR an affidavit before a first class judicial magistrate as per the format given in Annexure-G (in case the Tenderer is not covered under ESI Act or exempted from it). The tenderers, if not covered under ESI Act, shall, additionally, indemnify KoPT against all damages and accidents to his labourer in a non-judicial stamp paper as per the format given in Annexure-H. The contractors should declare and state in the averment in the Affidavit and in the indemnity bond that in case such declaration will be found wrong and false, they will be held responsible for all consequences in respect of compliance of The Employees State Insurance Act 1948.
 - (v) Certified copy of valid Trade License and Electrical Contractor Licence.
 - (vi) Copy of self attested PAN Card of the firm / company issued from Income Tax Department.
 - (vii) Statement to confirm the status of the Tenderer – whether a Partnership Firm, Company or Proprietorship Firm. If demanded by KoPT, the tenderer would be bound to furnish necessary documents in support of their statement in this regard.
 - (viii) Copy of valid Professional Tax clearance / Up-to-date Profession Tax Payment challans (if applicable) / else document in support of exemption.
 - (ix) Proof of possessing valid Employees' Provident Fund (EPF) Account/ PF Registration Certificate.
 - (x) A separate statement of the tenderer containing full name and office address of the Tenderer, names and designation of the officials of the Tenderer connected with the instant Tender, their land and mobile telephone nos., e-mail id and Fax No. etc. as per enclosed **Proforma (Form-D)**.
 - (xi) Declaration of the tenderer in the form of a COVERING LETTER with certain undertaking and also that they or their associates have not been banned or delisted by any Govt. or Quasi-Govt. agencies or PSUs in India as per enclosed Proforma.
 - (xii) Details of the firm as per 'Schedule-O' of the tender document.
 - (xiii) A declaration has to be furnished by the tenderer stating (undertaking) that the entire tender document, GCC and addenda has fully been read and understood (Annexure -I).

4. All the documents as mentioned here-in-before shall have to be UPLOADED failing which the related offer may be liable to be cancelled. The tenderer should clearly understand that no information/indication as to price should be entered in the page of "Bill of Quantities" or elsewhere in the Techno-commercial Bid. Indication of price anywhere in any manner in the Techno-commercial part of the tender would lead to rejection of the offer.
5. Please note that there is no provision to take-out the list of parties downloading the tender document from the website mentioned in NIT. As such bidders are requested to see the website once again before the due date of tender opening to ensure that they have not missed any CORRIGENDUM uploaded against the said tender after downloading the tender document. The responsibility of downloading the related CORRIGENDUM, if any, will be that of downloading parties.

Tenderers may note that non-submission of any of the aforesaid documents/non-fulfillment of any of the aforesaid criteria shall lead to disqualification of their offers. No alteration shall be made by the Tenderer in the tender and the tender must be in accordance with the specification. Non conformation to this instruction shall be treated as non responsive & hence may disqualify the tender.

6 Techno-commercial bids will be opened on the schedule date of opening of techno-commercial bid. Price Bids of only techno commercially qualified bidders shall be opened on a suitable date, to be intimated beforehand.

7. The Trustees reserve the right to accept or reject the tender without assigning any reason whatsoever.

8. The Trustees will not be responsible for any cost or expense incurred by the Tenderer in connection with preparation or submission of the tenders.

9. In case of unscheduled holiday, Strike/Bandh etc. on the scheduled date of Site Inspection, Pre-bid Meeting, submission of bids, opening of Techno-commercial or Price Bid, the same time (as per the schedule) on the next working day will be considered as scheduled time for the purpose of Site Inspection, Pre-bid meeting, submission of bids, opening of Techno-commercial or Price Bid, as the case may be. Here, Trustees' working day means Monday to Friday in between 9-30 hrs. to 17-30 hrs.

10. Should there be any doubt or ambiguity as to the meaning of any portion of the tender document or if any further information is required, the same shall be clarified/amended by KoPT in the Site Inspection and Pre-bid meeting. No excuse of ignorance in this regard shall be accepted at a later date after the Pre-bid meeting. In the event of making any important clarification or amendment of terms of the tender, pursuant to the discussion in the Pre-bid meeting, the same shall be immediately hosted in KoPT's website for information of all concerned and the same shall form a part of the Tender Document. Any offer having deviation from KoPT's terms and conditions shall render such offer unacceptable to KoPT. No alteration shall be made by the Tenderer in the tender document and the offer must be in accordance with the terms and conditions of the tender. The prospective tenderers may inspect the site prior to the date of Site Inspection and Pre-bid meeting in order to make themselves fully aware of the work, site and scope of work as mentioned in the Bill of Quantity as per tender. For attending the Pre-bid Meeting, the representatives of the tenderers should accompany proper authorizations letters from their respective organizations.

11. The rate quoted in the tender shall hold good and shall be binding on the tenderer notwithstanding any increase in the prices of the materials and labour or in the freights or levy or other charges whatsoever and the tenderers shall not be entitled to claim any increase over the rates quoted by them during the pendency of the contract.

12. **Validity of offer:** The quoted rates would be kept valid for **120 days** from the date of opening of the Techno-commercial Bid. If before expiry of this validity period, the Bidder amends his quoted rates or tender, making them unacceptable to the Trustees and / or withdraws his e-tender, the Earnest Money deposited shall to be forfeited.

13. The tenderers shall distinctly understand that they will be strictly required to conform to all the terms of the tender and the plea of custom prevailing will not in any case be accepted as an excuse on their part for infringing of any of the conditions and they shall refrain from sending revised or amended quotations, after the closing date and time of the tender.

14. Evaluation criteria:

(i) A fully priced bill of quantities duly totaled shall be submitted with the tender. A price shall be inserted against each item of the bill of quantities and these prices shall include all manner of labour, material plant tools and all other matters necessary for the execution of the contract in accordance with the General Conditions of Contract, specifications, drawings, if any, and bill of quantities.

(ii) If it is found on examination of a tender that there is a discrepancy between the total amount inserted in the bill of quantities and the amount arrived at by valuing the quantities set out therein with the rates and prices set against them, by the tenderer, calculation for the total amount will be made on the basis of Unit Rates multiplied by quantities. Evaluation of the tender will be done on the basis of the total price thus arrived including all charges excluding GST as applicable.

The tenderer must not keep any column/space blank in any item under BOQ; else the tender is liable for disqualification.

(iii) The price offer should be exclusive of GST and any statutory levies and or other charges levied by any central/state/local authorities. GST and any other extra charges/statutory levies will be paid extra at applicable rates at the time of supply of goods and services.

15. If excess work is required to be carried out in addition to the quantities stipulated in BOQ, the amount will be paid as per unit rate quoted in BOQ as per actual measurement. In case of extra work, the same will be paid as per rate of PWD schedule rate/ rate of reputed manufacturer/market rate with justification of rates as the case may be.

16. The contract document shall be drawn in English language only.

17. The contract shall be governed by all relevant Indian Acts as applicable only within the jurisdiction of High Court of Kolkata, West Bengal, India including the Acts like The Indian Contract Act, The Major Port Trusts Act, The Workmen's Compensation Act, The Minimum Wages Act, The Contract Labour (Regulation & Abolition) Act, The Dock Worker's Act, The Indian Arbitration & Conciliation Act, The Dock Safety Regulations, Act(s) or any other act, law, rule as may be applicable. Payment to the labourers to be made as per the minimum wage rate fixed by Chief Labour Commissioner (Central) and as per M.W.A. Govt. of W.B. whichever is higher and revision from time to time along with EPF /ESI and other statutory benefits, if applicable.

It will be the duty of the contractor to abide by the provisions of the Act, Ordinances, Rules, Regulations, Bye-laws and procedures as are lawfully necessary in the execution of the works. The contractor will be fully responsible for any delay / damages etc. and keep the Engineer indemnified against all penalties and liabilities of any kind of noncompliance or infringement of such Acts, Ordinances, Rules, Regulations, Bye-laws and procedures.

The aforesaid regulations shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a Breach of Contract. It will be obligatory on the part of Contractor to obtain necessary Labour Licence from the Competent Authority for deploying requisite Nos. of labours in the work and submit the Engineer-In-Charge prior to commencement of the work.

The contractor shall also be required to comply regarding 'Workmen Compensation Act, 1923 as amended by Amendment Act No. 65 of 1976' In addition to the above, the Personal Injuries (Compensation Insurance) Act, 1963 and any modifications thereof and rules made there under from time to time. The contractor shall take into account all the above said financial liabilities in his quoted rates and nothing extra, whatsoever, shall be payable to him on this account.

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Special Conditions of Contract

1. The Tenderer shall carefully examine the whole tender document and shall visit and inspect the site on his own, obtain all information, which may be necessary for the purpose of the tender/offer. The Tenderer is advised to acquaint himself with the job involved at the site, laws and bye-laws enforced by the Govt. and other statutory bodies. No excuse of ignorance as to site condition and local information will be accepted. All costs/charges/expenses that may be incurred by the Tenderer in connection with the preparation of his tender shall be borne by the Tenderer and KoPT accepts no liability in this regard.
2. Disclosure/indication of price in Techno-commercial part of the tender shall be liable to be disqualified.
3. Any quotation received for part supply or of doing a portion of the work with responsibility for carrying out remaining works by the Trustees, will not be considered.
5. No alteration shall be made by the Tenderer in the tender and the tender must be in accordance with the specification. Non conformation to this instruction shall be treated as non responsive & hence may disqualify the tender.
6. The contract shall be governed by the Indian Contract Act and all payments due to the Contractor under the Contract shall be made in India in Rupee Currency. No foreign exchange is payable on this contract.
7. The Contractor shall take adequate insurance cover for persons to be deployed for execution of this contract. The Contractor shall at his own expenses pay compensation for any injury, loss or reinstate and make good to the satisfaction of KoPT for loss or damage accrued to any property or rights of KoPT whatever, including KoPT's agents/ servants/ employees, or any third party arising out of or in any way in connection with the execution or purported execution of the contract and further the contractor shall indemnify KoPT against all claims enforceable against KoPT (or agents/servants/employees of KoPT) or which would be so enforceable against KoPT where KoPT is a private person, in respect of any such injury (including injury resulting to death), loss or damage to any person whomsoever or property including all claims which may arise under the Workmen's Compensation Act or otherwise.
8. Attention of the tenderer is drawn to clause no 3.4, 3.5, 3.6 of GCC regarding earnest money & security deposit and clause no.8 regarding delay/extension of time /LD / Termination of contract including GCC.
9. The tender shall remain valid for acceptance for a period of 120 days from the date of opening the Techno-commercial Bid. In the event of tenderer withdrawing their tender before the expiry of tender validity period of 120 days from the date of opening of the Techno-commercial Bid, the offer of such tenderer shall be cancelled and EMD deposited by them shall be forfeited. If tender process could not be finalized within 90 days, the EMD's to be revalidated accordingly.
10. Successful Tenderer shall be in all cases responsible for the execution of the work in accordance with the General Conditions of Contract. Specifications, Drawings if any, and the Bill of Quantities which the tenderer shall be deemed to have examined.

11. KoPT reserves the right to disqualify any offer, in case they are satisfied that any bribe/commission, gift or advantage has been given, promised or offered by or on behalf of any of the Tenderers to any officer, employee or representative of KoPT or any other person on his or their behalf in relation to the acceptance of this tender.

12. The Tenderer shall disclose the names of their Partners /Directors/ Members in the manner stipulated in this tender document. Any change in the composition of the same during subsequent stage of tender finalization as well as during the period of execution of the contract shall be immediately notified in writing to KoPT. In the event of any Tenderer failing to comply with the aforesaid requirement, the tender/ contract, if entered into, may be terminated.

13. At any time, prior to the last date of submission of Tenders, KoPT reserves the right to amend and modify the Tender Document. Such amendment shall be hoisted in CPP Portal as well as in KoPT's Portal and KoPT would in no way be responsible for any likely ignorance of any prospective Tenderer in this regard. Such amendment/ modification shall form part of the Tender and shall be binding upon all the Tenderers. KoPT may, at its discretion, alter any of the major dates like pre-bid meeting, last date of submission and date of opening of the Tender etc. to enable the Tenderer(s) to have reasonable time to submit their offer after taking into consideration such amendment / modification.

14. The Tenderer should note that the plea of custom prevailing will not in any case be admitted as an excuse on their part for infringing any of the conditions of the tender.

15. The Contract shall be governed by all the acts as listed under Clause No. 4.1 of the General Conditions of Contract and also by all other relevant Acts/Laws/ Regulations/Bye-laws/Statutory Requirements including Dock Safety Regulations as may be in vogue as well as any amendment thereof, if any, in executing the tender and during the pendency of the contract. It will be the sole responsibility of the Contractor to comply with the same.

16. While submitting tender, the conditions of tender, the general conditions of contract and specifications, drawings etc. shall be read in conjunction with the bill of quantities.

17. Completion time: 165 days from the date of placement of order letter.

18. The tenderer/s shall not rely merely on the descriptions given on the bill of quantities. The quantities shown on the bill of quantities are approximate only and the actual quantities will be intimated when formal order will be placed. If when preparing the tender documents, the tenderer feels that any essential item has been omitted from the bill of quantities the prices of which cannot be conveniently included under any other item, the tenderer shall request the Engineer to insert a suitable item at the time of Pre-bid meeting. Should the tenderer omit to mention the price of any item in the bill of quantities, the tender may be treated as cancelled.

19. The tenderer/s shall distinctly understand:-

- a. that they will be strictly required to conform to the General Conditions of Contract and Specification as contained in each of its clause;
- b. Non-acceptance/or non-compliance of any of the above terms and conditions may render the tenders liable to rejection.

20. **Warranty/Defect Liability Period:** The contractor shall make good at his own expenses of all defects, due to faulty design, materials and workmanship, which may develop under proper use during a period of 12 months from the date of commissioning / handing over of the work. Should any difference of opinion arise on any of the provisions of this clause, the decision of the Engineer shall be final and binding. In default, the Trustees will be at liberty to get the repairs done and reimbursed themselves so far as costs therefore are concerned out of the amount lying with them as security deposit so far as that is practicable. If the costs of such repairs exceeding the amount of security deposit, the Contractor shall pay the balance to the Trustees forthwith on demand. Where the Contractor has submitted bank guarantee in lieu of cash security money, the cost of such repairs will be payable to the Trustees forthwith on demand. With regard to Air Conditioner and CCTV surveillance system, the contractor has to submit the warranty certificate from the OEM /manufacturer.

21. **Safety:** The Contractor shall take adequate safety precautions for prevention of accidents at site. The Contractor shall ensure that his employees observe the statutory safety rules and regulations

22. **Entry Permit:** The Contractor shall be governed by the following provisions for interfacing safety custody and proper use of Dock Permits :

- a. **All** representatives and workers of the contractor shall possess the Dock Permit issued by Dock Permit Office at the recommendation of concerned officer/Engineer on monthly or daily basis, free of cost. A token charge of Rs. 7.00 per person per occasion will be levied for creation of new IDs in the permit system. A separate receipt indicating the details of the ID along with the amount charged will be issued which may be kept for future reference.
- b. **The** Contractor shall ensure that any Dock Permit issued to their workmen or representative by the Permit Office are not misused by unauthorized persons for entry into the protected dock area.
- c. **It** shall amount to breach of rules and regulations regarding entry into the prohibited area by the Contractor in case the Dock Permit issued at their request are found to be misused by any authority/person.
- d. The **Contractor** and their defaulting employees shall be liable for legal action against them for breach of rules regarding entry into the protected area.

23. **Permission from statutory bodies:** The Contractor shall make arrangement from his own cost for obtaining permission and relevant clearance from the statutory bodies such as Municipal Corporation, Electricity Authorities etc. on payment of necessary charges/fees etc. by the bidder.

24. **Drawings:** On completion of all work, the Contractor shall furnish three copies of all "As made" drawings to the Engineer without any cost.

25. **Testing and commissioning:** Before each test, the Contractor shall obtain permission from the Engineer and all tests shall be conducted in presence of duly authorized representative and the Electrical Inspector wherever it is necessary. Record of each test shall be prepared after the test and this record shall be signed by the Contractor's representative conducting the test. Copies of those records in quadruplicate shall be submitted to the Engineer. A certificate in quadruplicate shall be furnished by the Contractor countersigned by his certified Supervisor under whose direct supervision the installation has been carried out. The Testing & Commissioning and its related charges are to be borne by the Contractor at his own cost.

26. **Identification mark:** For identification of various equipment letter/figure writing of sizes varying from 12 mm. to 75 mm. with enamel paint of approved shade /standard ferules are to be carried out at the expenses of the contractor as per directive of Engineer.

27. The tenderer must produce evidence with his tender that he and his proposed sub-contractors have had experience and fully capable of carrying out work of this class and magnitude and by way of proof shall submit along with his tender under Schedule 'O' a list of important works of a similar nature successfully carried out by him giving the dates of commencement and completion of such works and full particulars of his business organization.

28. **Cleaning during execution and after completion :-**

Any damage done to the structures during execution of work should be made good by the contractor at his own cost. On completion of works, the contractor shall reinstate and make good at his own expense any property or land which might have been disturbed and/or damaged by his works. He should also clean the site as required during execution and fully clear the site after completion of all the works.

The contractor shall forward any usable material found during the course of construction at the work site or its vicinity to KoPT store/yard, dispose off the debris beyond the port area all at his own expenses by his own transport and labour and clean out all part of the work and leave everything clean and tidy to the entire satisfaction of the Engineer.

29. **Protection of existing service :**

The contractor must pay full attention to the fact that the existing service facilities for KoPT are not disturbed at any time due to storing of materials and rubbish and take every precaution to keep the entrance passage clear is the same are being used by the labourer. The contractor shall be held liable for all damage and inference to the existing service/structures caused by him in execution of works. Should any damage be done to the existing service/structures in general, the contractor shall make good the same and any further work considered necessary by the Engineer's representative without any delay otherwise the cost of such repairing shall be recovered from his running account bill for which Engineer's decision shall be final & binding.

30. **Forwarding of Materials**

All dismantled unserviceable materials are to be disposed off beyond the office compound and in conformity with the Municipal/corporation Rule at the contractor's own cost. The contractor shall have to arrange transport for forwarding the saleable/ unusable/ defective/ usable materials that may be found during the process of execution of the work to the Trustees sales yard or any other site/ Godown including labour, transportations, loading, unloading all complete as per the direction of the Engineer.

31. The Contractor shall arrange all necessary tools, tackles, equipment, measuring & testing equipment etc. required for the repair & maintenance work at no extra cost to Kolkata Port Trust.

32. The contractor shall start the work on "As-is-where-is" basis.

33. The Contractor shall arrange the services, if any, required from indigenous/ foreign companies at no extra cost to Kolkata Port Trust.

34. Kolkata Port Trust will provide general security of the entire working area. Kolkata Port Trust is covered by ISPS (International Ship and Port Facilities Security) code and the contractor shall have to arrange for further security of their stock etc., if considered necessary and related coverage at his cost in terms of ISPS code.

35. The stores/equipment/plant/machineries shall strictly conform to the tender specifications and shall be capable of satisfactorily performing the duties intended for in the specification.
36. Electricity will be provided free of cost from nearest available source for carrying out the works, if necessary. Water and Toilet facility, as available within the premises, shall be extended to the Contractor's men free of cost.
37. The contractor or his employees shall not use the premises allotted to him for any purpose other than for carrying out the work allotted as per the contract and shall not act in any manner as to cause any nuisance or annoyance to KoPT or the participants /visitors at the port
38. The tenderer/s shall submit manufacturers Test Certificates for all the bought-out items envisaged in the equipment.
39. The tenderer/s shall afford all facilities to the Engineer at their own arrangement for inspection and demonstration of the equipment, quoted for.
40. All equipment covered under this tender must be available from indigenous sources and the tenderer/s shall confirm that spares will be available freely at least for a period of 5 years from the date of commissioning. No foreign exchange will be made available.
41. The equipment shall be supplied and delivered at the specified site.
42. The Contractor shall supply, bound into suitable folder two sets of operating and maintenance & fault finding manual for use by the Engineer with three sets of complete general lay out, assembly drawings and illustrated spare parts catalogue for the stores/ plant/ equipment/ item.
43. The stores/equipment/plant/machineries shall strictly conform to the tender specifications and shall be capable of satisfactorily performing the duties intended for in the specification.
44. An agreement shall have to be executed at the expense of the contractor within 15 days from the date of issuance of **Order letter** by successful tenderer on a non-judicial stamp paper of at least Rs. 60/- as per format enclosed with the General Conditions of Contract. All correspondence between the contractor and KoPT and all documents to be submitted from the date of opening of tender till the submission of the Security Deposit should form part of the contract agreement.
45. For erection, if applicable, of the stores/ plant/ equipment/ machineries/ item, all connected work including grouting bolts, Base frame and Bed plate etc. shall be provided by tenderer. During erection all tools and tackles are to be provided by Tenderer. Tenderer should guard all equipments, etc. at site by his own men at his own cost. However, only space for keeping the materials for execution of the work may be provided by Kolkata Port Trust on free of cost basis.
The contract shall be drawn up in English language only.

46. The firm /contractor shall at all times, during the continuance of agreement, obey and observe all direction and instruction given by the Engineer or his authorized officials.
47. The contract may be terminated at one month's notice by KoPT if any one of the stipulated conditions agreed upon by the selected bidder is not met to the satisfaction of KoPT. Further, the contract shall stand terminated automatically after completion of the work.
48. The responsibility in respect of the antecedents / Credentials of the persons engaged by the contractor rest with the contractor.
49. All GSTN goods for which supply rate has to be quoted, the contractor shall buy such items from the manufacturer or first stage dealer or second stage dealer and obtain Invoice of such items a/c '**KOLKATA PORT TRUST**' for the 'subject work'. Payment of all such items will be made on production of proper documents. Contractor, however, will be paid for supply items at his quoted rate and not on the basis of actual invoice value of the manufacturer or first stage dealer or second stage dealer. Any purchase for supply items from other sources, not specified, will not be allowed for payment purpose.
50. The tenderer/s shall afford all facilities to the Engineer at their own arrangement for inspection and demonstration of the equipment, quoted for.
51. The tenderer shall along with the tender submit the detailed description of the equipment quoted for and enumerate the aspect of operation and maintenance facilities and shall enclose necessary literature.
52. The equipment shall be supplied and delivered at the specified site at your own cost.
53. All payments like refund of Earnest Money, Security Deposit and all bills of contractors' will be paid through ECS. For this purpose, following details are to be furnished by the tenderer:-
 - i). Name of the bank :-
 - ii). Name of the Branch with Code No. :-
 - iii). Bank account no. :-
 - iv). Type of account : - Saving/Current/Cash Credit
 - v) MICR No :-
 - vi) IFSC Code :-The account shall have to be with a bank within the ECS zone prescribed by the RBI.
54. The tenderer/s have to fill in the Technical Data. The successful tenderer shall have to supply materials and execute the work as per Technical Data offered by them.
55. All materials are to be supplied progressively as required at site subject to prior approval of Engineer or his representative.
56. During course of examination of techno-commercial Bid, the bidders if asked for shall furnish any or additional documents for the purpose of evaluation of his / their bids. The price bids i.e. part-II of those bidders who meet the qualifying criteria of the NIT shall be opened.

57. **Priority of Contract Documents**

The several documents forming the Contract are to be taken as mutually explanatory to one another, but in case of ambiguity or discrepancies, the same shall be explained and adjudicated by the Engineer of the Contract (EoC), who shall thereupon issue to the Contractor instructions thereon which will be final and binding on the Contractor. Unless otherwise provided in the Contract, if the stipulations in the various documents forming a part of the Contract are found to be in variation in any respect then, unless a different intention appears, the provision(s) of one will override others (but only to the extent these are at variance) in order of precedence as given in the list below i.e. a particular item in the list will take precedence over all those placed lower down the list:

The following documents of the Contract Agreement will be in the following sequence :-

- a. Letter of Intent (LoI) / Work Order
- b. Special Conditions of Contract
- c. Scope of work and Terms of Payment
- d. Bill of Quantities
- e. Instructions to the Tenderer
- f. General Conditions of Contract
- g. Any other document(s) forming part of the Contract.

58. **Custodian Certificate** : After delivery at site, the supplied materials are to be verified by KoPT Officials and the custodian certificate is to be issued by the Contractor in this regard, for consumption of such materials in the instant work.
59. **Termination of contract and Risk Purchase Clause** : Will be applicable as per clause No. 8 of KoPT's General Conditions of Contract.
60. **Special / Additional Security** may be arranged by the contractor at the site at no extra cost to KoPT over and above the General Security provided within KoPT premises by Port Security Authority.
61. In case of any dispute, question or difference either during the execution of the work or any other time as to any matter or thing connected with or arising out of this Contract, the decision of the Engineer, Kolkata Port Trust, thereon shall be final and binding upon all parties. If during the progress of the work it is found that contractor has executed any unsound or imperfect work or has supplied anything inferior in quality to that specified, the deficiencies shall be made good by the Contractor at his own expenses, within 7 days of his receiving the notice or otherwise within such time as may be reasonably necessary for making it good, proceed to alter or supply fresh materials upto the standard of the specifications
62. All other terms and conditions excepting those mentioned separately shall be governed by KoPT's General Condition of Contract.

63 **TERMS OF PAYMENT**

(i) Supply items :-

- a. 60% payment against supply and delivery of materials / equipment / machineries / items on production of proper purchase documents/challans at site together with required Test Certificates etc. from appropriate authorities including inspection certificate of KoPT's representative, as applicable and on submission of Custodian Certificate.
- b. 30% payment against installation and commissioning.
- c. 10% payment against testing and handing over of the entire work after completion of work as per NIT.

(ii) Installation and Commissioning:-

- a. 90% payment against installation and commissioning.
- b. 10% payment against testing and handing over of the entire work after completion work as per NIT.

If excess work is required to be carried out in addition to the quantities stipulated in BOQ, the amount will be paid as per unit rate quoted in BOQ as per actual measurement. **In case of extra work**, the same will be paid as per rate of PWD schedule rate/ rate of reputed manufacturer/market rate, as the case may be

Any defect and / or deficiency in the equipment supplied shall have to be made good by the contractor before any bill is passed for payment. Payment will be made subject to security deposit clause 3.4, 3.5 & 9 of GCC. Payment will be made on the basis of actual measurement.

73. Taxes & Duties: The rate quoted by the tenderer shall be inclusive of all charges excluding GST. GST will be paid extra at applicable rates at the time of supply of goods and services.

Relevant GST Clause:

- i. Supplier/Service Provider to confirm that the GST amount charged in Invoice is declared in its returns and payment of taxes is also made.
- ii. The supplier/service Provider agrees to comply with all applicable GST Laws, including GST acts, rules, regulations, procedures, circulars and interaction there under applicable in India from time to time and to ensure that such compliance is done within the time prescribed under such laws. Supplier/Service Provider should ensure accurate transaction details, as required by GST Laws are timely uploaded in GSTN. In case there is any mismatch between the uploaded in GSTN by supplier/service provider and details available with Kolkata Port Trust, then payment to supplier/service provider to the extent of GST relating to the invoice/s under mismatch may be retained from due payment till such time Kolkata Port Trust is not sure that accurate tax amount is finally reflected in the GSTN to KoPT's account and is finally available to the Kolkata Port Trust in terms of GST Laws and that the credit of GST taken by Kolkata Port Trust is not required to be reversed at a later date along with applicable interest.

- iii. Kolkata Port Trust has the right to recover mandatory loss including interest and penalty suffered by it due to any non-compliance of tax law by the supplier/service provider. Any loss of input tax credit to Kolkata Port Trust for the fault of supplier shall be recovered by Kolkata Port Trust by way of adjustment in consideration payable.
- iv. Supplementary invoices/debit note/credit note for price revision to enable Kolkata Port Trust to claim tax benefit on the same shall be issued by you for a particular year before September of the succeeding financial year.
- v. The purchase order/work order shall be void, if at any point of time you are found to be a blacklisted dealer as per GSTN rating system and further no payment shall be entertained.

64. DETAILED SCRUTINY OF E-TENDERERS:

Documents are to be uploaded (besides EMD & Tender cost) :

- (i) GST Registration certificate.
- ii) Valid Trade Licence and Electrical contractors license
- iii) Valid Professional Tax Clearance Certificate / Upto date tax payment challan(if applicable) / else document in support of exemption.
- iv) Proof of possession of valid Employees' Provident Fund (EPF) Account.
- v) Proof of being registered with Employees' State Insurance Corporation (ESIC) / Affidavit and Indemnity Bond.
- vi) Details of the firm as per Schedule-O (in Volume-I) of the tender document.
- vii) Credentials in the form of copies of Letters of Award of Works along with corresponding Completion Certificates from owners to justify that the intending bidder satisfies the earlier mentioned pre-qualification criteria.
- viii) Copies of balance sheet and Profit and Loss account / Trading account for the last 3 (three) financial years **(i.e. 2014 – 2015, 2015 – 2016, 2016-17)** and the same should be audited as per relevant norms wherever required.
- ix) Addendum / Corrigendum / Notice / Extension Notice issued and drawings (if any) duly signed by the Bidder under office seal.
- x) EMD & Cost of Tender documents or NSIC/DIC Registration certificate.
- xi) Certified copies of PAN Card.
- xii) Proforma (Form –D).
- xiii) Covering Letter.
- xiv) Statement to confirm the status of the Tenderer – whether a Partnership Firm, Company or Proprietorship Firm. If demanded by KoPT, the tenderer would be bound to furnish necessary documents in support of their statement in this regard.
- xvi) A declaration has to be furnished by the tenderer stating **(undertaking)** that the entire tender document, GCC and addenda has fully been read and understood (Annexure –I).

During techno-commercial evaluation, i.e. evaluation of Part-I of tender, an offer shall be considered non-responsive in case it –

- (i) is not accompanied by requisite earnest money, /NSIC or DIC Regn. certificate
- (ii) is not accompanied by requisite tender paper cost/NSIC or DIC Regn. Certificate
- (iii) validity of the offer is less than tender stipulation,
- (iv) It does not meet the qualification criteria as stipulated in the NIT.
- (v) The bidder submits conditional offer / impose own terms and conditions / does not accept tender conditions completely / offer or tender if submitted with any deviation from the tender terms & conditions.

- (vi) if the tender is conditional,
- (vii) if all the documents required as per NIT are not uploaded.

In addition to the above, a bidder may be disqualified if :-

- (a)** The bidder provides misleading or false information in the statements and documents submitted.
- (b)** Record of unsatisfactory performance during the last seven years, such as abandoning of work or rescinding of contract for which the reasons are attributable to the non-performance of the contractor or inordinate delays in completion or financial bankruptcy, etc.

The decision of Kolkata Port Trust in this regard shall be final and binding on the Bidder.

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KOPT

SCOPE OF WORK

The scope of work includes the following:

- 1) Supply, delivery, laying, Testing & Commissioning of **4C, 16sqmm, 1.1KV XLPE insulated Armored copper cable.**
- 2) Supply, delivery, laying, Testing & Commissioning of **4C and 1C, 16sqmm, 1.1KV Industrial Flexible cable.**
- 3) Supply, delivery, installation, Testing & Commissioning of a **LT Panel** at panel room
- 4) Supply, delivery, installation, Testing & Commissioning of **Distribution Boards and Sub-Distribution boards, pillar boxes.**
- 5) Design, Supply, delivery, installation, Testing & Commissioning of **High Mast Tower of 20 mtr High fitted with 12 Nos LED Luminaries each of 300 W**
- 6) Design, Supply, delivery, installation, Testing & Commissioning of **Street Light Pole of 9 mtr High fitted with LED Luminaries.**
- 7) Supply, delivery, fixing of LED tube lights, LED outdoor luminaries, LED street luminaries, LED High/Mid bay luminaries.
- 8) Supply, delivery and installation of ceiling fans along with supply delivery and installation of stepped electronic regulator.
- 9) Supply, delivery and installation of starter switch for 2 Tonne AC machine with DP MCB with plug top
- 10) Supply, delivery and installation of 3 pin 15 A flush type plug socket with 15A modular piano key type switch.
- 11) Distribution wiring for 15A plug points and starter switch
- 12) Point Wiring, Circuit Wiring.
- 13) Supply, delivery and installation of 2 T, 5 star, Split type inverter AC machine having Copper condenser.
- 14) Supply, Installation, Testing and Commissioning of IP based Digital Video Surveillance System (CCTV System) using Wireless Networks.
- 15) Design, supply, delivery and installation of Lightning arrester on the roof of the building
- 16) Copper Earthing arrangement for whole electrical systems

Any work, considered required by the contractor and not mentioned hereunder, for successful completion of the project, is to be included in the item of bill of Quantity, suitably which should be finalized in the pre bid meeting.

The work shall be carried out as per Indian Electricity Act, 2003, Indian Electricity Rules, 1956 with latest amendments and latest revised IS Code of Practice.

Including all appurtenant works as described and set forth in, Bill of Quantities, Special Conditions of contract, Technical Specification of works, and Specification of materials & Workmanship with all additional or varied works which may thereafter be required in Accordance with Clause 7 of General conditions of contract and as per direction of the Engineer-in-Charge.

The intending tenderer shall inspect the site of work in consultation with the Superintending Engineer (Electrical), Kolkata Port Trust and acquaint himself with the nature of Work before preparing his tender. His attention is drawn to the Conditions of Contract in this regard. No excuse on ignorance as to the site General Conditions will be entertained.

Unless otherwise specified, the work to be provided for by the contractor shall include but not be limited to the following:-

a) Provide all materials, supervision, services, scaffolding and temporary lighting as required for work purposes etc.

b) Prepare and submit for review and assessment to the Engineer working drawings showing how the work is actually going to be done as may be required by him.

c) The contractor shall carry out the work in phased manner as per availability of the site so that normal day to day activities are not affected for which no such extra payment will be entertained.

The work shall be carried out as per Indian Electricity Act, 2003, Central Electricity Authority (Measures relating to safety & electricity supply) Regulation, 2010 with latest revised IS code of Practice and relevant portion of National Building Code particularly with respect to fire safety and also code of practice for fire safety of buildings (general): Electrical Installations, IS: 1646: 1997 and code of practice for earthing IS 3043:1987 and Dock safety rule & regulation.

Danger Notice Plate (designed as per IS: 255) at the installation shall have to be affixed by the contractor permanently in a conspicuous position in accordance with Indian Electricity Rules, 1956 with latest amendments at Switch Room.

The **Electrical Layout Drawings, Single Line Diagram, Distribution Diagram, Circuit Drawings, Details drawing of LT Panels and Main Power & Lighting DB**, etc. should be prepared by the Successful Tenderer and the same should be submitted to the Engineer for necessary approval, in triplicate, before installation.

TECHNICAL SPECIFICATIONS

01.00 Cables :

4C, 16 sq. mm., 1.1 KV grade, Cross Linked Polyethylene (XLPE) Cable :

4C, 16 sqmm ,1.1KV, Flexible Copper Industrial Cable

1C,16 sqmm, 1.1KV, Flexible Copper Industrial Cable.

- The cables should be generally compliance with **IS 7098 (Part-1)** / 1988 or latest amendment if any and **IS 694 : 2010** or latest amendment if any with following specifications :
- Conductor : Stranded Copper comply to IS : 8130-1984 or latest amendment if any,
- Colour coded,
- Voltage Grade : 1.1KV,
- Insulation : XLPE ,
- Inner Sheathed : Extruded PVC,
- Armour : Galvanized Steel Strips,
- Outer Sheathed : Extruded PVC,

± 5% variation will be allowed as per practice.

It shall be ensured that before dispatch, both ends of the cables are properly sealed to prevent ingress of moisture in the insulation. Direction of arrow must be marked on the cable drum.

Laying of Cables

Before laying of Power Cables, Cable Routes should be checked properly to avoid interference with the existing cables, structures, drains, pipings, etc. as far as possible and minor adjustments to be done to suit the field conditions, wherever deemed necessary, without any extra cost.

i) Cable Routes should be carefully measured and the contractor shall ascertain the exact requirement of cable for a particular feeder, avoiding interference with existing cables, structure, foundation, pipelines, etc. Sufficient lengths are to be kept for the final connections of the cables to the terminal of the equipment. Various cable lengths cut off from the Cable Reels should be carefully selected to prevent undue wastage of cables. Continuous length of cables in each drum should be ascertained considering no straight through joints takes place.

Cables are to be laid in the existing cable trench or on the wall or in the following manner:

Directly buried cables should be laid in underground Cable Trenches to be excavated by the Contractor. Cable shall be laid generally in accordance with IS:-1255-1983. The average depth of trench for laying LT cable shall be as below:-

i) Directly on ground - 0.75 m.

ii) At road crossing - 1.00 m.

iii) At railway line (measured from the bottom slipper to the top of the pipe) - 1.00 m.

The trenches shall be excavated in reasonably straight line, and where there is a change in direction suitable curvature shall be provided, with 12D radius where D is the diameter of the cable. Where gradients and changes in depth are unavoidable, this shall be gradual, except where otherwise directed by the Engineer. The cable shall be laid on a cushion of sand, protected with bricks placed on both sides (along the length of the cable) and top (across the length of the cable). After laying of the cable the duct shall have to be filled up by sand. Where cables run in parallel, separate ducts as stated shall have to be provided. G.I. pipe shall have to be used where cable pass through walls, roads, drains, culverts, railway line etc.

GI pipe also shall be used if depth of cable trench is less than 750mm and further excavation is not possible due to obstruction of existing material, which will be paid in actual. For one run of cable one GI pipe is to be considered. In other word two or more run of cable will not pass through one pipe.

The cable trench shall be filled back with riddled soil obtained from excavation. This shall be done in layer and compacted. Cable route marker shall have to be provided at a maximum distance of 50 m. The cables should be neatly arranged in the Trench / Trays / Pipes in such a manner so that criss-crossing is avoided and final take off to the equipment / switchgear is facilitated.

Cable should be laid in existing Pipes also. The concrete Cable Trenches with removable covers / Chequered plate will be provided by KoPT inside Sub-station . Cables should be laid in tiers in these trenches as per directive of the Engineers. Concrete cable trenches should be filled with sand where required to avoid accumulation of hazardous gasses.

When cables pass through foundation walls, or other underground structures, if necessary, ducts or opening shall have to be provided, by the contractor. However, shall it become necessary to cut holes in the existing foundations or structures, the contractor should obtain approval from Engineer, before cutting is done. Cutting, if necessary and mending good of any cut portion should be done by contractor at his cost and risk.

Cables should be handled carefully during installation to prevent mechanical injury to the cables. Ends of cables leaving trenches should be coiled and provided with a protective pipe or cover, until such times, the final terminations to the equipment are completed.

After re-filling the trench with soil, rammed and levelled, **Insulation Test** of the cable should be carried out in presence of the Engineer. Any cable, which is found defective, should be replaced before the next group of cables is laid.

All cables will be identified close to their termination points by Cable Number / Equipment Number, which will be punched on Aluminium Straps (approx. 2 mm. thick) securely fastened to the cable and wrapped around it. Type and size of the cable also to be punched on the Aluminium Straps.

In unpaved areas, Cable Trenches should be identified by means of Cable Route Markers. These markers should be placed at location of changes in the direction of cables and at intervals of not more than 30 mtrs. on fixed structure. All temporary ends of cables must be protected against dirt and moisture to prevent damage to the insulation. For this purpose, ends of the cables should be covered with PVC insulating tape.

Before energizing, the insulation resistance of every cable shall have to be measured

TERMINATION OF POWER CABLES :

XLPE LT Cables 1.1 KV Grade shall be terminated at the equipment by means of compression type Nickel plated Brass Cable Glands.

All cable entries should be through bottom only (Top entry terminations may be done only after getting approval of the Engineer). The cables should be entered through Glands inside the electrical equipments.

Power Cables, wherever colour coding is not available, should be identified with **Red, Yellow & Blue PVC tapes** for the purpose of identification.

Cable Leads should be terminated at the equipment terminals, by means of crimped type solderless Aluminium connector. Crimping should be done by hand crimping / hydraulically operated tool and conducting jelly should be applied on the conductor. Insulation of the leads should be removed immediately before the crimping. Conductor surface should be cleaned and should not be left opened.

This scope includes supply of all materials including Complete Termination Kits with Lugs and all accessories

2. INDOOR TYPE LT PANEL

The **LT Panel** should be complete in all respect and equipped with all necessary accessories. The spares / attachments, which are meant necessary for the smooth functioning of the equipment and specially, are not mentioned here shall be assumed to be included in the scope of supply.

The LT Panel shall comprise of following accessories –

- (i) 1 nos. 400A, 50KA, FPMCCB as Incomer,
- (ii) 3 nos. 200A, 35KA, FPMCCB as Outgoing,
- (iii) 5 nos. 100 A, 35KA, FPMCCB as Outgoing
- (iv) 2 Nos. 40A, 35KA, FPMCCB as Outgoing
- (v) 4 nos. totally enclosed copper bar as Phase & Neutral bus bars and 1 no. copper bar as earth bus bar with suitable size,
- (vi) **Digital Display type Ammeter with Selector Switch** (for each ACBs).
- (vii) **Digital Display type Voltmeter with Selector Switch** [for Incomer ACBs],
- (viii) **Static KWH Meter & Maximum Demand Meter** (for Incomer ACBs),
- (ix) **Necessary Indication Lamps** for Incomers, Outgoing Feeders,
- (x) Any other equipments considered necessary to make the Panel complete in all respect.

Compact modular designed LT indoor type Panel with IP-54 protection fabricated from not less than 2.5mm thick mild steel sheet over suitable size of angle iron frame for base channel with suitable size of stiffener for vertical & horizontal shall have to be provided. Panel shall have front & rear access with protective devices removal from front and **size & design of the same to be approved by Engineer** or his representative.

The Panel should be painted with Powder Coated superior quality paint after degreasing & rust free before phosphate treatment. Gland plate should be punched for bottom entry of cable.

Distribution Boards and Sub Distribution Boards

The DBs and Sub DBs should be factory built /fabricated TPN/SPN distribution boards of sheet steel, phosphatised, powder painted complete with bus bars, neutral links, blanking plates etc. conforming to IS norm. The MCCBs should be adjustable thermal and fixed magnetic setting type.

Installation

The DBs and Sub DBs are to be installed on wall by suitable iron leg/flat iron frame/angle iron frame /flushed on wall as per site requirement and are to be double earthed adequately.

The DBs and Sub DBs are to be provided in accordance to the specification mentioned in BOQ.

Feeder Pillar Box

The Feeder Pillar Box shall comprise of following accessories –

- (i) 01 nos. 100A, 4 Pole FP MCCB of 25 KA,
- (ii) 03 nos. 63A , 25KA, FP MCB as outgoing unit,
- (iii) 05 nos. Copper bars as Phase, Neutral & earth bus bars with suitable size.

Feeder Pillar Boxes will be made of MS sheet with opening on both sides and double door arrangement on front opening side having IP-66 protection fabricated from 3.15mm thick sheet steel and of size approved by Engineer . The box shall be painted with epoxy painting on outside surface and two coats of synthetic enamel paint of approved colour over one coat of red lead paint on inside surface (in accordance with IS 13032, IS 8623) of the MS box complete with railway type locking arrangement. Gland plate should be punched for entry of XLPE cable

INSTALLATION of Feeder Pillar Box

The Feeder Pillar boxes shall be installed on masonry platform of suitable height to be made by the contractor and should be grouted on the platform by suitable nuts & bolts after grouting the bolts in the masonry trench foundation . The Panels shall be checked for correct vertical position. All the wiring connections should also be checked with drawings and tightened. All openings should be sealed to avoid ingress of any foreign particles inside the panels. All the wiring, Bus Bars, other live parts, Incoming & Outgoing Cables should be checked with Megger. Supply of all materials including hardware materials, as required, is under the scope of the Contractor. The boxes shall be double earthed through earthing system

HIGH MAST:

.01 Structure:

The High Mast shall be of 20 Mtrs. High, continuously tapered, polygonal cross section, at least 20 sided, presenting a good and pleasing appearance, based on the above referred applicable standards. The structure shall be suitable for wind loading as per IS 875 (Part 3), 1987. **Dimensions of the High Mast shall be as per the following TECHNICAL DATA SHEET FOR 20 MTRS HIGH MAST WITH INTEGRAL POWER TOOL. Thickness of 2 (two) sections of High Mast made, should be mentioned in the offer clearly.**

The Mast shall be fabricated from special steel plates, conforming to BS-EN 10025, S-355 or equivalent, cut and folded to form a polygonal section as stated above and shall be telescopically jointed giving a continuous tapered profile with good visual appearance and welded. The welding shall be in accordance with BS.5135/AWS.

The Mast shall be delivered in sections of effective length of 10 meters at site. Thus 20 Mtrs. High Mast shall be supplied in two sections & each section shall be fabricated out of individual plate duly folded and welded. At site, the sections shall be joined together by slip-stressed-fit method. No site welding or bolted joint shall be done on the Mast. The minimum over lap distance shall be 1.5 times the diameter at penetration. The concerned design calculations shall be submitted for verification. The Mast shall be provided with fully penetrated flange, which shall be free from any lamination or incursion. The welded connection of the base flange shall be fully developed to the strength the bolt-holes to ensure elimination of helical stress concentration. For the environmental protection of the mast, the entire fabricated mast shall be hot dip galvanized, internally and externally, having a uniform thickness as per IS: 4759 – 1984/BS. ISO 1461. The galvanization is to be done by single dipping method only for better adhesion and life.

.02 Life of High Mast:

The High Mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed as per IS 875 (three second gust) and shall be measured at a height of 10 Metres above ground level.

.03 Lantern Carriage:

Fabrication:

A fabricated Lantern Carriage shall be provided for fixing and holding of 12 no of symmetrical arms each holding 300W LED Luminaries along with Control Gear Boxes, 1 (one) number single dome aviation obstruction lights with Neon Spiral lamp and 2 (two) Nos. Cast Aluminium Junction Boxes radially and symmetrically. The Lantern Carriage shall be of special design and shall be of ring type steel tubular construction, the tubes acting as conduits for wires, with holes fully protected by grommets. The Lantern Carriage shall be so designed and fabricated to hold the above mentioned light fittings, Control Gear Boxes & Junction Boxes and also have a perfect self balance. It shall have proper arrangement to prevent swing and to prevent damage to Mast surface or other installed parts, during lowering/raising operation of the carriage.

The Lantern Carriage shall be fabricated in two halves and joined by bolted flanges with stainless steel bolts and stainless steel nuts to enable easy installation or removal from the erected High Mast. The inner lining of the carriage shall be provided with protective PVC arrangement, so that no damage is caused to the surface of the mast during the raising and lowering operation of the carriage. The entire Lantern Carriage shall be hot dip galvanized after fabrication. All hardware used shall have necessary corrosion protection provision.

Junction Box:

Weather proof Junction Boxes, made of Cast Aluminium shall be provided on the Carriage Assembly as required, from which the inter-connections to the above mentioned Aviation Obstruction Luminaries, Flood Light Fittings and associated Control Gear Boxes fixed on the carriage, shall be made. Inter connections shall have to be done by 1100 Volts grade PVC insulated & PVC sheathed 3 core 2.5 sq. mm. copper conductor flexible cables conforming to IS: 694. Bottom entry of Cable/ Wire with the Luminaries/Control Gear Boxes/Junction Boxes are preferred.

Raising and lowering mechanism:

For the installation and maintenance of the luminaries and lamps, it shall be necessary to lower and raise the Lantern Carriage Assembly. To enable this, a suitable Winch Arrangement shall be provided, with the winch fixed at the base of the mast and the specially designed head frame assembly at the top.

Winch:

The winch shall be of completely self sustaining type, without the need for brake shoe, springs or clutches. Each driving spindle of the winch shall be positively locked when not in use, by gravity activated PAWLS. Individual drum also should be operated for fine adjustment of lantern carriage. The capacity, operating speed, safe working load, recommended lubrication and serial number of the winch shall be clearly marked on each winch.

The gear ratio of the winch and the minimum working load shall be indicated by the tenderer. The winch shall be self-lubricating type by means of an oil bath and the oil shall be readily available grades of reputed producers.

The winch drums shall be grooved to ensure perfect seat for stable and tidy rope lay, with no chances of rope slippage. The rope termination in the winch shall be such that distortion or twisting is eliminated and at least 5 to 6 turns of rope remains on the drum even when the lantern carriage is fully lowered and rested on the rest pads. **It should be possible to operate the winch**

manually by a suitable handle and by an integral power tool. Operation of the winch with manual handle shall be independent of the power tool. Winches with manual operation through the power tool shaft shall not be accepted. **Individual drum operation of the winch shall be possible. A double drum winch shall have two drums and two worm gears independent in operation for increased safety.** It shall be possible to remove the double drum after dismantling, through the door opening provided at the base of the mast. Also, a winch Gear Box for simultaneous and reversible operation of the double drum winch shall be provided as part of the contract.

Sufficient distance is to be maintained between the switch gears and the winch assembly inside the lower part of the High Mast to provide easy maintenance facility.

Manufacturer's Test Certificate for the winch will have to be provided. A test certificate shall be furnished by the Contractor for each winch in support of the maximum load operated by the winch.

Head Frame:

The head frame which is to be designed as a capping unit of the mast, shall be of welded steel construction, galvanized both internally and externally after fabrication. The top pulleys shall be of appropriate diameter, large enough to accommodate the stainless steel wire ropes and the multi-core electric cable. The pulley block shall be made of non-corrodable material, and shall be of die cast Aluminium Alloy (LM-6). **Pulley made of synthetic materials such as Plastic or PVC are not acceptable.** Self-lubricating bearings and stainless steel shaft shall be provided to facilitate smooth and maintenance free operation for a long period. The pulley assembly shall be fully protected by a canopy galvanized internally and externally.

Close fitting guides and sleeves shall be provided to ensure that the ropes and cables do not get dislodged from their respective positions in the grooves. The head frame shall be provided with guides and stops with PVC buffer for docking the lantern carriage.

Stainless Steel Wire Ropes:

The suspension system shall essentially be **without any intermediate joint and shall consist of only non-corrodable stainless steel of AISI 316.**

The Stainless steel wire ropes shall be of 7/19 construction, the **central core being of the same material.** The overall diameter of the rope shall not be less than 6 mm. The breaking load of each rope shall not be less than 2400 kg. giving a factor of safety of over 5 for the system at full load as per the TR – 7 Technical Report Number 7 High Masts for Lighting and CCTV, 2000 Edition of The Institution of Lighting Engineers as mentioned above. The end constructions of ropes to the winch drum shall be fitted with talurit.

The thimbles shall be secured on ropes by compression splices. **Two continuous lengths of stainless steel wire ropes shall be used in the system and no intermediate joints are acceptable in view of the required safety. No intermediate joints/terminations, either bolted or else, shall be provided on the wire ropes between winch and lantern carriage.**

Manufacturer's Test Certificate for the stainless steel wire rope will have to be provided

Electrical System, Cable and Cable Connections:

A suitable terminal box shall be provided as part of the contract at the base compartment of the High Mast for terminating the incoming cable (3.5 cores x 35 sq. mm. XLPE insulated cable of 1100 Volts grade) through a connector. The electrical connections from the bottom to the top of the High Mast shall be **through 2 (two) Nos. separate circuits** made by 2 (two) Nos. special trailing cables. Each circuit will have to be protected by 1 (one) No. 40 Amps TPN MCB (breaking capacity not less than 10 KA). Incoming of the above mentioned TPN MCB will be connected with the above mentioned connector (where the incoming cable is being terminated) by copper flexible cable of proper size.

The cable shall be of 1100 Volts grade, EPR insulated and PCP sheathed to get flexibility and endurance as per IS:9968 (Part-1)-1988. Size of the cable shall be minimum 5 core x 4.0 sq. mm. stranded Copper conductor. The cable shall be of reputed make.

At the top, there shall be weather proof Junction Boxes, as mentioned above to terminate the trailing cable. Connections from the top Junction Boxes to the individual luminary and Control Gear Box shall be made by using 1100 Volts grade PVC insulated 3 core 2.5 sq. mm. copper conductor flexible cables of ISI marked.

The system shall have in-built facilities for testing the luminaries while in lowered position.

Suitable provision should also be made at the base compartment of the High Mast to facilitate the operation of internally mounted, electrically operated power tool for raising and lowering of the lantern carriage assembly. The trailing cables shall be terminated by means of specially designed, metal clad, multi-pin plug and industrial type socket provided in the base compartment to enable easy disconnection when required

Power Tool for the Winch:

A suitable, high-powered, electrically driven, **internally mounted power tool**, with manual over ride shall be supplied for the raising and lowering of the lantern carriage for maintenance purposes. The speed of the power tool shall be to suit the system. The power tool shall be single speed, provided with a motor of the required rating.

The power tool shall be supplied complete with a suitable control arrangement so that the operation of the mast can be done at a safe distance. **The capacity and speed of the electric motor used in the power tool shall be suitable for lifting of the design load installed on the lantern carriage.**

The power tool mounting shall be so designed that it shall be not only self supporting but shall also align the power tool perfectly with respect to the winch spindle during the operations. Also, a handle for the manual operation of the winches in case of problems with the electrically operated tool, shall be provided. There shall be a separate torque-limiting device to protect the wire ropes from over stretching. It shall be mechanical with suitable load adjusting device. The torque limiter shall trip the load when it exceeds the adjusted limits. There shall be suitable provision for warning the operator once the load is stripped off. **The torque limiter is a requirement as per the relevant standards in view of the overall safety of the system. Each mast shall have its own power tool motor**

Lightning Finial (Lightning Arrestor)

One number heavy duty hot dip galvanized lighting finial shall be provided for each mast. The lightning finial shall be minimum 1.2 Metre in length and shall be provided at the centre of the Head Frame. It shall be bolted solidly with the head frame to get a direct conducting path to the earth through the High Mast structure. **The lightning finial shall not be provided on the lantern carriage under any circumstances in view of safety of the system.**

Foundation for High Mast:

It is the responsibility of the contractor to provide suitable RCC foundation for the High Mast. The general soil bearing capacity at site is 10 Tonnes per Sq. Metre at a depth of 2.5 Metre from the existing ground level. If slushy materials are found, the contractor should take suitable strengthening measure as mentioned in the Scope of Work.

TECHNICAL DATA SHEET FOR 20 MTRS. HIGH MAST WITH INTEGRAL POWER TOOL

| | | |
|--|--|---|
| | HIGH MAST SYSTEM | |
| | Height of High Mast. | : 20 Metres |
| | No. of Sections. | : 2 (two) Sections. |
| | Make of High Mast | : To be mentioned by the bidder. |
| | Material of Construction. | : BSEN 10025, S-355 |
| | Minimum thickness of Sections. | : To be mentioned by the bidder. |
| | Length of individual Section. | : To be mentioned by the bidder. However, effective length of each section should be 10 meters. |
| | Cross Section of High Mast. | : 20 sided polygon (minimum). |
| | Minimum Bottom diameter of Bottom Section and Minimum Top diameter of Top Section (A/F). | : Minimum Bottom diameter of Bottom Section: 400 mm. Minimum Top diameter of Top Section: 150 mm. |
| | Type of joints. | : Slip-stress-fit method at site. |
| | Length of overlap. | : To be mentioned by the bidder. However, minimum over lap distance shall be 1.5 times the diameter at penetration. |
| | Metal protection treatment for High Mast Sections. | : Hot-Dip Galvanized. |
| | Method of Hot dipping. | : Single Dipping. |
| | Average thickness of galvanization. | : As per IS: 4759 – 1984/BS. ISO 1461 |
| | Size of opening door at base. | : To be mentioned by the bidder |
| | Type of locking arrangement. | : Close fitting, vermin proof, vandal resistant, weatherproof door provided with a heavy-duty double internal lock with special paddle key. |
| | Details of slack board inside the base compartment. | : PVC Board. |
| | Provision for incoming cable termination. | : Connector. |
| | Diameter of base plate | : To be mentioned by the bidder. |
| | Thickness of base plate. | : To be mentioned by the bidder. However, thickness should not be less than 30 mm. |
| | Size of Anchor Plate and thickness. | : To be mentioned by the bidder. However, thickness should not be less than 8 mm. |
| | Details of Template. | : To be mentioned by the bidder. However, thickness should not be less than 2 mm. |

| | | | |
|----|---|---|--|
| | Weight of 20 Metres High Mast (without accessories). | : | To be mentioned by the bidder. |
| | Lightning Protection Finial. | : | 1 (one) No. Heavy duty hot dip galvanized lighting finial of minimum 1.2 Meter in length. |
| 2. | DYNAMIC LOADING AS PREVAILING AT SITE | | |
| | Maximum Wind Speed. | : | 55 Meter / Second. |
| | Maximum Gust Speed time. | : | 3 (three) Seconds. |
| | Height above ground level these two factors are measured. | : | 10 (ten) Meter. |
| | Factor of safety for Wind Load. | : | 1.25 |
| | Factor of safety for other Load. | : | 1.15 |
| 3. | FOUNDATION DETAILS | | |
| | Type of foundation. | : | Open Raft Shallow footing. |
| | Size of foundation. | : | To be designed by the tenderer. |
| | Soil bearing capacity at site. | : | 7.5 Tonnes per Sq. Meter at a depth of 2.0 Meter from the existing ground level |
| | Design Safety Factor. | : | As per IS: 456 |
| | Considered Wind Pressure (Kg/Mt ²) | : | As per IS: 875 – 1987 |
| | Depth of foundation. | : | To be designed by the tenderer. |
| | No. of Foundation Bolts. | : | 8-12 Nos. |
| | PCD of Foundation Bolts. | : | To be mentioned by the bidder. |
| | Type of Foundation Bolts. | : | High Tensile Studs (6.8 grade). |
| | Length of Foundation Bolt | : | To be mentioned by the bidder. However, length should not be less than 850 mm. |
| | Foundation Bolt diameter. | : | 30 mm (minimum). |
| 4. | LANTERN CARRIAGE | | |
| | Material of Construction. | : | Ring type steel tubular construction. However, further details to be provided by the bidder. |
| | Minimum Diameter of Lantern Carriage Ring. | : | To be mentioned by the bidder. |
| | Construction. | : | Construction having not less than 12 Arms. |
| | No. of joints. | : | 2 (two). |
| | Type of Joints. | : | Joined by bolted flanges with stainless steel bolts and stainless steel nuts. |
| | Buffer between Lantern Carriage and Mast Section. | : | PVC sleeve on Lantern Carriage. |
| | Load carrying capacity. | : | Minimum 750 Kgs. |
| | Total Weight of Lantern Carriage Assembly with fittings. | : | To be mentioned by the bidder. |

| | | | |
|----|--|---|--|
| | Number of fittings/ Type of fittings & fixtures. | : | 12 Nos. 300W LED Luminaries along with Control Gear Boxes, single dome aviation obstruction lights with Neon Spiral lamp and 2 (two) Nos. Cast Aluminium Junction Boxes to be fitted radially and symmetrically. |
| 5. | HEAD FRAME | | |
| | Pulley Quantity | : | To be mentioned by the bidder. However, the quantity should not be less than 4 (four) Nos. |
| | Pulley Diameter | : | To be mentioned by the bidder. |
| | Pulley material. | : | Die cast Aluminium Alloy (LM-6). |
| | Shaft of Pulley | : | Stainless Steel. |
| | Bearing of Pulley. | : | Maintenance Free self lubricating type Bush Bearing. |
| | Head Frame Cover | : | MS galvanized, both internally and externally. |
| | Bolts and Accessories | : | Stainless Steel. |
| 6. | RISING CABLE OF HIGH MAST | | |
| | Type of Cable. | : | The cable shall be of 1100 Volts grade, EPR insulated and PCP sheathed to get flexibility and endurance as per IS:9968 (Part-1)-1988. Size of the cable shall be minimum 5 core x 4.0 sq. mm. stranded Copper conductor. |
| | Material of core of cable. | : | Stranded Copper Conductor. |
| | Minimum Conductor size. | : | 4.0 Sq. mm. |
| | Minimum No. of cores. | : | 5 (five). |
| | No. of Circuits. | : | 2 (two). |
| 7. | WINCH | | |
| | Make of Winch. | : | To be mentioned by the bidder. |
| | No. of Drums per Winch. | : | Double Drum Double Gear type. |
| | Gear Ratio. | : | To be mentioned by the bidder. |
| | Capacity. | : | 750 Kgs. |
| | Method of operation. | : | Both Electrical and Mechanical. |
| | Lubrication arrangement. | : | Permanent Oil Bath. |
| | Type of lubricant. | : | To be mentioned by the bidder. |
| 8. | STAINLESS STEEL WIRE ROPE | | |
| | Make. | : | To be mentioned by the bidder. |
| | Grade. | : | AISI 316 |
| | No. of Ropes. | : | Two continuous ropes. |
| | Construction. | : | 7/19 |
| | Central Core Material. | : | Stainless steel core. |
| | Minimum diameter in millimeter. | : | 6 (six). |
| | Thimbles and Talurit. | : | SS Thimble. |
| | Minimum Breaking load capacity. | : | 2400 Kgs. x 2 |
| | Factor of safety. | : | More than 5 for system at full load. |
| 9. | POWER TOOL | | |
| | Model. | : | Integral. |
| | Input supply. | : | 3 Phase, 415 Volts, 50 Hz AC System. |
| | Wattage/HP. | : | To be mentioned by the bidder. |
| | No. of speed. | : | Single speed. |

| | | | |
|----|---------------------------|---|---------------|
| 10 | TORQUE LIMITER | | |
| | Lifting capacity. | : | Upto 750 Kgs. |
| | Adjustable/Non-adjustable | : | Adjustable. |
| | Tripping device. | : | Mechanical. |

Installation of High Mast

The contractor shall make necessary arrangements for installation of the High Mast by using suitable equipments. Derrick or crane required for the purpose shall be arranged by the contractor at his risk, cost and arrangement. Rate to be quoted accordingly. The contractor shall ensure that illumination level of 30Lux is maintained in an area of 50 m radius.

Feeder Pillar Box for High Mast Lighting Tower :-

The overall tentative dimension of the Feeder Pillar Box for High mast tower will be 1000 (H) x 550 (L) x 350 (D) [approx.] with the following components:

- i) 63 Amps TPN MCB – 1 Nos.
- ii) 45 Amps TP Contactor – 1 No.
- iii) 9 Amps. TP Contactor (AC - 3 duty) – 2 Nos.
- iv) Double dial Time Switch (with rechargeable battery backup) for the automatic control of luminaries– 1 No.
- v) Bypass Switch – 1 No.
- vi) 6A Control MCB - 1 No.
- vii) Glass Fuse of appropriate capacity - 1 No.
- viii) Toggle switch - 1 No.
- ix) Push Button - 2 Nos.

The Feeder Pillar Boxes shall be suitable for IP – 55 Protection.

2 Nos. full threaded GI Bolts (M 10 x 40 mm) along with G.I. Nuts & Washers are to be provided on two sides of the Feeder Pillar Box as Earth Stud.

Supply, delivery and installation of street light poles

Item details

The Street light MS poles shall be swaged ones made of seamless or welded tubes of suitable length, swaged and joined together having Cast Iron loop-in-loop-out box in sheet steel lockable enclosure at suitable height and with base plate and cap fitted at suitable height. No circumferential joints shall be allowed in the individual tube lengths. There shall be one longitudinal weld seam only. The pole is to be painted with 2 coats of anti-corrosive enamel paint over primer coating. The pole will be of 9meter high and of type 410 SP 30 having double arm bracket. The length of the bracket shall be 1500 mm suitable for fixing 2 nos integral type metal halide light fittings at two different directions. All the poles shall be manufactured and supplied as per technical specification of IS 2713, Part II 1980 with its latest amendment .

Installation

The poles shall have to be properly installed in an absolute vertical manner at a suitable gap so that the truck terminals gets adequately illuminated. The planting depth shall be 1.5 meter. **All the poles shall be properly earthed with spike electrodes.** Suitable foundation for lighting poles is to be provided if planting depth of 1.5 meter could not be achieved. If slushy material are found at the location of installation of poles, the slushy material shall have to be removed and is to be replaced by silver sand and compacted for strengthening and making the base suitable for pole foundation

Luminaries

The following type of LED luminaries shall be supplied:

- 1) 150W LED Street light luminaries shall be supplied for street light poles.
- 2) 20W LED Tube light fittings shall be provided .
- 3) 150W LED outdoor luminaries shall be supplied for installation on the outer periphery wall of Container Scanner room.
- 4) 80W LED High/mid bay luminaries shall be provided for Maintenance sheds.

It is to be ensured by the contractor that the Luminaries do not contain mercury and are environment friendly and does not emit UV or IR radiations. The luminaries to have long life and have high performance electronic driver to ensure minimum maintenance.

Installation:

The luminaries are to be installed in the respective areas with suitable arrangement

Ceiling Fans

Energy saving, 3 blade, ball bearing type, armature with copper winding, ceiling fan of 1200 mm sweep complete with blade, canopy similar to that of Havells make Pacer model or equivalent to any other approved make of appropriate colour are to be provided.

Installation

The ceiling fans complete with blades, canopy, fork, rubber and electronic speed regulator are to be installed in the ceiling hook by properly cutting the false ceiling in the club lounge . Down rods are to be provided wherever necessary.

AC Starter for Air-conditioner Machine

AC Starter suitable for 2.0 T AC units : These units shall be surface mounted push button type AC starter suitable for 2Ton A.C m/c , with plug top, DP MCB and socket shall be provided . The plug top and socket shall be installed at the suitable location near to the AC unit in a MS box of required size. The starter unit with DP MCB shall be installed at the suitable location so that the same can be operated easily. MS box of required size shall have to be supplied by the tenderer. Cost of MS box shall be included in its installation price.

Details of Point Wiring, Circuit Wiring and Distribution wiring are mentioned in details in BOQ

CCTV Surveillance system

CAMERA REQUIREMENT:

A. Day/Night IP Fixed Camera(Both dome lens type & bullet lens type)

The fixed camera should features multi codec compression capability, M-PEG4 and H.265, high picture quality, CMOS image sensor and high sensitivity. Other features include, day/night function, high-frame rate of up to 25 FPS in PAL, @ Full HD (1920 × 1080) size images, simultaneous access and intelligent motion detection and alarm trigger function.

- 2 Megapixel — High Resolution or better.
- Multi streaming: H.265 and M-JPEG simultaneously for Recording, Remote viewing and Mobile Viewing application

- Alarm Trigger for Motion detection, tampering alarm, and network disconnect, IP address conflict, storage exception, etc.
- Video motion detection
- ONVIF compatible.
- Day/Night switching:
In night mode, the camera should enhance low light viewing by switching the inbuilt IR (infrared) filter out of the optical path and providing a monochrome image. The camera should switch from color to monochrome mode automatically by sensing the illumination level, manually, or remotely via a web browser.

Certifications and Approvals: UL, FCC, CE, to ensure greater interoperability between different platforms and compatibility.

B. 8 CHANNEL NETWORK VIDEO RECORDER WITH 12 TB HDD

- Support for up to 8 Channel.
- HDD capacity should be min 12 TB.
- HDD hot swap with RAID0, RAID 1, RAID 5, RAID 6 and RAID 10 storage scheme configurable.
- Support for decoding of H.265/H.264+/H.264/MPEG4 video formats
- Inbuilt Support for Centralized management software.
- Third-party network cameras supported
- HDMI and VGA output at up to 1920×1080P resolution

C. Network Rack

6 U & 4 U Network rack:-

- 6U & 4U wall-mounted enclosure Ideal for VoIP wiring closets
- Adjustable mounting depths up to 17" or 19" by 2 front vertical rackmount rails
- Ventilated front door and side panels for increased airflow
- Locking, reversible front door Locking, removable side panels Fully assembled for quick installation
- Meets all enclosure requirements

D. 8 Port PoE Network Switch 10/100/1000 Mbps

| Sl.No | General Specifications |
|-------|---|
| | 8 Port Fast Ethernet Lite Managed PoE |
| | Performance • Switching Capability: 16Gbps <ul style="list-style-type: none"> • Packet Buffer 1.488 mbps • MAC Address Table: 4K • PoE Power Budget: 54W |
| | Security <ul style="list-style-type: none"> • Mac address Binding • TCP/UDP filter • Support Broadcast storm control |

E. Wireless Transmitter

The wireless transmitter should have the following characteristics:-

| Sl. No. | Features | Description |
|---------|--|---|
| 1 | Frequency | Same Radio should operate in India ISM Band (preferably 5.8GHz) as per WPC Regulation |
| 2 | Topology | System should be able to perform as Point-to-Point and Point-to-Multipoint without changing Hardware |
| 3 | Channel Bandwidth | System must support 5MHz / 10 MHz / 20MHz / 40 MHz Channel Bandwidth |
| 4 | Channel Spacing | Configurable on 5MHz increments |
| 5 | Modulation | QPSK, 16-QAM, 64-QAM, MIMO, OFDM with Forward Error Correction (FEC) |
| | | Should support automatic adaptive modulation |
| 6 | Transmit Power | System must support Automatic Transmit Power Control (ATPC) to limit the CPE unwanted power |
| 7 | Distance Coverage | shall support at least for 10 KMs |
| 8 | Vlan Support | VLAN support based on IEEE 802.1Q with 802.1p priority |
| 9 | Encryption | 128 bit AES |
| 10 | Throughput | System must deliver actual/usable aggregate throughput of at least 100 Mbps in 20 MHz Channel Width |
| 11 | Encryption effect on throughput | Throughput capacity should not be reduced when using AES encryption |
| 12 | LAN Interface | System must support 100/1000Base(T) half/full duplex, rate auto negotiated |
| 13 | Management | System should have support of IPv4, UDP, TCP, IP, ICMP, SSH, SNMPv2c, HTTPs, STP |
| | | System should have support of Network Management with HTTPs, SSH, SNMPv2c |
| 14 | Quality of Service | Three level priority (Voice, High, Low) with packet classification by DSCP, COS, VLAN ID, IP & MAC Address, Broadcast, Multicast and Station Priority |
| 15 | Classification | System must provide the provision to configure rules to classify High Priority Packets |

| | | |
|----|---|---|
| 16 | MAC (Media Access Control) Layer | System must support scheduled access rather than CSMA Technology |
| 17 | Anti Cloning | system must supports Anticlone Hardware for better security |
| 18 | Bandwidth | System should be able to configure symmetric & asymmetric bandwidth. Also should support flexible dynamic Upload and download percentage should be user configurable. |
| 19 | Identity-based user accounts | System must support minimum of four user with four possible user role as Administrator, Installer, User and Read only |
| 20 | DHCP | System must be able to receive the IP Address from DHCP Server |
| 21 | Spectrum Analyzer | System must support Spectrum analyzer tool to find the best available frequency to be used. |
| 22 | Performance Statistic | System must be able to provide detail statistic of Wireless and LAN Interface including Received packets, error, multicast , broadcast packet received |
| 23 | Ethernet Port | system must also support Secondary ethernet Port which can be directly connected to IP Camera |
| 24 | Protection | Shall support IP 55 |
| 25 | WPC Approved | System must be approved from WPC |

F. ACCESS POINT ANTENAS

The antennas to have the following features.

Frequency Range 5150 – 5875 MHz

Gain 23 dBi

VSWR 1.6:1 max

Maximum Input Power 50 Ohms

Cross Polarization >18 dB

Wind Survival 190 km/h (118 mph)

G. LED MONITOR

- Screen size: 22"
- Panel Type : TN, Resolution: 1920 x 1080
- Brightness (nit) : 200
- Contrast Ratio (DFC) : Mega
- Response Time(ms) : 5ms
- Viewing Angle : 90/65
- Color Depth (No. of Colors) : 16.7M
- Pixel Pitch(mm) : 0.25 x 0.25

- Surface Treatment : Anti – Glare
- Intelligent Auto (Auto Resolution) : Yes
- DDC/CI : Yes
- Wall/Table Mount

H. Network Accessories including RJ45 Connectors, Patch cord etc.

- Make-PC (Polycarbonate)
- Contact Wire: Dia 0.45mm phosphor bronze gold plating over nickel
- 0.35mm thickness phosphor bronze alloy selective gold plating over nickel Shield:0.20~0.25mm thickness brass with tin plated

I. Pole with required accessories for mounting of cameras

- Structure Should be made by Mild Steel
- Pole diameter should be 30 to 35 mm
- Base Plate will be approx. 144 sq inch.
- Height will be 3 to 5 Mtr

J. CAT-6 cables

- 4 Pairs Unshielded Twisted Pair (UTP) Cable
- Conductor Metal: Solid Bare Copper
- Color Code: Gray
- Conductor Diameter: 0.560mm Nominal, 23 AWG
- Insulation Diameter: 0.970mm Nominal, Insulation Material: HD-PE
- Jacket Material: PVC UL94V-0/LSZH
- Cable Diameter: 6mm Nominal

N.B- The above specification are bare minimum and if any bidder provide higher specification products after becoming L-1, they are welcome at no extra cost

Details of Earthing and Installation of Lightning Arrestor has been mentioned in BOQ.

The contractor shall dispose off the debris in connection with this job beyond the dock area all at his own expenses by his own transport and labour and clean out all part of the work and leave everything clean and tidy to the entire satisfaction of the Engineer.

Any work, considered required by the contractor and not mentioned hereunder, for successful completion of the project, is to be included in the item of bill of Quantity suitably, which should be finalized in the pre-bid meeting.

List of Approved Makes

| Item | Make |
|--|---|
| CABLE | GLOSTER/HAVELLS/POLYCAB/KEI or any other reputed make. |
| MCCB,MCB,DB, Change Over Switch,Timer Switch | L&T / SIEMENS / HAVELLS/ Legrand / Schnider or any other reputed make |
| Cable Termination Kits | Raychem/3M or any other reputed make |
| Street Light Pole | Utkarsh/Bansal/Jindal/TATA/Calcutta Pole or any other reputed make |

| | |
|--|---|
| Luminaries, lamps. | Philips/ Bajaj/ Crompton/Havells |
| PVC Copper wire for internal wiring | Finolex/Havells/Gloster/Polycab |
| Modular Piano type switches/ Socket/CeilingRose/ Electronic regulator. | Havells/Anchor/ Ellora/ Precision/ Rider/ Bajaj/Crabtree/ Pritam |
| Ceiling Fan | Havells/Usha/Orient /Crompton Greaves/Polar |
| Starter for A.C. machine | Havells/North West/Anchor/ Crabtree/ Other reputed make |
| AC machine | Carrier/Hitachi/Mitsubishi/Daikin |
| Cameras | Hikvision/Honeywell/Panasonic/Bosch/Axis/ Pelco/Infinova |
| Network Video Recorder (NVR) | Hikvision/Honeywell/Panasonic/Bosch/Axis/ Pelco/Infinova |
| Monitor | LG/SAMSUNG/HCL |
| POE Switch | CISCO/ D-Link/Allied |
| Wireless Transmitters and receivers | WIS/ALCON/TP Link/Radwin/Cambium |
| Network Rack | ValRack/Precision/HCL/Dynamic/President |
| CAT-6 cables | Molex / Schneider/ D-Link/Cisco |

N.B: Any other reputed make of any particular item will only be considered if none of the specified make for that particular item is not available in the market for some reason or the other which is to be acceptable to competent authority

Inspection & Testing

KoPT shall have full liberty from time to time and at all times to inspect examine and test the materials at site or at manufacturers' premises and also the work and workmanship and shall at any and every such time, reject any or all of the materials of workmanship, which may seem to them defective or unfit or improper for the purpose to which they are applied or intended to be applied to or not in accordance with the description mentioned in or intended by the specification of the Contractor

Inspection of the items to be supplied by the contractor will be carried out **by the Engineer or his representative prior to dispatch**. The Engineer reserves the right to waive inspection at Manufacturer's premises (witnessing tests) or to inspect (physically) the materials at site, against Manufacturer's Internal Test Certificate & Guarantee Certificate as applicable.

Inspection and testing will be carried out by KoPT Engineer. Inspection will be carried out as applicable as per relevant Standard/ Technical Specification/ Approved Drawing etc. Manufacturer's Test and guarantee certificate as applicable will have to be submitted for verification. High voltage, Insulation Resistance, Earth Continuity and Earth Resistance tests etc. as applicable prior to commissioning are to be carried out for electrical installation including LT cable (if any). All pre commissioning tests shall be carried out by the authorized representative of the firm having valid Supervisor's Certificate of Competency.

PRICE NOT TO BE QUOTED HERE.**BILL OF QUANTITY (BOQ)**

Name of the Work:- Electrical Installation work including Air conditioning and CCTV surveillance System associated with installation of Container Scanner.

| SI.NO | Description of Items | Qty. | Unit | Unit rate (in Rs) | Total Value (in Rs) |
|-------|--|------|------|-----------------------------|-----------------------------|
| 1 | Supply of 4C,16sq mm , 1.1KV , XLPE insulated armoured Copper cable | 800 | Mtr | price not to be quoted here | price not to be quoted here |
| 2 | Laying of the above LT cables through existing trench | 800 | Mtr | | |
| 3 | Supply of 4C, 16 sq mm Industrial Flexible Copper Cable | 200 | Mtr | | |
| 4 | Laying of the above LT cables through existing trench | 200 | Mtr | | |
| 5 | Termination of 4C,16sqmm cable(both armoured and Flexible) by Supplying and fixing compression glands | 62 | nos | | |
| 6 | Supply of 1C, 16sq mm Industrial Flexible Copper Cable | 200 | Mtr | | |
| 7 | Laying of the above cable through existing trench | 200 | Mtr | | |
| 8 | Termination of the above cable | 4 | nos | | |
| 9 | Supply of 3.5C, 50 sqmm XLPE insulated, armoured copper cable | 50 | Mtr | | |
| 10 | Laying of the above cable on wall | 50 | Mtr | | |
| 11 | Termination of the cable | 6 | Nos | | |
| 12 | Supply of 415V, 50Hz, 400A Change over switch | 1 | nos | | |
| 13 | Installation of the Changeover switch | 1 | Nos | | |
| 14 | Supply and delivery of LT Panels consisting of the following Incomer:400A,50KA FPMCCB-1 Nos Outgoing 200A,35KA FPMCCB - 3 Nos , Outgoing100A,35KA FPMCCB- 5 Nos Outgoing 40A, 35KA FPMCCB- 2 Nos Bus Bar- For 3 phase and neutral and Earth Copper Bus bar with suitable size. Necessary Voltmeter, Ammeter, LED indication lamps and suitable CT are to be provided in the incomer side. Analog Ammeter & suitable C.Ts are to be provided at all outgoing feeders. | 1 | nos | | |

| | | | | | |
|----|---|----|-----|--|--|
| 15 | Installation of the above panel at Sub station | 1 | nos | | |
| 16 | Supply and delivery at site DB with the following accessories: Incomer -100A ,25KA FP MCCB --1 Nos Outgoing-6-32A,SP MCB -12 Nos Bus Bar-For 3 phase ,neutral and Earth bus bar with suitable size. | 2 | nos | | |
| 17 | Installation of the above DB at Container Scanning room and as a Sub DB at Panel room | 2 | Nos | | |
| 18 | Supply and delivery at site DB with the following accessories: Incomer -100A ,25KA FP MCCB --1 Nos Outgoing-63A, 25KA FP MCCB -3 Nos CopperBus Bar-For 3 phase ,neutral and Earth bus bar with suitable size. | 1 | nos | | |
| 19 | Installation of the DB at Panel room | 1 | nos | | |
| 20 | Supply and delivery at site Pillar Box with the following accessories: Incomer -100A ,25KA FP MCCB --1 Nos Outgoing-63A, 25KA FP MCCB -3 Nos Copper Bus Bar-For 3 phase ,neutral and Earth bus bar with suitable size. | 1 | nos | | |
| 21 | Installation of the DB at Panel room | 1 | nos | | |
| 22 | Supply and delivery at site Sub DB with the following accessories: Incomer -63 A ,25KA FP MCCB --1 Nos Outgoing-6-32A,SP MCB -9 Nos Bus Bar-For 3 phase ,neutral and Earth bus bar with suitable size. | 2 | nos | | |
| 23 | Installation of the Sub DB at Maintenance Shed and at DG shed | 2 | Nos | | |
| 24 | Supply,delivery of a 100A,35KA FP MCCB in sheet steel enclosure | 1 | nos | | |
| 25 | Installation of the same in Operators room | 1 | nos | | |
| 26 | Supply , delivery of Programmable time switch | 4 | nos | | |
| 27 | Installation of the time switch | 4 | Nos | | |
| 28 | Supply, delivery of Single arm 9m High Street Light pole with suitable cable entry box | 15 | Nos | | |
| 29 | Supply of 150W LED Street light Luminaries | 15 | Nos | | |
| 30 | Installation of the Street Light pole along with luminaries incl. neccy wirings | 15 | Nos | | |

| | | | | | |
|----|--|------|-----|--|--|
| 31 | Supply of 20Mtr High mast Tower fitted with 12 Nos LED luminaries each of 300 W capacity, neon spiral aviation lights, feeder pillar box having hoisting and lowering mechanism | 2 | Nos | | |
| 32 | Installation of the High Mast Tower | 2 | Nos | | |
| 33 | Supply, delivery of 150W LED Outdoor luminaries | 12 | Nos | | |
| 34 | Installation of the luminaries on the building of Container scanning room with GI reducer | 12 | Nos | | |
| 35 | Supply of 20W LED Tube light fittings complete with all accessories | 5 | Nos | | |
| 36 | Installation of the above LED tube light fittings | 5 | Nos | | |
| 37 | Supply of Ceiling fan of 1200 mm sweep | 2 | Nos | | |
| 38 | Supply of electronic step regulator | 2 | Nos | | |
| 39 | Installation of the Ceiling Fan | 2 | Nos | | |
| 40 | Supply and delivery of 80W LED High/Mid bay lights | 14 | Nos | | |
| 41 | Installation of the above lights in Maintenance shed and DG shed | 14 | Nos | | |
| 42 | Supply and delivery of 20A plug top with starter switch for 2T AC Machine with DP MCB | 2 | Nos | | |
| 43 | Installation of the above | 2 | Nos | | |
| 44 | Supply and fixing 230V 3Pin 15A plug socket with 15A Piano key type switch on sheet metal/polycarbonate box with bakelite top cover and earthing attachment | 10 | Nos | | |
| 45 | Distribution wiring with 2 X 2.5 sqmm PVC insulated FRLSH copper wire in with 1.5 sqmm PVC insulated FRLSH copper wire as ECC in PVC Rigid Conduit FR complete with all accessories (for 15A plug point , for connecting Sub DBs to switchboard and for Mid bay luminaries) | 2000 | RM | | |
| 46 | Distribution wiring with 2 X 4 sqmm PVC insulated FRLSH copper wire with 2.5 sqmm PVC insulated FRLSH copper wire as ECC in PVC Rigid Conduit complete with all accessories (for AC point and for outdoor luminaries to be installed on the roof of Container Scanner room) | 2000 | RM | | |

| | | | | | |
|----|---|-----|-------|--|--|
| 47 | Distribution wiring with 2 X1.5 sqmm PVC insulated FRLSH copper wire with 1.5 sqmm PVC insulated FRLSH copper wire as ECC in PVC Rigid Conduit complete with all accessories for light and fan points with avg run 5 meter | 7 | Nos | | |
| 48 | Distribution wiring in 1.5 sqmm PVC insulated FRLSH copper wire with 1.5 sqmm PVC insulated FRLSH copper wire as ECC in PVC Rigid Conduit FR complete with all accessories for 3pin 5A plug point incl S&F 5A 3pin flush type plug socket & piano key type switch on board. | 6 | Nos | | |
| 49 | Distribution wiring in 1.5 sqmm PVC insulated FRLSH copper wire with 1.5 sqmm PVC insulated FRLSH copper wire as ECC in PVC Rigid Conduit FR complete with all accessories for 3pin 5A plug point incl S&F 5A 3pin flush type plug socket & piano key type switch avg. run 3 meter | 10 | Nos | | |
| 50 | Supply and delivery of 2 T, Split type 5star rated Inverter AC machine | 2 | nos | | |
| 51 | Installation of the above AC Machine | 2 | Nos | | |
| 52 | Earthing with 50 mm dia 3 m long GI Pipe | 10 | nos | | |
| 53 | Earthing with copper plate electrode | 5 | Sets | | |
| 54 | Interconnection of the earth pits with 50mm X 6mm Galvanised MS flat | 300 | meter | | |
| 55 | Supply and fixing earth bus bar of galvanized MS flat of dimension 50mm X 6mm | 5 | meter | | |
| 56 | Connecting the earth bus from earth pit by 25mm X 6mm Galvanised MS flat | 100 | meter | | |
| 57 | Connecting the sub DBs to earth bus bar including S&F GI wire with 8 SWG GI wire | 300 | meter | | |
| 58 | Connecting the new LT panel with Earth pit by 50mm X 6mm with Galvanised MS Flat by making necessary arrangement | 50 | meter | | |
| 59 | Connecting the High mast and Feeder Pillar box with earth pits by 25mm X 6mm Galvanised MS flat | 200 | meter | | |
| 60 | Supply and fixing Air Terminals made of 15 mm dia , 1500 mm long GI Pipe having 5 prongs of 4SWG GI (Hot Dip) wire at top with 85 mm dia 6mm thick GI base plate at bottom incl necessary holes for Lightning arrestor | 10 | No | | |

| | | | | | |
|----|---|-----|-------|--|--|
| 61 | S&F of GI (Hot Dip) strips 20 X 3 mm thick for horizontal & vertical run on parapet/ roof o with GI saddles mending good to the damagesf the buildings | 500 | Meter | | |
| 62 | Making soldered joints between conductors and down pipes/ other metallic objects for 4SWG GI wire 20 X 3 mm GI Strip incl supply of necessary 4SWG GI wire and painting 2 coat of bituminous paints | 20 | No | | |
| 63 | S&F of testing Joints by 20X 3 mm thick GI strip 125 mm long grouted on wall having clearance of 6 mm from wall having clearance of 6 mm from wall for making connection with 20 X 3 mm GI strip of vertical conductor with necessary fixtures as required. | 10 | No | | |
| 64 | Supply of 2 MP, IP based IR bullet lens type fixed camera having IP 66 protection | 6 | No | | |
| 65 | Installation of the above bullet lens type cameras | 6 | No | | |
| 66 | Supply of High Resolution 8Channel NVR with 12TB Hard Disk Drive | 1 | No | | |
| 67 | Installation of the above NVR | 1 | No | | |
| 68 | Supply of 22" Monitor | 1 | No | | |
| 69 | Installation of the above monitor | 1 | No | | |
| 70 | Supply of 08 Port PoE Network Switch | 6 | No | | |
| 71 | Installation of 08 Port PoE Gigabite Network Switch | 6 | No | | |
| 72 | Supply of Wireless antenna access Point supported up to 2 km link having adequate data speed | 6 | Set | | |
| 73 | Installation of Wireless antenna access Point supported up to 2 km | 6 | Set | | |
| 74 | Supply of 4 U Network rack with Power socket and other accessories | 6 | No | | |

| | | | | | |
|----|---|-----|-------|--|--|
| 75 | Installation of 4 U Network rack with Power socket and other accessories | 6 | Nos | | |
| 76 | Supply of 6 U Network rack with Power socket and other accessories | 1 | No | | |
| 77 | Installation of 6 U Network rack with Power socket and other accessories | 1 | No | | |
| 78 | Supply of other Network accessories including patch cord, RJ45, patchcord connector etc | 1 | Lot | | |
| 79 | Installation of the same | 1 | Lot | | |
| 80 | Supply of Pole with accessories for mounting cameras, Antena etc | 6 | No | | |
| 81 | Installation of Pole | 6 | No | | |
| 82 | Supply of CAT-6 cables through rigid conduits | 250 | Meter | | |
| 83 | Laying of CAT-6 cables | 250 | Mtr | | |

Note:

- (i) The quantity above may increase or decrease as per requirement, for which payment will be made as per actual.
- (ii) The rate quoted by the tenderer/firm should be considered to complete the work in all respect and should be exclusive of GST or any statutory levies and or other charges levied by any central/state/local authorities.
- (iii) GST and any other extra charges/statutory levies will be paid extra at applicable rates at the time of supply of goods and services.

Completion time: 165 days from the date of placement of order letter

Profile of Tenderer / FORM –D

This is to confirm that we agree to abide by all the terms and conditions of this NIT No. **KoPT/ KDS/ Mech/SE-I/ADV/506** dated **05.11.2018**, those mentioned in the “General Conditions of Contract” enclosed with this Tender Document as well as decisions taken in the pre-bid techno-commercial conference, if any.

Our relevant particulars are furnished hereunder:

| Particulars | To be filled in by the Tenderer or to be mentioned as “none ” |
|---|---|
| Name of the Tenderer | |
| Name of the owner(s) of the Tenderer | |
| Full postal address of the Tenderer including Police Station | |
| Telephone No. of the Tenderer | |
| Fax No. of the Tenderer | |
| E-mail ID of the Tenderer | |
| Name of the contact person of the Tenderer | |
| Mobile/land line Telephone No. of the contact person of the Tenderer. | |
| Name of the partners/directors/ members, as applicable, in this particular contract | |
| Name of their authorized representative(s) who would handle the contract on their behalf. | |

**[DOCUMENT TO BE DOWNLOADED, FILLED IN UNDER BIDDER'S LETTERHEAD,
SIGNED, SCANNED AND UPLOADED]
Covering Letter**

Ref. No.....

Date

The Chief Mechanical Engineer,
Kolkata Port Trust,
Mechanical and Electrical Engineering Department,
8, Garden Reach Road,
Kolkata – 700 043

Dear Sir,

1. We,(Name of Tenderer) having examined the Tender Document and understood its contents, hereby submit our Tender for (NIT No. KoPT/KDS/Mech/SE-I/ADV/..... dated. and confirm that we unconditionally accept all the terms and conditions of the same including the Addendum (if issued).

2. All information and proofs provided in the Tender including Addendum and in the Appendices are true and correct and all documents accompanying such tender are true copies of their respective originals.

3. We shall make available to Kolkata Port Trust (hereinafter referred to as KoPT) any additional information it may find necessary or require to supplement or authenticate the Tender.

4. We,(Name of Tenderer) hereby undertake that we will abide by the decisions of KoPT in the matter of examination, evaluation and selection of Successful Tenderer and shall refrain from challenging or questioning any decision taken by KoPT in this regard. We further acknowledge the right of KoPT to reject our tender without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.

5. We also certify the following

(a) We have not been debarred by the Central/State Govt. or any entity controlled by them or any other legal authority from participating in any Tender/Contract/Agreement of whatever kind.

(b) We have also not been expelled from any project or contract nor have had any contract terminated for breach in the last 3 years ending on the date of opening of the techno commercial part of the tender.

6. We declare that:

(a) We have examined and have no reservations to the Tender Document, including the Addendum, if any, issued by KoPT thereon.

(b) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any corrupt, fraudulent or coercive practices to influence the evaluation process of the tender.

7. We understand that KoPT reserves the right to accept or reject any tender and to annul the tendering process and reject all tenders at any time without any liability or any obligation for such acceptance, rejection or annulment without assigning any reason thereof.

Yours faithfully,

Signature of Tenderer.....

Name:

Designation:

Date :

Seal of the tenderer.....

KOLKATA PORT TRUST
SCHEDULE - "O"

Tenderers must fill in the undernoted column :

| Sl. No | Full particulars of similar works carried out by Tenderer | Value of work | Contract for completion time | Actual completion time | Name and Addresses of Authorities for whom work was carried out | Name and Addresses to whom reference can be made |
|-----------|---|------------------|---------------------------------------|------------------------------|--|---|
| | | | | | | |

SCHEDULE – “O”
Sheet – 2

The Tenderers are also requested to furnish the following particulars :

A. In case of a Limited Company:

1. Name of the Company :
2. Address of its present registered office :
3. Date of its incorporation :
4. Full name and address of each of its Directors – any special particulars as to Directors if desired to be stated :
5. Name, address and other necessary particulars of Managing Agents, if any, appointed by the Company :
6. Copies of Memorandum and Articles of Association (with the latest amendments, if any) :
7. Copies of audited Balance Sheets of the Company for the last three years. :

SCHEDULE – “O”

SHEET – 3

B. In case of a Firm :

1. Name and address of the firm :
2. When business started :
3. If registered, a certified copy of Certificate of Registration :
4. A certified copy of the Deed Of Partnership :
5. Full name and address of each of the Partners and the interest of each partner in the Partnership. Any special particulars as to Partners if desired to be stated :
6. Whether the firm pays income tax over Rs.10, 000/- per year :

SCHEDULE - "O"

SHEET - 4

C. In case of an Individual :

1. Full name and address of the Tenderer; any special particulars of the Tenderer if desired to be stated :
2. Name of the father of the Tenderer :
3. Whether the Tenderer carried on business in his own name or any other name :
4. When business was started any by whom :
5. Whether any other person is interested in the business directly or indirectly, if so, name, address, etc. of such persons and the nature of such interest. :
6. Whether the Tenderer pays income tax over Rs.10,000/- per year :

DATED, the.....

Signature of Tenderer

**FORMAT OF AFFIDAVIT
On the Rupees Ten Non – Judicial Stamp Paper**

BEFOR THE 1ST CLASS JUDICIAL MAGISTRATE AT-----

AFFIDAVIT

I ----- son of ----- aged about -----
---Years , by faith ----- , by occupation -----, residing at-----

do hereby solemnly affirm and declare as follows:-

1. That I am the proprietor/Partner of ----- having office at -----
and carrying on business on the said name and style.

(In case the above Deponent is an enlisted Contractor at Kolkata Port Trust, the same should be mentioned in affidavit.)

2. THAT my aforesaid Firm is exempted from E.S.I. Act and the said Firm has no valid E.S.I Registration.
3. THAT the present affidavit is to be filed before the Kolkata Port Trust as per the clause no ---
----- of Tender no-----issued by Kolkata Port Trust in respect of
the work (the name of the work is to be mentioned)
That the statements made above are all true to be the best of my knowledge and belief.

That in the event the declaration is found to be wrong and false, I will be held responsible for all the consequences in respect of compliance of The Employees State Insurance Act, 1948

DEPONENT

Identified by me

(FORMAT OF INDEMNITY BOND)
On the Rupees Fifty Non – Judicial Stamp Paper

I N D E M N I T Y B O N D

By THIS BOND I, Shri/Smt-----, son of Shri/Smt--

Residing at ----- by occupation -----the Partner/Proprietor/Director
-----having office at ----- am a tenderer under Mechanical Engineering
Department, Kolkata Port Trust(A statutory body under MPT Act, 1963)

- 2 WHEREAS , the said Kolkata Port Trust asked the every tenderer, who is not covered under E.S.I Act or exempted to furnish an Indemnity Bond in favour of Mechanical Engineering Department, Kolkata Port Trust against all damages and accident to the Labourer Tenderer/contractor.
- 3 NOW THIS BOND OF INDEMNITY WITNESSTH THAT the Tenderer/contractor named herein above shall indemnify the Kolkata Port Trust AGAINST ALL DAMAGES AND ACCIDENT OCCURRING TO THE Labourers of the Tenderer/contractor as demanded by the Kolkata Port Trust and which shall be legal and /or claimed by the Kolkata Port Trust during the execution of the work stated in the NIT No----- of -----
- 4 AND the contractor hereunder agree to indemnity and at all times keep indemnified the Kolkata Port Trust and its administrator and representative.
5. And also all such possible claim or demand for damages and accidents. In the event the declaration is found to be wrong and false, the tenderer will be held responsible for all the consequences in respect of compliance of The Employees State Insurance Act, 1948.

In WITNESS WHEREOF I-----, the Partner/Proprietor/Director----- Hereto
set and seal this the----- Day of-----
In the year----- at-----

Sureties

Signature of the Indemnifier

1 Signature
 Name:-
 Address

2 Signature
 Name:-
 Address

3 **Witness**
 Signature
 Name:-
 Address

**[DOCUMENT TO BE DOWNLOADED, FILLED IN UNDER BIDDER'S LETTERHEAD,
SIGNED, SCANNED AND UPLOADED]**

**Undertaking to be submitted in lieu of uploading/submitting signed copy of full tender
document**

Ref. No.....

Date

The Chief Mechanical Engineer,
Kolkata Port Trust,
Mechanical and Electrical Engineering Department,
8, Garden Reach Road,
Kolkata – 700 043

Dear Sir,

We,(Name of Tenderer) have fully read and understood the entire Tender Document, GCC, and Addenda, if any, downloaded from the instant e-tender and no other source, and will comply to the said Tender document, GCC and Addenda.

We are submitting this undertaking in lieu of submission of signed copy of the full Tender document.

Yours faithfully,

Signature of Tenderer.....

Name:

Designation:

Date :

Seal of the tenderer.....

KOLKATA PORT TRUST



**MECHANICAL & ELECTRICAL ENGINEERING DEPARTMENT
8, Garden Reach Road, Kolkata – 700 043.**

GENERAL CONDITIONS OF CONTRACT

FORMS AND AGREEMENTS

**SANCTIONED BY TRUSTEES UNDER RESOLUTION NO. 92
OF
THE 6TH MEETING HELD ON 27TH MAY, 1993.**

(Copy of Booklet Published on May, 1993)

1. **DEFINITIONS**

- 1.0. In the contract, as here-in-after defined, the following words and expressions shall have the meaning here-in assigned to them, except where the context otherwise required.
- 1.0. "**Employer**" or "Board" or "Trustees" means the Board of Trustees for the Port of Kolkata, a body corporate under Section 3 of the Major Port Trust Act, 1963, including their successors, representatives and assigns.
- 1.1. "**Chairman**" means the Chairman of the Board and includes the person appointed to act in his place under Sections 14 and 14A of the Major Port Trusts Act, 1963.
- 1.2. "**Contractor**" means the person or persons; Firm or Company whose tender /offer has been accepted by the Trustees and includes the Contractor's representative's heirs, successor and assigns, if any permitted by the Board / Chairman.
- 1.3. "**Engineer**" means the Board's official who has invited the tender on its behalf and includes the Chief Engineer, the Chief Mechanical Engineer, the Senior Executive Engineer the Chief Hydraulic Engineer, the Deputy Chief Engineer, the Deputy Chief Mechanical Engineer, the Senior Resident Engineer, The Manager (Infrastructure & Civic Facilities), the Manager (Plant & Equipment) the Deputy Manager (Infrastructure & Civic Facilities) and the Deputy Manager (Plant & Equipment), or other official as may be appointed from time to time by the employer, with written notification to the Contractor, to act as Engineer for the purpose of the contract, in place of the "Engineer" so designated.
- 1.4. "**Engineer's Representative**" means any subordinate Engineer or Assistant to the Engineer or any other official appointed from time to time by the Engineer to perform the duties set forth in Clauses 2.4 to 2.6 hereof.
- 1.5. "**Work**" means the Work to be executed in accordance with the Contract and includes authorized "Extra Works" and "Excess Works" and Temporary Works.
- 1.6. "**Temporary Works**" means all temporary works of every kind required in or about the execution, completion or maintenance of the works and includes (without thereby limiting the foregoing definitions) all temporary erections, scaffolding, ladders, timbering, soaking vats, site offices, cement and other god owns, platforms and bins for stacking building materials, gantries, temporary tracks and roads, temporary culverts and mixing platforms.
- 1.7. "**Extra Works**" means those works required by the Engineer for completion of the Contract which were not specifically and separately included in the schedule of items of works (i.e., Bills of Quantities) of the tender. "Excess Works" means the required quantities of work in excess of the provision made against any item of the Bill of Quantities.
- 1.8. "**Specifications**" means the relevant and appropriate Bureau of Indian Standard's Specifications (latest revisions) for materials and workmanship unless stated otherwise in the Tender.
- 1.9. "**Drawings**" means the drawings referred to in the Tender and specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
- 1.10. "**Contract**" means and includes the General and Special Conditions of Contract, Specifications, Drawings, priced Bill of Quantities, the Tender/ Offer, the letter of acceptance of the Tender/Offer, the Contract Agreement if separately entered into and the Schedule of Rates and Price, if any, adopted by the Trustees at their discretion.
- 1.11. "**Constructional Plant**" means all appliances or things of whatsoever nature required in or about the execution, completion or maintenance of the works or temporary works and includes (without thereby limiting the foregoing definition) all machinery and tools but does not include materials or other things intended to form or forming part of the permanent work.
- 1.12. "**Site**" means the land and other places, on, under, in or through which the works are to be executed or carried out and any other lands or places provided by the Trustees for the purpose of the Contract.
- 1.13. "**Contract Price**" means the sum named in the letter of acceptance of the Tender/ Offer of the Contractor, subject to such additions thereto and deduction there from as may be made by the Engineer under the provisions here-in-after contained.
- 1.14. "**Month**" means English Calendar Month.
- 1.15. "**Excepted risks**" are riot in so far as it is uninsurable, war, invasion, act of foreign enemies, hostilities (whether war be declared or not) Civil War, rebellion, revolution, insurrection or military or usurped power or use or occupation by the Trustees of any portion of the works in respect of which a certificate of completion has been issued (all of which are herein collectively referred to as the excepted risks)
- 1.16. Word importing the **singular** only, also includes the **plural** and vice-versa where the context so required.
- 1.17. The **headings and marginal notes** in these General Conditions of Contract shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
- 1.18. Unless otherwise stipulated the word "Cost" shall be deemed to include overhead costs of the contractor, whether on or off the site.

2. DUTIES & POWERS OF ENGINEER & ENGINEER'S REPRESENTATIVE

2.0. The Contractor shall execute, complete and maintain the works in terms of the contract to the entire satisfaction of the Engineer and shall comply with the Engineer's direction on any matter whatsoever.

2.1. The Contractor shall take instructions from the Engineer and subject to limitation of Clause 2.5 herein, from the Engineer's Representative.

2.2. The Engineer shall have full power and authority

- (a) to supply to the contractor from time to time during the progress of the works such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the contractor shall carry out and be bound by the same.
- (b) to alter or modify the specification of any material and workmanship and to inspect the work at any time.
- (c) to order for any variation, alternation and modification of the work and for extra works.
- (d) to issue certificates as per contract
- (e) to settle the claims & disputes of the Contractor and Trustees, as the first referee.
- (f) to grant extension of completion time.

2.3. The Engineer's representative shall:

- (a) watch and supervise the works,
- (b) test and examine any material to be used or workmanship employed in connection with the work.
- (c) have power to disapprove any material and workmanship not in accordance with the contract and the contractor shall comply with his direction in this regard.
- (d) take measurements of work done by the contractor for the purpose of payment or otherwise.
- (e) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense,
- (f) have powers to issue alteration order not implying modification design and extension of completion time of the work and
- (g) have such other powers and authorities vested in the Engineer, which have been delegated to him in writing by the Engineer under intimation to the Contractor.

2.4. Provided always that the Engineer's Representative shall have no power:

- (a) to order any work involving delay or any extra payment by the Trustees,
- (b) to make variation of or in the works and
- (c) to relieve the Contractor of any of his duties or obligations under the Contract.

2.5. Provided also as follows:

- (a) Failure of Engineer's Representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or materials and to order the pulling down, removal, braking-up thereof and re-construction at the contractor's cost and the contractor shall have no claim to compensation for the loss sustained by him.
- (b) If the contractor shall be dissatisfied by reason of any decision of the Engineer's Representative, he shall be entitled to refer the matter to the Engineer who shall thereupon confirm, reverse or vary such decision.
- (c) Any written instructions or written approval given by the Engineer's Representative to the contractor, within the terms of delegation of power and authority vested in Engineer to his Representative in writing shall bind the contractor and the Trustees as though it had been given by the Engineer, who may from time to time make such delegation. Contractor and the Trustees as though it had been given by the Engineer, who may from time to time, make such delegation.

3. THE TENDER / OFFER AND ITS PRE-REQUISITES

3.0. The Contractor shall, before making out and submitting his tender / offer be deemed to have inspected and examined the site, fully consider all factors, risks and contingencies, which will have direct and in direct impact on his expenses and profit from the work and shall be specifically deemed to have taken the following aspects into consideration:

- (a) The form and nature of the site and its surroundings including their sub-surface, hydrological, tidal and climate conditions, the means of access to the site and all other local conditions including the likely charges and costs for temporary way-leave, if any, required for the work.
- (b) The drawings, specifications, the nature and extent of work to be executed and the quality, quantity and availability of the required materials and labour for the work and the need to execute the work to the entire satisfaction of the Engineer, and also by complying with the General and Special Conditions of Contract.

- (c) The accommodation required for the workmen and site office, mobilization / demobilization and storage of all plant, equipment and Construction materials.
- (d) The sources and means of procurement of water for drinking, washing and execution of work, and source and availability of electrical power, all of Contractor's cost.
- (e) Payment of taxes and duties and compliance of all applicable statutes, ordinances and law together with the rules made there under, the rules, regulations and bye-laws of public bodies or any local or other authority by the Contractor, keeping the Trustees indemnified against penalties and liabilities of every kind arising from the Contractor's failure in such compliance.
- (f) Payment of all kinds of stamp-duty for exacting the agreement or for any legal instrument including Bank Guarantees and Indemnity Bonds.

3.1. The Contractor's tender shall be in ink on the Tender Forms supplied by the Trustees, unless stipulated otherwise in the Notice-Inviting the Tender and shall be faultless in figures and free from erasing. Corrections, if any, shall only be made by scoring out and initialing of the revised figure.

3.2. If required by the Engineer or the Trustees, the Contractors in their tender or subsequently, shall disclose the names of their owners/partners/Share Holders at the required points of time. The failure in this regard shall be treated as a breach and a contract, if entered into, shall be liable to be cancelled.

3.3.

- (a) Unless other wise stipulated in the Notice Inviting the Tender/Offer, every tender must be submitted with Earnest Money of the amount calculated as per the following scale.

| Estimated Value | Amount of Earnest Money | |
|---------------------|--|---|
| | For works contract. | For contract of supplying materials of equipment only |
| Up to Rs.1,00,000/- | 5% of the estimated value of work | 1% of the estimated value of work. |
| Over Rs. 1,00,000/- | 2% of the estimated value of work subject to a maximum of Rs.20,000/- and minimum of Rs. 5,000/- | 1/2% of the estimated value of work subject to a maximum of Ts. 10,000/- and minimum of Rs. 1,000/- |

- (b) Earnest Money shall be deposited with Trustees' treasurer in cash or by Banker's Cheque of any Kolkata Branch of a Nationalized Bank of India drawn in favour of Kolkata Port Trust or in the form of an "Kolkata Port Trust" and payable at Kolkata / Haldia Holding as the case may be and the receipt granted there for be kept attached to the Tender / offer in the Sealed Cover.

- (c) Earnest Money of un-accepted tender shall be refunded without any interest through A/c. Payee Cheque drawn on a Nationalized Bank of Kolkata / Haldia.

- (d) The enlisted (registered) Contractors of the Trustees, who have deposited fixed Security with the Trustees FA & CAO / Manager (Finance) according to his Class of Registration, shall be exempt from depositing the Earnest Money, as per the following scale:

| Class of Registration | Amount of Fixed Security | Financial limit of each tender |
|-----------------------|--------------------------|--|
| A | Rs. 10,000/- | Any tender priced up to Rs. 2,00,000/- |
| B | Rs. 5,000/- | Any tender priced up to Rs.1,00,000/- |
| C | Rs. 2,500/- | Any tender priced up to Rs.50,000/- |

- (i) Tender submitted without requisite Earnest Money may be liable to rejection.
- (ii) If before expiry of the validity period of his Tender / offer, the tender amends his quoted rates or tender/ offer making them unacceptable to the Trustees and / or withdraws his tender / offer, the Earnest Money deposited shall be liable to forfeiture of the option of the Trustees.
- (e) The Earnest Money of accepted Tender / offer shall be retained by the Trustees as part of the Security Deposit, for which a separate Treasury Receipt shall be issued to the Contractor after cancellation of the previous Receipt of Earnest Money.
- (f) Balance security for works contract shall be recovered by deduction from all progressive Bill (including final Bill, if necessary) @ 10% of the gross value of work in each such bill, so that the total recovery may not exceed the quantum computed as per the under noted percentages of the total value of work actually done up to the stage of completion.

| Value of Work | % of Security Deposit for works contract | % of Security Deposit for Contract of supplying materials and equipments only |
|---|---|---|
| For works up to Rs. 10,00,000/- | 10% (Ten percent) | 1% (One percent) |
| For works costing more than Rs.10,00,000/- and up to Rs.20,00,000/- | 10% on first Rs. 10,00,000/- + 7 1/2% on the balance | 1% on first Rs.10,00,000/-+1/2% on the balance |
| For works costing more than Rs.20,00,000/- | 10% on first Rs. 10,00,000/- + 7 1/2% on next Rs.10,00,000/-+ 5% on the balance | 1% on first Rs.10,00,000/-+1/2% on next Rs.10,00,000/-+ 1/4% on the balance |

- (g) Balance Security for Contract of supplying materials and equipment computed in terms of the percentages given above, shall have to be deposited with the trustees' Treasurer in advance and within 30 days from the date of placement of supply order, either in cash or by A/c. Payee Draft of a Nationalized Bank of India drawn in favour of Kolkata Port Trust and payable at Kolkata / Haldia, as the case may be.
- (h) No interest shall be paid by the trustees to the Tenderer / Contractor on the amount of Earnest Money / Security Deposit held by the Trustees, at any stage.

3.4.

- (i) The Security Deposit shall be refunded to the Contractor in terms of Clause 9.3 hereinafter and subject to deduction, if any, under the provision of Sub-Clause 3.5(ii) herein below. If, however, the contract provides for any maintenance period, 50% of the Security Deposit may be refunded against any of the Treasury Receipt for that amount on expiry of half of the maintenance period and the balance deposit on the said maintenance period and after the Engineer has certified the final completion of work in form G.C.2 and the Contractor has submitted his "No Claim" Certificate in form G.C.3.
- (ii) The Security Deposit/Earnest Money may be liable to forfeiture at the option of the Trustees, if the Contractor fails to carry out the work or to perform/observe any of the conditions of the contract. The Trustees shall also be at liberty to deduct any of their dues from the Security Deposit, fixed Security, Earnest Money or from any sum due or to become due to the Contractor under any other contract.

3.5. If stipulated in the contract as a Special Condition, the Contractor shall have to submit to the Engineer a performance Bond in the form of an irrevocable guarantee from Kolkata/Haldia Branch, as the case may be, of any Nationalized Bank of India in the proforma annexed hereto and for the sum and period as mentioned in the letter of acceptance of the Tender/Offer, within 15 days from the date of such letter, failing which the contract shall be liable to be terminated and the Earnest Money are liable to forfeiture; all at discretion of the Engineer. The cost of obtaining this or any other Bank Guarantee and/or the revalidation thereof, wherever required, has to be borne by the Contractor and it shall be his sole responsibility to arrange for timely revalidation of such bank guarantee, failing which and for non-fulfillment of any contractual obligation by the Contractor, the Engineer and/or the Trustees shall be at liberty to raise claim against the Guarantee and/or enforce the same unilaterally.

4. THE CONTRACT & GENERAL OBLIGATIONS OF CONTRACTOR

4.0.

- (a) The contract documents shall be drawn-up in English language.
- (b) The contract shall be governed by all relevant Indian Acts as applicable only within the jurisdiction of the High Court at Kolkata, India, including the following Act:
- The Indian Contract Act, 1872.
 - The Major Port Trust, Act, 1963.
 - The Workmen's Compensation Act, 1923.
 - The Minimum Wages Act, 1948.
 - The Contract Labour (Regulation & Abolition) Act, 1970.
 - The Dock Workers' Act, 1948.
 - The Indian Arbitration Act (1940) (in the case of a definite arbitration Agreement only).

4.1. After acceptance of his Tender / Offer and when called upon to do so by the Engineer or his representative, the Contractor shall, at his own expense, enter into and execute a Contract Agreement to be prepared by him in the form annexed hereto. Until such Contract Agreement is executed the other documents referred to in the definition of the term "Contract" here-in-before shall collectively be the Contract.

4.2. Several documents forming the contract are to be taken as mutually explanatory of one another. Should there be any discrepancy, ambiguity, omission or error in the various contract documents, the Engineer shall have the power to correct the same and his decision shall be final and binding on the parties to the Contract.

- 4.3. Two copies of the Drawing referred to in the General and Special Conditions of Contract and in the Bill of Quantities, shall be furnished by the Engineer to the Contractors free of cost for his use on the work, but these shall remain the property of the Trustees and hence, the Contractor shall return them to the Engineer or his Representative on completion of the work. if not torn or mutilated on being regularly used at site.
- 4.4. The Contractor shall prove and make at his own expense any working or progress drawings required by him or necessary for the proper execution of the works and shall, when required, furnish copies of the same free of cost to the Engineer for his information and/ or approval, without meaning thereby the shifting of Contractor's responsibility on the engineer in any way whatsoever.
- 4.5. The Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof without the written permission of the engineer. Even if such permission be granted, the Contractor shall remain responsible (a) for the acts, defaults and neglect of any sub-contractor, his agents servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor himself or his agents, servants or workmen, and (b) for his full and entire responsibility of the contract and for active superintendence of the works by him despite being sublet, provided always that the provision of labourers on a "piece rate" basis shall not be deemed to be subletting under this clause.
- 4.6. Unless otherwise specified, the Contractor shall be deemed to have included in his Tender / Offer all his cost for supplying and providing all constructional plant, temporary work, materials both for temporary and permanent works, labour including supervision thereof transporting to and from the site and in and about the work, including loading, unloading, fencing, watching, lighting, payment of fees, taxes and duties to the appropriate authorities and other things of every kind required for the construction, erection, completion and maintenance of the work.
- 4.7. The Contractor shall be solely responsible for the adequacy, stability and safety of all site operations and methods of construction, even if any prior approval thereto has been taken from the Engineer or his Representative. The Contractor shall not be responsible for the correctness of the design or specification of the Temporary and Permanent works formulated by the Engineer; but the contractor shall be fully responsible for the correct implementation thereof as also for any design and specification prepared / proposed / used by the Contractor.
- 4.8. Whenever required by the Engineer or his Representative, the Contractor shall submit to him the details of his (a) programme for execution of the work, (b) proposed procedure and methods of work, (c) proposed deployment of plant, equipment labour, materials and temporary works. The submission to and/ or any approval by the Engineer or his Representative to any such programme or particulars, shall not relieve the Contractor of any of his obligations under the contract. If for any reason the contractor be unable to adhere to his earlier programme, he shall submit his revised programme for completion of work within the stipulated time whenever asked to do so.
- 4.9. Necessary and adequate supervision shall be provided by the Contractor during execution of the works and as long thereafter as the Engineer or his Representative shall consider necessary during the maintenance period. The Contractor or his competent and authorised agent or representative shall be constantly at site and instructions given to him by the Engineer or his Representative in writing shall be binding upon the Contractor subject to limitation in clause 2.5 hereof. The Contractor shall inform the Engineer or his Representative in writing about such representative/agent of him at site.
- 4.10. The Contractor shall employ in execution of the Contract only qualified, careful and experienced persons and the Engineer shall be at liberty to direct the Contractor to stop deployment of any of his staff, workmen or official at site and the Contractor shall within 48 hours comply with such instruction without any demur, whenever the Engineer shall feel that the deployment of the person concerned will not be conducive to the proper and timely completion of the work.
- 4.11. The Contractor shall be responsible for the true and proper setting-out of the works in relation to reference points/lines/levels given by the Engineer in writing. The checking of any setting-out or of any alignment or level by the Engineer or his Representative shall not in any way relieve the contractor of his responsibility for the correctness thereof and he shall fully provide, protect and preserve all stakes, templates, bench marks, sight rails, pegs, level marks, profile marks and other things used in setting-out the works.
- 4.12. From the commencement of the works till issue of the completion certificate in Form G.C.1, vide Clause 5.12 hereof, the contractor shall take full responsibility for the care thereof. Save for the excepted risks, any damage, loss or injury to the work or any part thereof shall be made good by the Contractor at his own cost as per instruction and to the satisfaction of the Engineer, failing which the Engineer or his Representative may cause the same to be made good by any other agency and the expenses incurred and certified by the Engineer, shall be recoverable from the Contractor in whatever manner the Engineer shall deem proper. This Clause will not apply to that part of the work, which might have been taken over by the Trustees on partial completion of the work and in such case the Contractor's obligation will be limited to repairs and replacement for manufacturing or construction defects during the Maintenance period (Guarantee Period) as per the directions of the Engineer as also for defects/ damages if any caused to the work by the Contractor during such repairs and replacement in the maintenance period.
- 4.13. The Contractor shall at his own cost protect, support and take all precautions in regard to the personnel or structure or services or properties belonging to the Trustees or not, which may be interfered with or affected or disturbed or endangered and shall indemnify and keep indemnified the Trustees against claim for injury, loss or damage caused by the Contractor in connection with the execution and maintenance of the work to the aforesaid properties,

structures and services and/ or to any person including the Contractor's workmen. Cost of Insurance Cover, if any, taken by the Contractor shall not be reimbursed by the Trustees, unless otherwise stipulated in the Contract.

- 4.14. The Contractor shall immediately inform the Engineer's Representative if any fossil, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological importance be discovered at site which shall remain the property of the Trustees and protect them from being damaged by his workmen and arrange for disposal of them at the Trustees expense as per the instruction of the Engineer's Representative.
- 4.15. The Contractor shall be deemed to have indemnified the Trustees against all claims, demands, actions and proceedings and all costs arising there from on account of:
- (a) Infringement of any patent right, design, trade-mark, or name or other protected right, in connection with the works or temporary work.
 - (b) Payment of all royalties, rent, toll charges, local taxes, other payments or compensation, if any, for getting all materials and equipment required for the work.
 - (c) Unauthorized obstruction or nuisance caused by the Contractor in respect of Public or Private road, railway tracks, footpaths, crane tracks, waterways, quays and other properties belonging to the Trustees or any other person.
 - (d) Damage / injury caused to any highway and bridge on account of the movement of Contractor's plants and materials in connection with the work
 - (e) Pollution of waterway and damage caused to river, lock, sea-wall or other structure related to waterway, in transporting contractor's plants and materials.
 - (f) The Contractor's default in affording all reasonable facilities and accommodation as per the direction of the Engineer or his Representative to the workmen of the Trustees and other agencies employed by or with the permission and / or knowledge of the Trustees on or near the site of work.
- 4.16. Debris and materials, if obtained by demolishing any properly, building or structure in terms of the Contract shall remain the property of the Trustees.
- 4.17. The Contractor's quoted rates shall be deemed to have been inclusive of the following:
- (a) Keeping the site free of unnecessary obstruction and removal from site of constructional plant wreckage, rubbish, surplus earth or temporary works no longer required.
 - (b) Cleaning and removal from site all the surplus materials of every kind to leave the site clean and tidy after completion of the work, without which payment against final bill may be liable to be withheld.
 - (c) Precautionary measures to secure efficient protection of Docks, the River Hooghly and other waterways against pollution of whatever nature during execution and maintenance of the works, and to prevent rubbish, refuse and other materials from being thrown into the water by the Contractor's men or those of his agency.
 - (d) Making arrangements for deployment of all labourers and workers, local or otherwise including payment for their wages, transport, accommodation, medical and all other statutory benefits and entry permits, wherever necessary.
 - (e) Making arrangements in or around the site, as per the requirements of Kolkata Municipal Corporation or other local authority or the Engineer or his Representative, for preventing (i) spread of any infectious disease like smallpox, cholera, plague or malaria by taking effective actions for destruction of rats, mice, vermin, mosquitoes etc. and by maintaining healthy and sanitary condition, (ii) illegal storage and distribution of Drugs, Narcotics, Alcoholic liquor, Arms and Ammunitions, (iii) unlawful, riotous or disorderly conduct of the Contractor's or his Sub-Contractor's workmen, (iv) deployment of workmen of age less than 16 years.
- 4.18. Every direction or notice to be given to the Contractor shall be deemed to have been duly served on or received by the Contractor, if the same is posted or sent by hand to the address given in the tender or to the Contractor's Site Office or in case of Trustee's enlisted Contractor to the address as appearing in the trustee's Register or to the Registered Office of the Contractor. The time mentioned in these conditions for doing any act after direction or notice shall be reckoned from the time of such posting or dispatch.
- 4.19. The Contractor and his sub-contractor or their agents and men and any firm supplying plant, materials, and equipment shall not publish or caused to be published any photographs or description of the works without the prior authority of the Engineer in writing.
- 4.20. The Contractor shall, at the Trustees' cost to be decided by the Engineer, render all reasonable facilities and Co-operation as per direction of the Engineer or his representative to any other Contractor engaged by the Trustees and their workmen, to the Trustees' own staff and to the men of other Public Body on or near the site of work and in default, the contractor shall be liable to the trustees for any delay or expense incurred by reason of such default.
- 4.21. The work has to be carried out by the Contractor causing the minimum of hindrance for any maritime traffic or surface traffic.

- 4.22. All constructional plants, temporary works and materials when brought to the site by the contractor, shall be deemed to be the property of the Trustees who will have a lien on the same until the satisfactory completion of the work and shall only be removed from the site in part or in full with the written permission of the Engineer or his Representative.

5. COMMENCEMENT, EXECUTION AND COMPLETION OF WORK

- 5.0. The contractor shall commence the work within 7 days of the receipt of Engineer's letter informing acceptance of the Contractor's tender / offer by the Trustees or within such preliminary time as mentioned by the contractor in the Form of Tender or the time accepted by the Trustees. The contractor shall then proceed with the work with due expedition and without delay, except as may be expressly sanctioned or ordered by the Engineer or his Representatives, time being deemed the essence of the contract on the part of the Contractor.
- 5.1. The Contractor shall provide and maintain a suitable office at or near the site, to which the Engineer's Representative may send communications and instructions for use of the Contractor.
- 5.2. Unless specified otherwise in the contract or prior permission of the Engineer has been taken, the contractor shall not execute the work beyond the working hours observed by the Engineer's Representative and on Sundays and Holidays observed in the trustees system, except in so far as it becomes essential on account of tidal work or for safety of the work. If the progress of the work lags behind schedule or the work has been endangered by any act or neglect on the part of the contractor, then the Engineer or his Representative shall order and the contractor at his own expense shall work by day and by night and on Sundays and Public Holidays. Any failure of the Engineer or his Representative to pass such an order shall not relieve the contractor from any of his obligations. The Engineer's decision in this regard shall be final, binding and conclusive.
- 5.3. Unless stipulated otherwise in the contract, all materials required for the work shall be procured and supplied by the contractor with the approval of the Engineer or his Representative and subject to subsequent testing as may be required by the Engineer or his Representative. The engineer shall exercise his sole discretion to accept any such materials.
- 5.4. Unless stipulated otherwise, in the contract, all materials, workmanship method of measurement shall be in accordance with the relevant Codes (Latest Revision) of the Bureau of Indian Standards and the written instructions of the Engineer or his Representative. Where no specific reference is available in the contract, the materials and workmanship shall be of the best of their respective kinds to the satisfaction of the Engineer.
- 5.5. Samples shall be prepared and submitted for approval of the Engineer or his Representative, whenever required to do so, all at the contractor's cost.
- 5.6. Unless stipulated otherwise in the contract, the cost of any test required by the Engineer or his representative in respect of materials and workmanship deployed on the work shall be borne by the contractor.
- 5.7. Regarding the supply of any materials by the Trustees to the contractor in accordance with the contract, the following conditions shall apply:
- (a) The contractor shall, at his own expense, arrange for transporting the materials from the Trustees' Stores, watching, storing and keeping them in his safe custody, furnishing of statement of consumption thereof in the manner required by the Engineer or his representative, return of surplus and empty container to the Trustees' Stores as per the direction of the Engineer or his Representative.
 - (b) Being the custodian of the Trustees' materials, the contractor shall remain solely responsible for any such materials issued to him and for any loss or damage thereof for any reason other than "Excepted Risks", the contractor shall compensate the Trustees' in the manner decided by the Engineer and shall at no stage remove or cause to be removed any such material from the site without his permission.
 - (c) The Trustees' materials will generally be supplied in stages and in accordance with the rate of progress of work, but, except for grant of suitable extension of completion time of work as decided by the Engineer, the contractor shall not be entitled to any other compensation, monetary or otherwise, for any delay in the supply of Trustees' materials to him. The Contractor shall, however communicate his requirement of such materials to the Engineer from time to time.
 - (d) Unless stipulated otherwise in the contract, the value of the Trustees' materials issued to the contractor shall be recovered from the Contractor's bills and / any of his other dues. Progressively according to the consumption thereof on the work and / or in the manner decided by the Engineer or his Representative and at the rate / stipulated in the contract. These rates shall only be considered by the contractor in the preparation of his tender / offer and these will form the basis of escalation / variation, if in future the contractor is required to procure and provide any such material on the written order of the Engineer consequent on the Trustees' failure to effect timely supply thereof.
 - (e) If the Engineer decides that due to the contractor's negligence, and of the Trustees' materials issued to the contractor has been – (i) lost or damaged, (ii) consumed in excess of requirement, and (iii) wasted by the contractor in excess of normal wastage, then the value thereof shall be recovered from the contractor's bills or from any of his other dues, after adding 19 ¼% extra over the higher one of the followings—

- i. The issue rate of the materials at the Trustees' Stores, and
 - ii. The market price of the material on the date of issue as would be determined by the Engineer.
- 5.8. The Engineer or his Representative shall have the power to inspect any material and work at any time and to order at any time – (i) for removal from the site of any material which in his opinion is not in accordance with the contract or the instruction of the Engineer or his Representative, (ii) for the substitution of the proper and suitable materials, or (iii) the removal and proper re-execution of any work, which in respect of material and workmanship is not in accordance with the contract or the instructions of the Engineer. The contractor shall comply with such order at his own expense- and within the time specified in the order. If the contractor falls to comply, the Engineer shall be at liberty to dispose of such materials and re-do any work in the manner convenient to the Trustees by engaging any outside agency at the risk and expense of the contractor and after giving him a written prior notice of 7 days.
- 5.9. No work shall be covered up and put out of view by the contractor without approval of the Engineer or his Representative and whenever required by him the contractor shall uncover any part or parts of the work or make openings in or through the same as may be directed by the Engineer or his Representative from time to time and shall reinstate or make good those part of works thus affected to the satisfaction of the Engineer, all at the cost of the contractor. The Trustees shall reimburse such cost as determined by the Engineer, if the initial covering up was with prior written order of the Engineer or his Representative.
- 5.10. On a written order of the Engineer or his Representative the contractor shall delay or suspend the progress of the work till such time the written order to resume the execution is received by him. During such suspension the contractor shall protect and secure the work to the satisfaction of the Engineer or his Representative. All extra expenses in giving effect to such order shall be considered by the Trustees, unless such suspension is
- i. Otherwise provide for in the contract, or
 - ii. Necessary by reason of some default on the part of the Contractor, or
 - iii. Necessary by reason of climatic conditions on the site, or
 - iv. Necessary for proper execution of the works or for the safety of the works or any part thereof. The Engineer shall settle and determine such extra payment and / or Extension of completion time to be allowed to the contractor, as shall, in the opinion of the Engineer, be fair and reasonable.

If at any time before or after commencement of the work the Trustees do not require the whole of the work tendered for, the Engineer shall notify the same to the contractor in writing and the contractor shall stop further works in compliance of the same. The Contractor shall not be entitled to any claim for compensation for underived profit or for such premature stoppage of work or on account of curtailment of the originally intended work by reason of alteration made by the Engineer in the original specifications, drawings, designs and instruction.

- 5.11. When the whole of the work has been completed to the satisfaction of the Engineer and has passed any final test prescribed in the contract, the contractor shall, within 21 days of submission of his application to the Engineer be entitled to receive from him a certificate for completion of work in Form G.C.1 annexed hereto. If any part of the total work having been completed to the satisfaction of the Engineer, be takeover and / or used by the Trustees the Contractor shall on application be entitled to partial completion certificate in the Form of G.C.1 indicating the portion of the work covered by it, so that the Contractor's liability during maintenance period of the contract, if any, shall commence from the date mentioned in such certificate so far as the completed portion of the work is concerned.

6. TERMS OF PAYMENT:

- 6.0. No Sum shall be considered as earned by or due to the Contractor in respect of the work till final and satisfactory completion thereof and until a certificate of final completion in Form G.C.2 has been given by the Engineer. On account payments, if any, made prior to issue of the certificate in Form G.C.2, shall all be treated as mere advances, which shall stand recoverable in full or in part, if the Engineer so decides in the context of Contractor's unfulfilled contract condition, if any.
- 6.1. All payments shall be made to the Contractor on the basis of measurement of actual work done, as recorded in the Trustees' measurement books and at accepted tendered or at agreed rates, as the case may be except as otherwise provided in the contract and when the Engineer decided any other rate for change in the scope of work or omission, if any, on the part of the Contractor.
- 6.2. For work of sanctioned tender value more than Rs. 50,000/- or having an initially stipulated completion period of 4 months or more, on account payments may be made at the discretion of the Engineer or his Representative at intervals deemed suitable and justified by him. Provided always that, subject to execution of work of substantial value in the context of the contract price, the interval of such on account payments shall be decided by the Engineer or his Representative, which shall ordinarily not be less than 1 month in between two payments for on account bill and / or advance.

- 6.3. Measurement for works done shall be progressively taken by the Engineer's Representative and entered in the Trustees' Measurement Book, at intervals deemed suitable and proper by him and / or the Engineer. The Contractor or his duly accredited Representative or Agent shall remain present at the time of such measurement and assist the Engineer's Representative in every manner required by him. After the measurements taken have been entered in the Measurement Book, the Contractor or his Agent shall sign the Measurement Book at the end of such Measurements over the Contractor's Rubber Stamp as a taken of acceptance of all such measurements, recorded above and prior to such signature. If the Contractor or his Agent fails to participate even other 3 days written notice from the Engineer's Representative the measurement shall be taken ex-part by the Engineer's representative and those shall be accepted by the Contractor.
- 6.4. Based on the quantum of work and the value thereof computed in the Measurement Book, the Contractor shall type out his bill in the proforma approved by the Engineer and submit the same to the Engineer's Representative in quadruplicate, duly signed by him or his accredited Agent over his Rubber Stamp. The Engineer or his Representative may, in his absolute discretion, allow advance payment against such bill to the extent of an amount not exceeding 75% of the "net payable" sum of the said bill, subject to adjustment thereof against the bill at the time of checking and auditing the bill at the Trustees end., The measurement Book will not be handed over to the Contractor; but he will obtain the abstracts of quantities, amount and recoveries to type out the bill.
- 6.6 At the discretion of the Engineer or his Representative and only in respect of accepted offers/ where estimated amount put to tender would be Rs. 2,00,000/- or more, advance payment may be made to the extent of 75% of the value of any material purchased and brought to the site by the Contractor. Provided always that
- i. The materials shall, in the opinion of the Engineer or his Representative, be of imperishable nature.
 - ii. The value of such materials shall be assessed by the Engineer or his Representative, at their own directions.
 - iii. A formal agreement has been drawn up with the contractor, under which the Trustees secure a lien on the contractor's materials.
 - iv. The materials are safe-guarded by the contractor against losses, shortage and misuse due to the contractor postponing the execution of the work or otherwise.
 - v. In the event of shortage of such materials within the Trustees' protected areas in the Docks, the contractor shall submit an indemnity Bond in the proforma and manner acceptable to Trustee' whereby the contractor shall indemnify the Trustees' against all financial loss/ damage, on account of loss/ damage to such materials for whatever reasons.
 - vi. In the event of shortage of such materials within the Trustees' protected areas in the Docks, the contractor shall submit an indemnity Bond in the proforma and manner acceptable to Trustee' whereby the contractor shall indemnify the Trustees' against all financial loss/ damage, on account of loss/ damage to such materials for whatever reasons.
 - Vii . In the event of storage of such materials outside the Trustees' protected areas the Contractor shall submit to the Engineer an irrevocable Bank Guarantee favouring the Trustees and for the same sum as is being advance, in the proforma and manner acceptable to the Trustees. The Guarantee shall be of a Kolkata / Haldia Branch of any Nationalised Bank or a Scheduled Commercial bank, as the case may be, acceptable to the Trustees and shall remain valid till the anticipated period of consumption of such materials in the work. The Bank Guarantee must bear an undertaking by the issuing Bank guaranteeing automatic payment of the guaranteed sum to the Trustees by the Bank on the date of expiry of the validity of the Guarantee, unless with the prior written approval of the Engineer on behalf of the Trustees, the Bank has extended the validity of the Guarantee.
 - Viii . The amount of advance shall be recoverable from the contractor's bills or any other dues, progressively with the consumption of the materials on the basis of quantity consumed. Consequent on full recovery of the advance the Indemnity Bond / Bank Guarantee, vide sub-clause (v) & (vi) above, shall be returned to the Contractor duly discharged by the Engineer on behalf of the Trustees.
- 6.7 No Certificate of the Engineer or his Representative shall protect the Contractor against or prevent the Trustees from obtaining repayment from the Contractor, in case the Engineer or his Representative should over certify for payment or the Trustees should over-pay the Contractor on any account.
- 6.8 No claim for interest shall be admissible to the Contractor at any stage and in respect of any money or balance or Bank Guarantee, which may be due to the Contractor from the Trustees, owing to dispute or otherwise or for any delay on the part of the Trustees in making interim or final payment or otherwise.

7 VARIATION AND ITS VALUATION:

7.7 The Quantities set out in the Bill of Quantities of the tender shall be treated as estimated quantities of the work and shall never be deemed as actual or correct quantities of the works to be executed by the contractor in fulfillment of his obligation under the contract.

7.8 The Engineer shall have the power to order the Contractor in writing to make any variation of the Quantity, quantity or form of the works or any part thereof that may, in his opinion, be necessary and the Contractor upon receipt of such an order shall act as follows:

- a) Increase or decrease the quantity of any work included in the contract.
- b) Omit any work included in the contract.
- c) Change the Character or quality or kind of any work included in the contract.
- d) Change the levels, lines, position and dimensions of any part of the work, and
- e) Execute extra and additional work of any kind necessary for completion of the works.

7.9 No such variation shall in any way vitiate or invalidate the contract or be treated as revocation of the contract, but the value (if any) of all such variations evaluated in accordance with the Engineer's sole decision shall be taken into account and the contract price shall be varied accordingly.

7.10 Provided always that written order of the Engineer shall not be required for increase or decrease in the quantity of any work up to 15% where such increase or decrease is not the result of any variation order given under this clause but is the result of the quantities exceeding or being less than those stated in the bill of quantities. Provided also that verbal order of variation from the Engineer shall be complied with by the Contractor and the Engineer's subsequent written confirmation of such verbal order shall be deemed to be an order in writing within the meaning of this clause.

- 7.11
- a) The Contractor shall not be entitled to any claim of extra or additional work unless they have been carried out under the written orders of the Engineer.
 - b) The Engineer shall solely determine the amount (if any) to be added to or deducted from the sum named in the tender in respect of any extra work done or work omitted by his order.
 - c) All extra, additional or substituted work done or work omitted by order of the Engineer shall be valued on the basis of the rates and prices set out in the contract, if in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices directly applicable to the extra additional or substituted work, then the Engineer may decide the suitable rates on the basis of Schedule of Rates (including surcharge in force at the time of acceptance of tender), if any, adopted by the Trustees with due regard to the accepted contractual percentage, if any thereon. In all other cases the Engineer shall solely determine suitable rates in the manner deemed by him as fair and reasonable, and his decision shall be final, binding and conclusive.
 - d) If the nature or amount of any omission or addition relative to the nature or amount of the whole of the contract work or to any part thereof shall be such that, in the opinion of the Engineer, the rate of prices contained in the contract for any item of the works or the rate as evaluated under sub-clauses (b) and (c) of this clause, is by reason of such omission or addition rendered unreasonable or in-applicable the Engineer shall fix such other rate or price as he deems proper and the Engineer's decision shall be final, binding and conclusive.

8 DELAY / EXTENSION OF COMPLETION TIME / LIQUIDATED DAMAGE / TERMINATION OF CONTRACT

8.7 Should the quantum of extra or additional work of any kind or delayed availability of the Trustees' materials to be supplied as per contract or exceptionally adverse climatic conditions and natural phenomenon or strikes, lock-outs, civil commotions or other special circumstances of any kind beyond the control of the Contractor cause delay in completing the work, the contractor shall apply to the Engineer in writing for suitable extension of completion time within 7 days from the date of occurrence of the reason and the Engineer shall thereupon consider the stated reasons in the manner deemed necessary and shall either reject the application or determine and allow in writing the extension period as he would deem proper for completion of the work, with or without the imposition of "Liquidated Damaged" Clause (No.8.3 hereof) on the Contractor and his decision shall be binding on the contractor. If an extension of completion time is granted by the Engineer, the clause No.8.3 of the Liquidated damage shall apply from its date of expiry, if the work be not completed within the extended time, unless stated otherwise in the decision communication by the Engineer, as aforesaid.

- 8.8** a) If the Contractor fails to complete the work within the stipulated dates or such extension thereof as communicated by the Engineer in writing, the contractor shall pay as compensation (Liquidated Damage) to the Trustees and not as a penalty, ½ % (half percent) of the total value of work (contract price) as mentioned in the latter of acceptance of the tender/offer, for every week or part thereof the work remains unfinished. Provided always that the amount of such compensation shall not exceed 10% the said value of work.
- b) Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation / damage in Sub-Clause (a) of this clause, from any money due or likely to become due to the contractor. The payment or deduction of such compensation / damage shall not relieve the Contractor from his obligation to complete the work or from any of his other obligations / liabilities under the contract and in case of the Contractor's failure and at the absolute discretion of the Engineer, the work may be ordered to be completed by some other agency at the risk and expense of the Contractor, after a minimum three days notice in writing has been given to the contractor by the Engineer or his Representative.

8.9 Without being liable for any compensation to the Contractor, the Trustees may, in their absolute discretion, terminate the contract due to occurrence of any of the following reasons and decision of the Trustees in this respect, as communicated by the Engineer shall be final and conclusive:

- (i) The Contractor has abandoned the contract.
- (ii) In the opinion of the Engineer, either the performance of the Contractor is not satisfactory or the work is not getting completed within the agreed period on account of Contractor's lapses.
- (iii) The Contractor has failed to commence the work or has without any lawful excuse under these conditions, has kept the work suspended despite receiving the Engineer's or his Representative's written notice to proceed with the work.
- (iv) The Contractor has failed to remove materials from site after receiving from the Engineer or his Representative the written notice stating that the said materials or work are rejected by him.
- (v) The Contractor is not executing the work in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract.
- (vi) Any bribe, commission, gift or advantage is given, promised or offered by or on behalf of the contractor to any officer, servant or representative of the Trustees or to any person on his or their behalf in relation to the obtaining or to the execution of the contract.
- (vii) The Contractor is adjudged insolvent or enters into composition with his creditors or being a company goes into liquidation either compulsorily or voluntarily.

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- 8.3.1 Upon receipt of the letter of termination of work, which may be issued by the Engineer on behalf of the Trustees, the Contractor shall hand over all the Trustees' tools, plant and materials issued to him at the place to be ascertained from the Engineer, within 7 days of receipt of such letter.
- 8.3.2 In all such cases of Termination of work, the Trustees shall have the power to complete the Work through any other agency of the Contractor's risk and expense and the Contractor shall be debited any sum or sums that may be expended in completing the work beyond the amount that would have been due to the contractor, had he duly completed the whole of the work in accordance with the contract.
- 8.3.3 Upon termination of contract, the contractor shall be entitled to receive payment of only 90 % of the value of the work actually done or materials actually supplied by him and subject to recoveries as per contracts, provided the work done and materials conform to specifications at the time of taking over by the Trustees. The payment for work shall be based on measurements of actual work done and priced at approved contract rates or other rates, as decided by the Engineer. The payment for materials supplied shall be at the rates as decided by the Engineer, which shall in no case be more than market rates prevailing at the time of taking over by the Trustees. The Engineer's decision in all such case shall be final, binding and conclusive.
- 8.3.4 The Trustees shall have the power to retain all moneys due to the Contractor until the work is completed by other agency and the Contractor's Liabilities to the Trustees and known in all respect.

9 MAINTENANCE AND REFUND OF SECURITY DEPOSIT

- 9.7 On completion of execution of the work the contractor shall maintain the same for a period, as may be specified in the form of a Special Condition of the Contract, from the date mentioned in the initial Completion Certificate in the Form G.C.1. Any defect / fault, which may appear in the work during aforesaid maintenance period, arising, in the sole opinion of the Engineer or his Representative, from materials or workmanship not in accordance with the contract or the instruction of the Engineer or his Representative, shall, upon the written

notice of the Engineer or his Representative, be amended and made good by the Contractor at his own cost within seven days of the date of such notice, to the satisfaction of the Engineer or his Representative, failing which the Engineer or his Representative shall have the defects amended and made good through other agency at the Contractor's risk and cost and all expenses, consequent thereon or incidental thereto, shall be recoverable from the Contractor in manner deemed suitable by the Engineer.

- 9.8 The Contract shall not be considered completed and the work shall not be treated as finally accepted by the Trustees, until a final Completion Certificate in from G.C. 2 annexed hereto shall have been signed and issued by the Engineer to the contractor after all obligations under the Contract including that in the maintenance period, if any, have been fulfilled by the Contractor. Previous entry on the works or taking possession, working or using thereof by the trustees shall not relieve the Contractor of his obligations under the contract for full and final completion of the work.
- 9.9 On completion of the contract in the manner aforesaid, the Contractor may apply for the refund of his Security Deposit by submitting to the Engineer (i) The Treasury Receipts granted for the amount of Security held by the Trustees, and (ii) his "No further claim" Certificate in from G.C.3 annexed hereto (in original), where upon the Engineer shall issue Certificate in from G.C.2 and within two months of the Engineer's recommendation, the Trustees shall refund the balance due against the Security Deposit to the Contractor, after making deduction there from in respect of any sum due to the Trustees from the Contractor.

10 INTERPRETATION OF CONTRACT DOCUMENTS, DISPUTES & ARBITRATION

- 10.7 In all disputes, matters, claims, demands or questions arising out of or connected with the interpretation of the Contract including the meaning of Specifications and Instructions or as to the quality of workmanship or as to the materials used in the work or the execution of the work whether during the progress of the work or after the completion and whether before or after the determination, abandonment or breach of the contract the decision of the Engineer shall be final and binding on all parties to the contract and shall forthwith be given effect to by the Contractor.
- 10.8 If, the Contractor be dissatisfied with any such decision of the Engineer, he shall within 15 days after receiving notice of such decision require that the matter shall be referred to Chairman, who shall thereupon consider and give a decision.
- 10.9 If, however, the contractor be still dissatisfied with the decision of the Chairman, he shall, within 15 days after receiving notice of such decision required that within 60 days from his written notice, the Chairman shall refer the matter to an Arbitrator of the panel of Arbitrators to be maintained by the Trustees for the purpose and any such reference shall be deemed to be a submission to arbitration within the meaning of Indian Arbitration Act, 1940 or any statutory modification thereof.
- 10.3.1 If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another person from panel shall be appointed as Sole Arbitrator and he shall proceed from the stage at which it was left by his predecessor.
- 10.3.2 The Arbitrator shall be deemed to have entered on reference on the date he issues notice to both the parties fixing the date of first hearing.
- 10.3.3 The time limit within which the Arbitrator shall submit his award shall normally be 4 months as provided in Indian Arbitration Act, 1940 or any amendment thereof. The Arbitrator may, if found necessary, enlarge the time for making and publishing the award, with the consent of the parties.
- 10.3.4 The Venue of the arbitration shall be Kolkata or as may be fixed by the Arbitrator in his sole discretion. Upon every or any such reference to cost of any incidental to the reference and award respectively shall be in discretion of the Arbitrator who may determine, the amount thereof or by whom and to whom and in what manner the same shall be borne and paid.
- 10.3.5 The Award of the Arbitrator shall be final and binding on all parties subject to the provisions of the Indian Arbitration Act, 1940 or any amendment thereof. The Arbitrator shall give a separate award in respect of each item of disputes and respective claim referred to him by each party and give reason for the award.
- 10.3.6 The Arbitrator shall consider the claims of all the parties to the contract within only the parameters of scope and conditions of the contract in question.
- 10.3.7 Save as otherwise provided in the contract the provisions of the Arbitration Act, 1940 and rules made there under, for the time being in force, shall apply to the arbitration proceedings under this Clause.
- 10.10 The Contractor shall not suspend or delay the work and proceed with the work with due diligence in accordance with Engineer's decisions. The Engineer also shall not withhold any payment, which, according to him, is due or payable to the Contractor, on the ground that certain disputes have cropped up and are likely to be referred to arbitration.

10.11

Provided always as follows:

- (a) Nothing of the provisions in paragraphs 8.3 to 8.3.7 hereinabove would apply in the case of contracts , where tendered amount appearing in the letter of acceptance of the tender / offer is less than Rs.40,00,000/-.
- (b) The Contractor shall have to raise disputes or differences of any kind whatsoever in relation to the execution of the work to the Engineer within 30 days from the date of occurrence of the cause of dispute and before the preparation of the final bill, giving detailed justifications, in the context of contract conditions.
- (c) Contractor's dispute, if any, arising only during the maintenance period stipulated in the contract, must be submitted to the Engineer, with detailed justifications in the context of contract Conditions, before the final completion of the work.
No dispute or difference on any matter whatsoever, pertaining to the contract can be raised by the contractor after the completion of the work.
- (d) Contractor's claim / dispute raised beyond the time limits prescribed in sub-clauses 8.5(b) and 8.5(c) hereinabove, shall not be entertained by the Engineer and / or by any Arbitrator, subsequently.
- (e) The Chairman / Trustees shall have the right to alter the panel of Arbitrators on their sole discretion, by adding the names of new Arbitrators and / or by deleting the names of existing Arbitrators, without any reference to the Contractor.

THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA

FORM OF TENDER

CONTRACT NO......

To,

.....
.....
.....

I/We of
.....

having examined the site of works, inspected the Drawings and read the Specifications, General and Special Conditions of Contract and Conditions of Tender, hereby tender and undertake to execute and complete all the works required to be performed in accordance with the Specification, Bill of Quantities, General & Special Conditions of Contract and Drawings prepared by or on behalf of the Trustees and at the rates and prices set out in the annexed Bill of Quantities with month/week from the date of the order to commence the work and in the event of our Tender being accepted in full or in part, I/We also undertake to enter into a Contract Agreement in the Form hereto annexed with such alterations or additions thereto which may be necessary to give effect the acceptance of the Tender and incorporating such Specification, Bill of Quantities, Drawings and Special & General Conditions of Contract and I/We hereby agree that until such Contract Agreement is executed the said Specifications, Bill of Quantities, Conditions of Contract and the Tender, together with the acceptance thereof in writing by or on behalf of the Trustees shall be the Contract.

THE TOTAL AMOUNT OF TENDER Rs

(Repeat in words).....
.....

*I/We require days/months preliminary time to arrange and procure the materials required by the work from date of acceptance of the Tender before I/We could commence the Work.

(* This should be scored out in the case of labour contracts)

I/We have deposited with the Trustees' Financial Advisor & Chief Accounts Officer / Manager (Finance), Haldia Dock Complex vide Receipt No of as Earnest Money.

I/We agree that period for which the Tender shall remain open for acceptance shall not be less than four months.

Signature of the Tenderer

Witness:

(Seal of the Tenderer)

Signature

Name of the Tenderer

Name

(In Block Letters)

(In Block Letters)

Address

Dated

.....

Address

Occupation

.....

KOPT

THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA

FORM OF AGREEMENT

THIS AGREEMENT made thisday of.....200.....between the Board of Trustees for the Port of Kolkata, a body corporate constituted by the Major Port Trusts Act, 1963 (hereinafter called “Trustees” which expression shall unless excluded by or repugnant to the context be deemed to include their successors in office) ofthe one part and(hereinafter called “the Contractor”, which expression shall unless excluded by or repugnant to the context be deemed to include its heirs, executors, administrators, representatives and assignees or successors in office) of the other part.

WHEREAS the Trustees are desirous that certain works should be executed / constructed , viz.and have accepted a Tender / Offer by the Contractor for the execution and maintenance of such work NOW THIS AGREEMENT WITNESSETH as follows :

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in General Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.
 - (a) The said Tender / Offer & the acceptance of the Tender / Offer
 - (b) The General Conditions of Contract
 - (c) The Special Conditions of Contract
 - (d) The Conditions of Tender
 - (e) The Technical Specifications
 - (f) The Schedule of Rates
 - (g) The Terms of Payment
 - (h) All correspondence by which, the contract is added, amended, varied or modified in any way by mutual consent.

3. In consideration of the payments to be made by the Trustees to the Contractor as hereinafter mentioned, the Contractor hereby covenant with the Trustees to execute and maintain the work in conformity in all respects with the provisions of the contract.
4. The Trustees hereby covenants to pay to the Contractor, in consideration of such execution and maintenance of the Work, the Contract Prices at the times and in the manner prescribed by the Contract.

IN WITNESS whereof of the parties hereto have caused their respective Common Seals to be hereunto affixed (or have hereunto set their respective hands and seals) the day and year first above written.

The Seal of.....
.....

Was hereunto affixed in the presence of:

Name

Address

Or

SIGNED, SEALED AND DELIVERED

By the said

In the presence of:

Name

Address:

.....

The Common Seal of the Trustees was hereunto affixed in the presence of:

Name.....

Address:

KOLKATA PORT TRUST

FORM G.C.1

Contract

Address

.....

Date of Completion

Dear Sir/s,

This is to certify that the following works viz.

Name of the Work.....

Estimate Number E.E.Odt

C.E.Odt

Work Order Number

Allocation

Contract Number

Which was carried out by you is in the opinion of the undersigned completing in every respect on the Day of20..... in accordance with clause 62 of the General Conditions of Contract and under the provisions of the Contract for a period of Days /weeks / months / years.

From the day of 20

of the day of 20

Signature (.....)

(Engineer / Engineer's Representative)

Name.....

Designation.....

Office Seal

c.c. to The Deputy Chief Engineer ()

The Deputy Manager ()

Financial Adviser & Chief Accounts Officer/

Manager (Finance), Haldia Dock Complex.

KOLKATA PORT TRUST

FORM G.C.2

The Financial Adviser & Chief Accounts Officer.

The Manager (finance), Haldia Dock Complex.

CERTIFICATE OF FINAL COMPLETION

This is to certify that the following works viz.

Name of Work

Estimate No. E.E.O. No. dt

C.E.O. Nodt

Work Order Nodt

Contract No

Resoln. No & Meeting No

Allocation

Which was carried out by Shri / Messrs.....is now complete in every respect in accordance with the terms of the Contract and that all the obligations under Contract have been fulfilled by the Contractor.

Signature (.....)
(Engineer / Engineer's Representative)

Name.....

Designation.....

Office Seal

KOLKATA PORT TRUST

FORM G.C.3

(‘No Claim’ Certificate From Contractor)

The Engineer
Kolkata Port Trust
Kolkata / Haldia

(Attn)

(Address, the Trustees’ Official, mentioned in
the work Order and under whom the Contract
was executed)

Dear Sir,

I/We do hereby declare that I/We have received full and final payment from Kolkata Port Trust for the execution of the following work, viz.

Name of Work

Work Order No dt

Contract Nodt.....

Agreement Nodt.....and I/We have no
further claim against Kolkata Port Trust in respect of the above mentioned job.

Yours faithfully,

(Signature of Contractor)

Date

Name of Contractor

Address

.....
(Official Seal of the Contractor)

Draft Proforma of Bank Guarantee (Performance Bond) in lieu of cash Security Deposit, to be issued by the Kolkata/Haldia, as the case may be, of any nationalized Bank of India on Non-Judicial Stamp Paper worth Rs.50/- or as decided by the Engineer / Legal Adviser of the Trustees.

To
The Board of Trustees
for the Port of Kolkata.

BANK GUARANTEE NO.....DATE.....

Name of issuing Bank.....

Name of Branch.....

Address.....

In consideration of the Board of Trustees of the Port Kolkata, a body corporate - duly constituted under the Major port Trust Act, 1963 (Act 38 of 1963), having agreed to exempt Shri / Messrs a proprietary / Partnership / Limited / Registered Company, having its Registered Office at (hereinafter referred to as "The Contractor") from cash payment of Security Deposit / Payment of Security Deposit through deduction from the Contractors' bills under the terms and conditions of a contract made between the Trustees and the Contractor for (write the name of the work as per Work Order) in terms of the Work order No dated.....(hereinafter referred to as "the said contract"), for the due fulfillment by the contractor of all the terms and conditions contained in the said contract, on submission of a bank Guarantee for Rs (Rupees) we,.....Branch, Kolkata...../ Haldia, do on the advise of the contractor, hereby undertake to indemnify and keep indemnified the Trustees to the extent of the said sum of Rs (Rupees) We.....Branch,Kolkata/Haldia, further agree that if a written demand is made by the Trustees through any of its officials for honoring the Bank Guarantee constituted by these presents, We,..... Branch, Kolkata /Haldia shall have no right to decline to cash the same for any reason whatsoever and shall cash the same and pay the sum so demanded to the Trustees within a week from the date of such demand by an A/c. Payee Banker's Cheque drawn in favour of "Kolkata Port Trust", without any demur. Even if there be any dispute between the contractor and the Trustees, this would be no ground for us,.....(Name of Bank), Branch, Kolkata...../Haldia to decline to honour the Bank Guarantee in the manner aforesaid. The very fact that We,Branch,Kolkata /Haldia, decline or fail or neglect to honour the Bank Guaranteed in the manner aforesaid shall constitute sufficient reason for the Trustees to enforce the Bank Guarantee unconditionally without any reference, whatsoever, to the contractor.

2. We,.....Branch,Kolkata.....
...../Haldia, further agree that a mere demand by the Trustees at any time and in the manner aforesaid, is sufficient for us, Branch, Kolkata / Haldia, to pay the amount covered by this Bank Guarantee in full and in the manner aforesaid and within the time aforesaid without reference to the contractor and no protest by the contractor, made either directly or indirectly or through Court , can be valid ground for us,
.....Branch,Kolkata /Haldia, to decline or fail or neglect to make payment to the Trustees in, the manner and within the time aforesaid.

3. We, Branch, Kolkata /Haldia, further agree that the Bank Guaranteed herein contained shall remain in full force and effect, during the period that is taken for the due performance of the said contract by the contractor and that is shall continue to be enforceable till all the dues of the Trustees under and/or by virtue of the terms and conditions of the said contract have been fully paid and its claim satisfied and/or discharged in full and/or till the Trustees certify that the terms and conditions of the said contract have been fully and properly observed/fulfilled by the contractor and accordingly, the Trustees have discharged the Bank Guarantee, subject however, that this guarantee shall remain valid up to and inclusive ofday of19.....and subject all so that the provision that the Trustees shall have no right to demand payment against this guarantee after the expiry of 6(six) calendar months from the expiry of the aforesaid validity period up to Or any extension thereof made by us,Branch, Kolkata/Haldia, in further extending the said validity period of this Bank Guarantee on Non-Judicial Stamp Paper of appropriate value, as required / determined by the Trustees, only on a written request by the Trustees to the contractor for such extension of validity of this Bank Guarantee.

4. We, Branch,Kolkata
...../Haldia, further agree that, without our consent and without affecting in any manner our obligations hereunder, the Trustees shall have the fullest liberty to vary from time to time any of the terms and conditions of the said contract or to extend the time for full performance of the said contract including fulfilling all obligations under the said contract by the contractor or to postpone for any time or from time to time any of the powers exercisable by the Trustees against the contractor and to forebear or enforce any of terms and conditions relating to the said contract and We, Branch, Kolkata/Haldia, shall not be relieved from our liability by reason of any such variation or extension being granted to the contractor or for any fore-bearance, act or commission on the part of the Trustees or any indulgence by the Trustees to the contractor or by any such matter or thing of whatsoever nature, which under the law relating to sureties would, but for this provision, have effect of so relieving us,.....Branch, Kolkata...../Haldia.

5. We Branch, Kolkata/Haldia, lastly undertake not to revoke this Bank Guarantee during its currency except with the previous consent of the Trustees in writing.

SIGNATURE.....
NAME.....
DESIGNATION.....

(Duly constituted attorney for and on behalf of)
BANK.....
BRANCH.....
Kolkata...../Haldia.

(OFFICIAL SEAL OF THE BANK)

ADDENDUM

Modification of clause no.3.4 of GCC as sanctioned vide Reso. No.210 by the Board of Trustees for the Port of Kolkata in the 13th Meeting held on 26.02.2013.

- i. **Earnest Money:** Earnest money deposit @ 2% of the estimated cost will be applicable for works / service / O&M contract only and not for procurement contract for which existing system as mentioned in the GCC should be followed.
- ii. **There will be no minimum ceiling of Earnest Money** which will be @ 2% of estimated cost of projects upto Rs.10 crore. EMD of project estimated above Rs.10 crore will be Rs.20 lakh + 1% of estimated cost by which it exceeds Rs.10 crore.
- iii. **Upto Rs.10 lakh Earnest Money** will be accepted by Banker's cheque / Demand Draft / Pay order. EMD beyond Rs.10 lakh may be accepted in the form of Bank Guarantee issued by an Indian Nationalized / Scheduled Bank.
- iv. **Refund of Earnest money** to other than L-1 bidders will be made within 2 months of opening of bid or on finalization / acceptance of tender, whichever is earlier.

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