



कोचिन पत्तन प्राधिकरण  
Cochin Port Authority

**COCHIN PORT AUTHORITY**

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**e-TENDER DOCUMENT FOR**

**“SMART LIGHTING OF EXISTING HIGH MASTS AT VARIOUS LOCATIONS AND  
INSTALLATION OF MAST LIGHTS WITH SMART CONTROL IN THE Q8-Q9 BACK  
SIDE AREA”**

**(TECHNICAL BID)**

**(e-Tendering Mode)**

Website: [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT)

**(Tender No.:F1/T-4/Smart Lighting/2025/M dt:16/01/2026)**

**OFFICE OF THE  
CHIEF MECHANICAL ENGINEER,  
I FLOOR, NEW ADMINISTRATIVE BUILDING,  
COCHIN PORT AUTHORITY,  
WILLINGDON ISLAND,  
COCHIN-682 009**

**Cost of Tender Document: Rs.2,360/-**

*Signature of the Tenderer*

## COCHIN PORT AUTHORITY

### Tender for “SMART LIGHTING OF EXISTING HIGH MASTS AT VARIOUS LOCATIONS OF PORT AREA IN WILLINGDON ISLAND AND INSTALLATION OF MAST LIGHTS WITH SMART CONTROL IN THE Q8-Q9 BACK SIDE AREA AT THE ERNAKULAM WHARF OF COCHINPORT AUTHORITY”

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Signature of the Tenderer

website: [www.cochinport.gov.in](http://www.cochinport.gov.in)

Chief Mechanical Engineer's Office,  
Cochin Port Authority,  
W/Island, Cochin – 682009, Kerala  
Tele: 91-0484-2666639/0484-258-2300/2352  
Email: [cme@cochinport.gov.in](mailto:cme@cochinport.gov.in); [dycmeele@cochinport.gov.in](mailto:dycmeele@cochinport.gov.in)

**SECTION-I**

**1. NOTICE INVITING TENDER**

**Tender No.:F1/T-4/Smart Lighting/2025/M**

**Dated: 16/01/2026**

**1. Notice Inviting Tender**

Electronic Tenders (**e-Tenders**) on percentage basis is invited in Single Stage Two Cover bidding procedure [Technical Bid and Financial Bid], by the Chief Mechanical Engineer, Cochin Port Authority, Willingdon Island, Cochin-682009, from **Proprietorship/ Individual/ Limited company/ LLP the Minimum Qualification Criteria** specified below for the work of **“Smart Lighting of Existing High Masts at Various Locations of Port area in Willingdon Island and Installation of Mast Lights With Smart Control In the Q8-Q9 Back Side Area at Ernakulam wharf of Cochin Port Authority”**

- 1.1** For submitting the e-tender, the prospective bidders willing to participate in this tender shall fulfill the Minimum Qualification Criteria and agree to the Terms and Conditions mentioned in the Tender Document. Tender timeline is available in the BID INFORMATION SHEET given in the Tender Document.

**2. BID INFORMATION SHEET**

A	Bid No.	<b>TenderNo.:F1/T-4/Smart Lighting/2025/M Dt.16/01/2026</b>
B	Name Of Work	<b>Smart Lighting of Existing High Masts at Various Locations of Port area in Willingdon Island and Installation of Mast Lights With Smart Control In the Q8-Q9 Back Side Area at Ernakulam wharf of Cochin Port Authority</b>
C	Brief Scope Of Work	PART A - Smart Lighting of Existing High Masts in Various Locations of Port Area In W/Island PART B – Supply, installation, testing and commissioning of 18 Nos. of 9M Lamp Poles With Smart Lighting Control in Q8-Q9 Back Side Area of Ernakulam Wharf
D	Tender E-Publication Date	<b>16/01/2026</b>
E	Type Of Bidding System	e-Tender through e-Tendering portal <a href="http://www.tenderwizard.com/COPT">www.tenderwizard.com/COPT</a>
F	Type Of Tender	Single stage 2 cover system with EMD
G	Language Of Tender And All Correspondences	English
H	Download Period Of Tender Documents	<b>FROM 16/01/2026 TO 06/02/2026 upto 2.30PM</b>

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I	Date, Time & Venue Of Pre-Bid Meeting	Pre-bid meeting will be held in the CME's office of CoPA on <b>23/01/2026 11.00 AM</b> , through Video Conference to answer clarifications, if any, on the bid document and the link will be shared to the bidders on their request.
J	Online Bid-Submission Deadline Date	<b>06/02/2026 upto 3.00PM</b>
K	Techno- Commercial Bid Opening	<b>06/02/2026 at 3.30 PM in the e-tender portal</b> , at the Office of the Chief Mechanical Engineer, 1st Floor, New Administrative Building, Cochin Port Authority, Cochin. After the deadline for submission of tenders, only technical submission will be opened on the due date of tender opening. Only tenders that are responsive to the mandatory requirements in the technical evaluation shall have their financial submission opened.
L	Price Bid Opening	Date and time will be informed later to the eligible bidders. The price shall be fixed. The currency in which the prices shall be quoted shall be: Indian Rupees (INR). Prices quoted shall be net excluding GST
M	Estimated Amount Put To Tender	<b>Rs.1,70,61,693/- excluding GST</b> (Rupees One Crore Seventy Lakhs Sixty One Thousand Six Hundred Ninety Three only excluding GST)
N	Cost of Bid Document (Exemption will be Given As Per Cl. No.3.6(j) Below)	<b>Rs.2360/-including 18% GST</b> . The cost of bid document and shall be furnished in the form of Demand Draft/ Banker's Cheque drawn in favour of FA & CAO, CoPA or through RTGS/NEFT mode.
O	Earnest Money Deposit (Exemption will be Given As Per Cl. No.3.6(j) Below)	<b>Rs.3,41,240/-</b> (Rupees Three Lakh Forty One Thousand Two Hundred Forty only) shall be furnished either in the form of Insurance Surety Bond or through account payee Demand Draft, Banker's Cheque or an irrevocable Bank Guarantee drawn in favour of Financial Adviser & Chief Accounts Officer, CoPA, enforceable/encashable at Kochi, from any Commercial Banks or online payment (State Bank of India, Cochin Port Authority Branch, IFSC Code: SBIN0006367, Account No.41401802288), in an acceptable form safeguarding the interest purchaser's interest in all respects. The bid security shall be valid for a period of 45 days beyond the final bid validity period. Exemption shall be granted to MSEs on submission of NSIC/ MSME/ UAM certificates.
P	Contract Period	The entire work shall be completed & commissioned within <b>120 Days from the date of LoA</b>
Q	Validity Of Tender	Bid shall remain valid for a period of <b>120</b> days from the date of Tender opening.
R	Contact Details Of e-tender portal	<b>e-Tender Help Desk No.080-40482000 / 9746118529 / 9605557738.</b>
S	Name, Designation, Address And Other Details (For Submission Of Tender))	The Chief Mechanical Engineer, Cochin Port Authority, 1st floor, New Administrative Building, Willingdon Island, Kochi-682 009 Tel. 0484-2666639, 2582300, 2582352 Email: <a href="mailto:cme@cochinport.gov.in">cme@cochinport.gov.in</a> ; <a href="mailto:dycmeele@cochinport.gov.in">dycmeele@cochinport.gov.in</a>

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### 3. MINIMUM QUALIFICATION CRITERIA OF THE BIDDERS (MQC):

#### 3.1 FINANCIAL CRITERIA :

The Bidder should have an Average Annual Financial Turnover of **Rs.51,18,510/-**, during the last three financial years, ending **31/03/2025** (viz.2022-23, 2023-24 & 2024-25)

Note : Documentary evidence such as balance sheet / profit and loss statement duly certified by Chartered Accountant with their UDIN (Unique Document Identification Number) with QR code if available shall be uploaded along with the Bid.

#### 3.2 TECHNICAL CRITERIA:

The Bidder should have successfully completed “**similar works**” during last 7(seven) years ending last day of month previous to the one in which tenders are invited should be either of the following :

At least One similar completed work costing not less than **Rs.1,36,49,360/-** (Excluding GST)

OR

At least Two similar completed works costing not less than **Rs.85,30,850/- each** (Excluding GST)

OR

At least Three similar completed works costing not less than **Rs.68,24,680/- each** (Excluding GST)

**Similar work** means “Any electrical works which includes Supply, installation, testing, commissioning and successful implementation of Smart LED Street/Flood Lighting systems with Centralised Control and Monitoring System(CCMS)”.

**3.3** The Bidder shall have valid “B” Class Electrical Contractor’s license or above, issued by any State/ Central/ Union Territory, Licensing Authority. In case the Bidder does not possess “B” Class Electrical Contractor’s license, the Bidder may execute the work through a licensed Contractor and shall submit an undertaking to this effect on Kerala Stamp Paper of value Rs.200/-along with the Bid.

**3.4** The Bidder shall submit valid MAF certificate issued by the OEM of smart light luminaires and CCMS panels, they will support the Bidder for a minimum period of 5 years with all spares and software, along with Bid. Format as per Annexure-21/D.

**4.** In order to meet the Technical criteria as per clause No.3.2 above, the bidder shall submit the following documents along with the technical bid:-

Self-attested photocopies of LOA/ Work Order/ Agreements showing the awarded contract value for “similar works” and satisfactory Completion Certificates issued by the Client, indicating the date of Completion and completed Contract Value. The Bidder shall also enclose detailed BOQ with rates and scope of work supporting the LOA/ work order/ agreements/ completion certificates. The experience certificate of Works executed in private sectors/ Govt. organisations shall be considered for qualification, only on submission of statement as per Form-5A, duly certified by a Chartered Accountant for the transaction of the projects. Chartered Accountant is to provide their UDIN (Unique Document Identification Number) while certification with QR code if available.

Amendments to the tender (if any) will be issued only through web site [www.cochinport.gov.in](http://www.cochinport.gov.in), on CPP Portal [www.eprocure.gov.in](http://www.eprocure.gov.in) and on e-Tendering portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT)

Sd/-  
**CHIEF MECHANICAL ENGINEER**  
**COCHIN PORT AUTHORITY**

*Signature of the Tenderer*

## SECTION II INSTRUCTIONS TO TENDERERS

### 1. Introduction

The subject work is for the **Smart Lighting of Existing High Masts at Various Locations and Installation of Mast Lights With Smart Control In the Q8-Q9 Back Side Area**. The bidder shall visit the site, ascertain the site conditions and scope before Bidding.

#### 1.1 The scope of work includes the following works:

PART A - Smart Lighting of Existing High Masts in Various Locations of Port Area in W/Island

PART B – SITC of 18 Nos. of 9 M Lamp Poles With Smart Lighting Control in Q8-Q9 Back Side Area of Ernakulam Wharf

Detailed Scope of Works is given in Section-V, Technical Specifications.

### 2. General Instructions

- a) The work is to be executed as described in the Bid document and in particular in the Technical specifications, Special Conditions, Schedule of Quantities etc. and in general includes, but is not limited to supplying all items including consumables and equipment necessary to execute the work as described in the Bid Document.
- b) Before submitting the bid, the bidder shall examine carefully all conditions of contract, specifications etc. The bidders shall inspect the site of work with prior appointment with the Engineer of the work to get himself acquainted with the site conditions and to assess and satisfy himself of the difficulties and constraints which may be involved in executing the work in the location. It will be deemed that prior to the submission of tender, the tenderer has visited the site and has satisfied himself as to the nature and location of the work, general and local conditions, particularly those pertaining to transportation, handling and availability and storage of materials, availability of labour, weather conditions, tidal variations at site, working conditions, ground level, nature of soil etc. and that the tenderer has estimated his cost accordingly and the Port will be in no way responsible for the lack of such knowledge and also consequences thereof to the tenderer. Failure to visit the site will in no way relieve the successful bidder of any of the obligations in performing the work in accordance with this Bid Document including addendum/corrigendum, within the quoted price.
- c) Cochin Port Authority will not be held responsible for any technical snag or networks/ purchase failure during online bidding. It is the bidder's responsibility to comply with the system requirement, i.e. hardware, software and internet connectivity, at Bidder's premises to access the e-tender Portal.
- d) Under any circumstances, Cochin Port Authority shall not be liable to the Bidders for any direct/ indirect loss or damages incurred by them, arising out of incorrect use of the e-tender Portal or internet connectivity failures.
- e) Financial instrument towards cost of tender document/ tender processing fee and EMD (DD/BG/banker's cheque etc.) drawn in favour of the Financial Adviser & Chief Accounts Officer (FA & CAO), CoPA from any Commercial bank in India having its branch at Cochin shall be submitted in original at the Employer's office before the due date and time of opening of the bid and scanned copy of the same shall be attached with the e-tender. Non submission of original financial document towards cost of tender document and EMD will make the tender liable for rejection, and such tenders would not be evaluated further.
- f) Bank details of Cochin Port Authority are as follows: State Bank of India, Cochin Port Authority Branch, IFSC Code: SBIN0006367, Account No.41401802288.
- g) Exemption from the payment of Cost of Tender Document and EMD shall be given to Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by the Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department. The tenderers shall furnish a copy of the NSIC / MSME / UAM certificates for the exemption of EMD along with the Technical bid. Such Certificates should mention

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the QR code of such registration. The scanned copy of Exemption Certificate duly notarized shall be uploaded in the e-Tender Portal. If the Registration Certificate does not pertain to the Category of 'Similar Works' mentioned above, the Tender will be rejected.

According to the Gazette Notification of India dated 18.10.2022, the Ministry of MSME, Government of India, has allowed those registered MSME's to continue to avail of non-tax benefits for three years, instead of one year, in case of an upward graduation in their category and consequent reclassification. Non-tax benefits include benefits of various schemes of Government including Public Procurement Policy, Delayed Payments, etc.

- h) In case of Tender Document being downloaded from the Cochin Port website, at the time of uploading, the Tenderer shall give an undertaking that no changes have been made in the Document. The Port's Tender Document will be treated as authentic Tender and if any discrepancy is noticed at any stage between the Port's Tender Document and the one submitted by the Tenderer, the Port's Document shall prevail. For the discrepancies found at any time, the Tenderer shall be liable for legal action.
- i) The bidders need to obtain the one time User ID & password for log-in to in e- Tendering system [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT) from the service provider KEONICS (Karnataka State Electronics Development Corporation, Bangalore) by paying registration amount by online Payment using Credit/Debit Card/Net banking or DD in favour of "KSEDCL, Bangalore".
- j) The intending bidder must have valid Class-II or III digital signature certificate to submit the bid. For further details and to obtain the digital signature, please contact e-Tender Help Desk No.080-40482000 / 9746118529 / 9605557738.
- k) Format for Self-Certification under Preference to "MAKE IN INDIA" Policy CERTIFICATE as per Form -12- In line with Government Public Procurement Order No.P-45021/2/2017-BE-II dt.15.06.2017 and No.P45021/2/2017-PP (BE-II) dt.04.06.2020 as amended from time to time along with clarifications/amendments and other references as issued from time to time, the Contractor has to certify that they are meeting the requirement of Minimum Local Content in goods/services/ works to be supplied by local supplier as per declaration. (Class-I Supplier (50%) or Class-II Supplier (20%) or Non-Local Supplier (Less than 20%)
- l) The bidder should not have been blacklisted or debarred by any Central / State Government / Agency of Central / State Government / Public Sector Undertaking / Regulatory Authority of India at the time of submission of this bid. In this regard the firm should submit a declaration that they have not been blacklisted or debarred by any Central /State Government/ Agency of Central / State Government/ Public Sector Undertaking / Regulatory Authority of India at the time of submission of bid.
- m) The bidders have to execute an "Integrity Pact"(IP) as per the format enclosed in the tender document and also available in the CoPA's website [www.cochinport.gov.in](http://www.cochinport.gov.in). The Tenderer should sign and upload the "Integrity Pact" duly signed, in techno-commercial bid. **Bids not accompanied by a duly signed "Pre-Contract Integrity Pact" shall be liable for rejection.**  
The Independent External Monitors (IEM) for Cochin Port are as follows:
- 1) Shri. Harishwar Dayal, IDSE (Rtd.)  
H-2, Lawyer Colony, Bypass Road,  
Agra-282005 (UP)  
Mobile No:9412095786 Email: [dayalagra@gmail.com](mailto:dayalagra@gmail.com)
  - 2) Shri. Deepak Chaturvedi, ITS (Retd)  
Flat No.1, Sanchar Vihar,  
C-58/4, Sector-62,Uttar Pradesh, Noida-201301  
Mobile No:9930408711  
Email ID :[chaturvedideep@rediffmail.com](mailto:chaturvedideep@rediffmail.com)
- n) The Chief Mechanical Engineer, CoPA reserves the right to reject/cancel/postpone/annul the tenders at any stage of the tender without assigning any reason thereof, which will be binding on all bidders.
- o) The tender notice shall form part of the tender document and is to be signed and uploaded along with the technical bid.

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- 2.1 A bidder shall be deemed to have full knowledge of all documents, site conditions etc. whether he has inspected them or not. The submission of a bid by the bidder implies that he has read the notice and conditions of contract and has made himself aware of the scope and specifications and other factors bearing on the bid and that they are binding on him.
- 2.2 The bidders may please note that the EMPLOYER will not entertain any correspondence or query on the status of the offers received against this Bid. Bidders are also requested not to depute any of their personnel or agents to visit the Employer's offices for making such enquiries till finalization of the bid. Should the EMPLOYER find it necessary to seek any clarification, technical or otherwise the concerned bidder will be duly contacted by the EMPLOYER.
- 2.3 Canvassing in any form by the bidder or by any other agency acting on behalf of the bidder after submission of the bid may disqualify the said bidder. The Employer's decision in this regard shall be final and binding on the bidder.
- 2.4 EMPLOYER will not be liable for any financial obligation in connection with the work until such time the EMPLOYER has communicated to the successful bidder in writing his decision to entrust the Work (covered by the bid document).
- 2.5 Telex/E-mail offers will not be considered. Bidders should prepare their bid themselves and upload in the e-tender portal.
- 2.6 In case of an unscheduled holiday on the prescribed closing/opening day of the bid, the next working day will be treated as the scheduled prescribed day of closing/opening of the bid.
- 2.7 While evaluating the document, regard would be paid to National security considerations, at the discretion of the Cochin Port Authority. Bid received from any bidder may be summarily rejected on National security consideration without any intimation thereof to the bidder.
- 2.8 If there are varying or conflicting provisions made in any document forming part of the contract, the Chief Mechanical Engineer, Cochin Port Authority, Cochin – 682009 shall be the deciding authority with regard to the intention of the document which will be binding on the Bidder.
- 2.9 In case the department desires to inspect the equipments/ machinery for confirmation of its availability and capacity etc., necessary arrangements shall be made by the contractor for such inspection at his own cost.
- 2.10 Any error in description, any omissions there from shall not vitiate the contract or release the contractors from the execution of whole or any part of the works comprised therein according to drawing and specifications or from any of his obligations under the contract.
- 2.11 All the Bank Guarantees (BGs) to be furnished by the contractors in connection with the tender shall be drawn in favour of FA&CAO, CoPA, sent to the Chief Mechanical Engineer, Cochin Port Authority directly by the issuing bank under registered post with AD. The contractor shall take the responsibility of sending BGs directly to the Port Authority by the issuing bank.
- 2.12 **The contractor shall comply with all the provisions of the Indian Employee's Compensations Act, Provident Fund Regulations, Employees Provident Fund and ESI Act etc. amended from time to time and rules framed there under and other laws affecting the contract labour that may be brought in to force from time to time.**
- 2.13 **The contractor shall be registered under EPF and ESI Act and the employees employed under them shall be covered in the EPF and ESI scheme. Work Order shall be issued only to the contractors who are registered under EPF organization and ESI Corporation. The contractors shall regularly remit the employer and employee contribution to the authorities. If not, the Department would remit the same and the amount so remitted shall be deducted from the part/final bill of contractors.**
- 2.14 **The contractor shall be registered under GST and shall furnish documentary evidence in support of valid GST registration.**

### **3. Invitation for Bids:**

The Invitation for Bids is open to all eligible bidders meeting the Minimum Qualification Criteria.

### **4. Downloading of Tender Documents:**

Tender documents can be downloaded from the e-Tendering portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT) on the dates specified in Table above by making online requisition. Bid document will also be available in Cochin Port website ([www.cochinport.gov.in](http://www.cochinport.gov.in)) as well as Govt. tender website, [www.eprocure.gov.in](http://www.eprocure.gov.in), which can be

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downloaded for submission. Interested bidders shall download the Tender Documents from these portals as per the provisions available therein. Tenders attaching all required documents shall be submitted “online” in the website [www.tenderwizard.com/](http://www.tenderwizard.com/) COPT, strictly in accordance with the Instructions to Tenderers and Terms & Conditions given in the tender document before the tender submission time mentioned in the tender. No Bids shall be accepted off-line (Hard copy).

**5. One Bid per Bidder:**

5.1 Each bidder shall submit only one bid. A bidder who submits or participates in more than one Bid will be summarily rejected.

5.2 The Bidder shall be a single entity (Proprietorship/ Individual/ Limited company/ LLP) or consortium meeting the Minimum Qualification Criteria

**6. Cost of Bidding:**

The bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible and liable for those costs.

**7. Site visit:**

The Bidder, at the Bidder’s own responsibility and risk is encouraged to visit and examine the work site and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for execution of the Works. The costs of visiting the site shall be at the Bidders’ own expense.

**8. Clarification of the Bidding Documents:**

The tenderers are advised to examine the Tender Document carefully and if there be or appear to be any ambiguity or discrepancy in the documents, or any clarifications needed on the Tender Documents; these shall be referred to the Chief Mechanical Engineer in writing at the following address, so as to reach them before the pre-bid meeting. It is to be noted that queries, clarifications received after the above date will not be considered.

Address:

The Chief Mechanical Engineer,  
Cochin Port Authority, Willingdon Island,  
Cochin,682009,Kerala,India.

Phone: 91-0484-2666639/2582300 /2352/2320, Fax: 91-0484-2666639

Email: [cmec@cochinport.gov.in](mailto:cmec@cochinport.gov.in) , [dycmeee@cochinport.gov.in](mailto:dycmeee@cochinport.gov.in)

**9. Pre-bid meeting:**

Pre-bid Meeting will be conducted on the date notified in the Bid Information Sheet under NIT, through Video Conference and the link will be shared to the bidders on their request. A prospective tenderer requiring any clarification of the tender shall submit their queries to the Chief Mechanical Engineer in writing/e-mail well in advance before the pre-bid meeting. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder. Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be published in e-tender portal as well as in Cochin Port Authority official website as Addendum/ corrigendum. Any modification of the bid documents as a result of the pre-bid meeting shall be made exclusively through the issue of an Addendum/ corrigendum.

**10. Amendment of Bidding Documents:**

The Chief Mechanical Engineer, Cochin Port Authority shall have the right to omit or suspend certain items of work or revise or amend the Bid documents prior to the due date of submission of the Bid by issuance of addendum/corrigendum. Any addendum/corrigendum thus issued shall be part of the tender documents. The addendum/corrigendum, if any, shall be hosted in the e-tender portal as well as in the website of the Cochin Port. The bidders are requested to watch the e-tender Portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT), CoPA website [www.cochinport.gov.in](http://www.cochinport.gov.in) and CPPP Website [www.eprocure.gov.in](http://www.eprocure.gov.in) for Addendums / Amendments/ Errata / Replies to the queries of the bidder etc., if any, issued by the Employer. The bidder is responsible to download Addenda/ Amendments/ Errata/ Replies to the queries of the bidders etc., if any, issued by the Employer, from the website before submission of the bid and upload a copy of the Tender Document and Amendments / Corrigendum duly signed on all the pages by the Authorised signatory with Company seal affixed. Any shortfall in uploading the same will render the Tender incomplete and such incomplete Tender Documents may be rejected by the employer and would not be evaluated.

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In order to afford the Bidders with reasonable time to take addendum into account, or for any other reason, the Port may, at its discretion, extend the due date for submission of Bid and bid extension notice shall be hosted in the web site.

**11. Preparation of bids:**

All documents relating to the bid shall be in the English language.

**12. Experience Criteria in MQC:**

Following enhancement factors will be used for the costs of Works executed for bringing the financial figures to a common base value in respect of the Works completed in past years:

Year before	Multiplying Factor
One year [2024]	1.07
Two years [2023]	1.14
Three years[2022]	1.21
Four years [2021]	1.28
Five years [2020]	1.35
Six years [2019]	1.42

**12.5 Other Eligibility Considerations:**

Even though the tenderers meet the above qualifying criteria, they will be disqualified if they have:

- (a) Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/ or
- (b) Record of poor performance such as abandoning the works/ purchases, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.

In this regard the firm should submit a declaration that they have no record of poor performance, at the time of submitting the tender.

**13. Bid Prices:**

**13.1 Percentage basis contracts**

**The Bidder shall fill the percentage in figures above / below of departmental estimate amount for the work noted in the Bill of Quantities (As per the instructions given in BOQ) and the total quoted amount in words will appear automatically.** The contract shall be for the whole work based on the priced Bill of Quantities submitted by the Bidder. Tenderer should ensure that his tendered percentage as per Price bid is not mentioned anywhere in any other documents in Technical bid submission, directly or indirectly. If any such mention is made, the tender will become invalid and shall become liable for rejection.

The rate quoted by the Tenderer shall be inclusive of the cost of provision of plant and equipment, materials, labour, execution, supervision, maintenance, overheads and profits and every incidental and contingent cost and charges whatsoever, **excluding Goods and Service Tax (GST)**. GST as may be applicable from time to time shall be shown separately in the invoice.

**13.2 Currencies of Bid and Payment:**

The price shall be quoted in Indian National Rupees (INR).

**14. Bid Validity:**

Bids shall remain valid for a period of not less than 120 (one hundred and twenty) days from the Tender submission due date. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. Should any tenderer withdraw his tender before the validity period will be treated as non-responsive and will be left out of consideration.

**15. Bid Security / EMD:**

- 15.1 Each tender should be accompanied by an Earnest Money amounting to Rs.3,41,240/-(Rupees Three lakh forty one thousand and two hundred forty only). The EMD shall be furnished in the form of Insurance surety bond/ Account Payee Demand Draft/ Banker's Cheque from a Commercial Bank in India in favour of FA&CAO, Cochin Port Authority, payable at Cochin or online payment in an acceptable form

*Signature of the Tenderer*

safeguarding the purchaser's interest in all respects. The Earnest Money deposit will not carry any interest. Any bid not accompanied by an acceptable Bid Security shall be treated as Non-responsive and shall be rejected by the Employer. Exemption shall be given to Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department).

15.2 Forfeiture of Bid security/ EMD: Bid Security/EMD will be forfeited in the following cases:

- (a) If a Bidder withdraws his bid during the period of bid validity.
- (b) In the case of a successful bidder who fails
  - (i) to commence the work, within the specified time limit
  - (ii) to sign the Agreement or furnish the required Performance Security within the specified time limit.

## **16. No Alternative Proposals by Bidders:**

Bidders shall submit offers that comply with the requirements of the bidding documents. Alternatives will not be considered

## **17. Format and Signing of Bid:**

- 17.1 The Tenderer shall prepare one set of his Tender (all Volumes), duly completed and signed, along with the set of Drawings and other documents mentioned hereinafter. The Bid document shall be signed by a person or persons duly authorised to sign on behalf of the Bidder with signature duly witnessed and company seal affixed. Then it shall be scanned and uploaded in the e-tender portal for submission. However the Power of Attorney (in original) authorizing the signatory/s of the Tender shall be submitted in hard copy along with submission of tender fees and Bid Security Declaration.
- 17.2 If the tender is made by an individual it shall be signed by his full name and his address shall be given. In the event of the tender being submitted by a registered partnership firm, it must be signed individually by each partner thereof or it must be signed by person holding a proper power-of- attorney authorising him to do so and to bind the partner in all matters pertaining to the contract including the arbitration clause, such power-of-attorney to be attached with the tender which must disclose that the firm is duly registered under Indian Partnership Act. If the tender is made by a Limited Company it shall be signed by a duly authorised person who shall produce with the tender satisfactory evidence of the authorisation. In the case of a Limited Company the tender should be accompanied by the Memorandum and Articles of Association of the Company.

## **18. Bid Submission:**

Bid shall be submitted in two parts, **Part - I: Technical Bid** and **Part - II: Price Bid** through e-tender mode. For online submission of **Technical Bid**, the scanned copies of the documents under item nos. (a) to (o) as detailed in clause 19.1 below need to be submitted through e-Tendering mode on [www.tenderwizard.com/](http://www.tenderwizard.com/) COPT. Price bid (Schedule-II) in the provided format shall be submitted only through e-tendering mode on [www.tenderwizard.com/](http://www.tenderwizard.com/)COPT before 15.00 Hrs on **the date notified in NIT.**

**Price bid in hard copy need not be submitted.**

## **19. Information Required in the Bid**

19.1 **Part I -Technical Bid shall contain the following:**

- (a) Financial instrument towards EMD/ or relevant certificate for exemption of EMD
- (b) Financial instrument towards Cost of tender document processing fee.
- (c) Letter of Submission (vide **Form-1**)
- (d) Power of Attorney (vide **Form-2**).
- (e) Organization Details (vide **Form-3**)
- (f) Details of experience regarding works executed in Govt. organizations/ private sectors as per **Form-4a&4b** and Certificates in proof of experience in similar works as detailed under Clause 12 of Instruction to bidders, accompanied by **Form-5A**, duly certified by a Chartered Accountant for the transaction of the projects.

*Signature of the Tenderer*

**Explanatory notes:**

- 1) Self attested copy of completion certificates of each work and work order shall be attached. The certificate shall contain the following details:
  - (a) Work order no. and date
  - (b) Details of work and completion cost
  - (c) Date of commencement and Date of completion of the work.
- 2) The works indicated in **Form-4a& 4b** will only be considered for evaluation, accompanied by **Form-5A**, duly certified by a Chartered Accountant. Mere submission of work completion certificate will not be considered as Eligible Assignments.
- (g) Statement duly certified by Chartered Accountant showing Average Financial Turnover of the tenderer over the last three financial years [ 2022-23, 2023-24, 2024-25].(vide **Form-5**), supported by Financial statements such as Balance sheets, Profit & Loss statements for the last 3 years ending March 2025.
- (h) **Copy Valid “B Class”** or above grade Electrical Contractor’s license or an undertaking submitted in a stamp paper of Rs. 200/- as per MQC.
- (i) Format for Self-Certification under Preference to “MAKE IN INDIA” Policy **CERTIFICATE** as per **Form –12**
- (j) Integrity Pact, duly sealed & signed **Form-19**
- (k) Copies of PAN, GST, EPF and ESI registration.
- (l) A detailed method statement (Technical Note) for carrying out of the works, along with implementation schedule showing sequence of operation and the time frame for various segments of temporary and permanent works.(vide **Form-10**). The information provided will form part of the work methodology and the same shall be in line with the Specifications and Bill of quantities.
- (m) Bid document including all addendum/corrigendum duly signed and sealed.
- (n) Partnership deed or Memorandum and Articles of Association of the company and Registration certificate of the company as the case may be.
- (o) Declaration as per **Form-13** that
  - 1) Confirmation that not made any payment or illegal gratification to any persons/ authority connected with the bid process so as to influence the bid process and have not committed any offence under PC Act in connection with the bid.
  - 2) We disclose with that we have made / not made payments or propose to be made to any intermediaries (agents) etc in connection with the bid.
- (p) Bank information for e- Payment system as per **Form-14&15**.
- (q) The proposed methodology and program of construction, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion **Form-10**
- (r) Plant and equipment proposed for the Project **Form-11**
- (s) Historical Contract Non-Performance Pending Litigation and Litigation History-**Form-7 &8**
- (t) Details of Tenderer for refund of EMD through E-Payment, if applicable **Form-13**
- (u) Tenderers shall quote for the whole of the item as per Scope of Work on a single responsibility basis, such that the total Tender Price covers all the Contractor’s obligations mentioned in the Tender Document
- (v) MAF as per **Form 21/D**.

**19.2 Part II : “Price Bid”**

Tenderers shall provide price in the “**Price Bid**” as per the Bill of Quantities (**Schedule II**) in e-tender portal, which shall be duly priced as per Clause no.13.1 above.

Tenderers shall provide price in the manner and detail called for Bid (Financial Proposal). The price shall only be mentioned in the BOQ uploaded in the e-tender portal and the quoted price shall be inclusive of all taxes and duties excluding GST

**20. Deadline for Submission of the Bids:**

E-tenders attaching all documents shall be submitted ‘on-line’ in the e tender portal strictly in accordance with the terms and conditions of tender document before the time and the day notified in Bid Information Sheet of NIT.

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## 21. Bid Opening

The Chief Mechanical Engineer or his representative will open the tenders in the web portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT). Technical Bid shall be opened in the office of the **Chief Mechanical Engineer, Cochin Port Authority** at 15.30 Hours on the last date fixed for receiving the Tenders.

Failure to submit Bid Security (EMD) or valid NSIC/MSME/UAM registration certificate will make the tender defective and will be treated invalid and price bids of those tenderers will not be opened.

## 22. Bid Opening – Price Bid:

Price Bid of those tenderers found responsive in the evaluation of Technical bid, will be opened later. Short listed bidders will receive intimation through E-tender portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT).

## 23. Clarification of Bids:

The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted.

No Bidder shall contact the Employer on any matter relating to his bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, he should do so in writing.

Any effort by the Bidder to influence the Employer's bid evaluation, bid comparison or contract award decisions, may result in the rejection of his bid.

## 24. Examination of Bids and Determination of Responsiveness:

24.1 Prior to detailed evaluation of Bids, Cochin Port Authority will determine whether each Bid

- a) meets the minimum eligibility criteria defined in Clause 3 under NIT.
- b) is accompanied by the required cost of bid document and Bid security(EMD) or MSME/UAM reg. certificate
- c) is responsive to the requirements of the Bidding documents.

24.2 A responsive Bid is one which conforms to all the terms, conditions and specification of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality or performance of the Works;

- a) which limits in any substantial way, the Employer's rights or the Bidder's obligations under the Contract; or
- b) whose rectification would affect unfairly the competitive position of other Bidders presenting responsive Bids.
- c) Undertakes in the Technical Bid that he has not incorporated any conditions in the Financial Bid.
- d) **The financial evaluation will be carried out together for all the items and contract will be awarded to the overall lowest offer.**

24.3 If a Bid is not substantially responsive, it shall be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

## 25. Evaluation and Comparison of Bids:

The Employer will evaluate and compare only the Bids determined to be responsive in accordance with Clause 24.

### 25.1 Evaluation of Price Bid

- a) The tenderers shall quote their rates for the items as per schedule, excluding GST, in the E-tender portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT) on percentage basis.
- b) Only those tenders, as determined to be substantially responsive to the requirements of the Tender Documents will be evaluated. Other non-responsive tenders will be rejected. Cochin Port's decision on this shall be final, conclusive and binding.
- c) In order to determine the lowest evaluated bid, Cochin Port Authority will consider overall lowest of all the items together.

## 26. Alteration of tender documents:

No alteration shall be made in any of the tender documents or in the Bill of Quantities and the tender shall comply strictly with the terms and conditions of the tender document. The Employer may however ask any tenderer for clarifications of his tender if required. Nevertheless, no tenderer will be permitted to alter his tender price after opening of the tender.

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**27. Alternative conditions and Proposal:**

The Tenderer shall note that alternative or qualifying tender conditions, or alternative design proposal for whole or part of the work will not be acceptable. Tenders containing any qualifying conditions or even Tenderer's clarifications in any form will be treated as non-responsive and will run the risk of rejection. Price Bid of such Tenderer's will not be opened.

**28. Award of Contract:**

The Employer will award the Contract to the bidder whose bid has been determined to be responsive to the bidding documents and who has offered the lowest evaluated bid price, provided that such bidder has been determined to be:

1. Eligible in accordance with the provisions of Clause 3 under NIT, and
2. Qualified in accordance with the provisions of Clause 3.

**29. Letter of Award ("LoA")**

Prior to expiry of the validity or extended validity period of the Tender, the Employer will notify the Successful Bidder through e-mail confirmed by registered letter that its Tender has been accepted. This Letter (hereinafter and in the Contract Conditions referred to as the "Letter of Award" (of the Tender) or "LoA") shall specify the sum which the Employer will pay the Contractor (hereinafter and in the Contract Conditions referred to as the "Contract Price") in consideration of the execution and completion of the Works for the Project and the remedying of any defects therein by the Contractor in terms of the Contract.

**30 Performance Security:**

30.1 Within not later than 21 days from the date of receipt of the Letter of Acceptance by e-mail or within such time as extended by the Employer, the Successful Tenderer shall deliver to the Employer, a Performance Security for an amount equivalent to **5% of the total Contract price including taxes & duties**, rounded off to the nearest Rs.1000/- in any one of the following forms:

- i) Insurance Surety Bond/ Banker's Cheque/ Account Payee Demand Draft from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority
- ii) An irrevocable Bank Guarantee (BG) enforceable and encashable at Cochin, drawn in favour of FA&CAO, CoPA from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority.
- iii) Payment online in an acceptable form safeguarding the purchaser's interests in all respects.

30.2 If the performance security is provided by the successful Bidder in the form of a Bank Guarantee, the BG shall be issued in favor of Cochin Port Authority in the Format enclosed in **Form-17**.

The BG furnished towards the Performance Security shall be valid for a period until a date, 60 days from the day of expiry of the defect liability period (5 years) stipulated as per the terms of the contract.

30.3 Unless Performance Security is furnished within the period as specified above or such extension of that period as may be permitted by the Engineer in writing, the Earnest Money will be liable to forfeiture and the Contract to cancellation.

30.4 Performance Security will be released/ refunded to the contractor not later than 14 days from the date of completion of defect liability period.

30.5 The Security Deposit will not carry any interest.

30.6 The successful tenderer will be required to furnish Performance Guarantee in the form of irrevocable bank guarantees as security for due performance of the contract in the proforma at Form 17. The above performance guarantee shall be produced in bank guarantee, issued by Nationalised Bank/ Scheduled Bank in India of value equal to 5% of the total amount quoted for the items of Supplying and fixing highmast/ street light fittings.

The bank guarantee thus furnished shall be valid for 5 years from the date of completion of the installation of the highmast/ street light fittings and completion of the same certified by the Engineer in charge.. The BG thus furnished will be retained as a security for the due and proper fulfillment of the performance of the highmast/ street light fittings for 5 years from the date of completion of the installation of the highmast/ street light fittings and completion of the same certified by the Engineer in charge. Such BG shall be encashed as decided by the Chief Mechanical Engineer, CoPA whose decision

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will be final and binding on the contractor on failure of contractor to perform or non fulfillment by the contractor of the terms and conditions of the work of providing and fixing of the highmast/ street light fittings or on performance failure of highmast/ street light fittings supplied and installed as per the requirement in the contract.

The yearly penalty cost calculated as per Annexure - 7 have to be remitted by the contractor within 30 days from the date of intimation failing which, the penalty cost will be deducted from the security deposit. In case, the penalty cost deducted from the SD, the contractor has to upkeep the security amount to 10% of contract value till completion of guarantee period.

### **31. Forfeiture of Performance Security**

Provisions of Sanctions for Violation as detailed under shall be applicable for forfeiture of Performance Security in case of a decision by the Employer to forfeit the same without assigning any reason for imposing Sanctions for Violation.

#### **31.1 Sanctions for Violations:**

Any breach of the aforesaid provisions by the Tenderer or any one employed by it or acting on its behalf (whether with or without the knowledge of the Tenderer) shall entitle the Employer to take all or any one of the following actions, wherever required:-

- (i) The Security Deposit/Performance Security shall stand forfeited either fully or partially, as decided by the Employer and the Employer shall not be required to assign any reason therefore.
- (ii) To immediately cancel the Contract, if already signed, without giving any compensation to the Tenderer.
- (iii) To cancel all or any other Contracts with the Tenderer. The Tenderer shall, be liable to pay compensation for any loss or damage to the Employer resulting from such cancellation/rescission and the Employer shall be entitled to deduct the amount so payable from the money(s) due to the Tenderer.
- (iv) To debar the Tenderer from participating in future tendering processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the Employer.
- (v) To recover all sums paid in violation of the Tender by Tenderer(s) to any middleman or agent or broker with a view to securing the contract.
- (vi) Forfeiture of Performance Security in case of a decision by the Employer to forfeit the same without assigning any reason for imposing sanction for violation of this Tender.

31.2 The Employer will be entitled to take all or any of the actions mentioned above by the Tenderer or any one employed by it or acting on its behalf (whether with or without the knowledge of the Tenderer), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

31.3 The decision of the Employer to the effect that a breach of the provisions of this Tender has been committed by the Tenderer shall be final and conclusive on the Tenderer. However, the Tenderer can approach the Independent Monitor(s) appointed for the purposes of this Pact [In case Integrity Pact is applicable].

### **33. Retention Money:** Retention Money @ 5% shall be retained from each payment due to the Contractor.

- a. Retention Money shall be deducted at 5% of the gross amount of the bill from the first Running Account bill onwards till the recovered sum along with Performance Security amounts to 10% of the Contract value or the value of the work done whichever is higher at all times. **Retention Money shall be refunded to the Contractor after two months after Defect liability/Guarantee period.**
- b. If the Cost of Work done exceeds the Contract Value, the total amount retained as Security Deposit considering the Performance Security initially submitted together with the Retention Money recovered from the running account bills, shall amount to 10% of the Cost of Work done.
- c. In cases where cost of Work done exceeds the Contract Value while releasing the Retention Money

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after payment of Final Bill, only 5% cost of Work done is released, instead of the entire Retention Money recovered from the bills. The balance amount shall be retained; to make up for the shortage in the Performance Security, upto the completion of Defects Liability Period.

**34. Signing of Agreement**

After furnishing the Performance Security, the successful tenderer will be required to execute an Agreement at his expense within 28 (twenty eight) days from the date of LoA, on Kerala State Stamp Paper of appropriate value in the prescribed form. The agreement as finally executed will include the Employer's Bid Documents and the Bidder's offer as finally accepted by the EMPLOYER together with addendum/corrigendum, bid clarification and all correspondences exchanged between EMPLOYER and the bidder, if any. Till the formal agreement is executed, the Letter of Acceptance together with the offer as finally accepted along with correspondences shall form a binding contract between the two parties.

**35. Release of Bid Security /EMD:**

The Bid Security/EMD of unsuccessful bidder other than L1 and L2 will be refunded immediately after ranking of the Bids. The bid security of L2 bidder shall be refunded immediately after entering into agreement with L1 bidder and acceptance of the Performance Security. The Bid Security of the successful bidder will be discharged after he has signed the Agreement and furnished the required Performance Security.

**36. Fraud and Corrupt Practices:**

36.1 The bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this document, the Port shall reject the tender without being liable in any manner whatsoever to the bidder, if it determines that the bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "Prohibited Practices") in the Selection Process. In such an event, the Port shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Port for, inter alia, time, cost and effort of the Authority, in regard to the Tender, including consideration and evaluation of such Bidder's Proposal. Such Bidder shall not be eligible to participate in any tender or RFP issued by the Authority during a period of 2 (two) years from the date such Bidder is found by the Authority to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

36.2 For the purposes of this Clause, the following terms shall have the meaning hereinafter respectively assigned to them:

a) "corrupt practice" means

i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly with the Selection Process or the LOA or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process; or

ii) engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LOA or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the Authority in relation to any matter concerning the Project;

b) "fraudulent practice" means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;

c) "coercive practice" means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person's participation or action in the Selection Process;

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- d) “restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Selection Process.
- e) “undesirable practice” means
  - i. establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or
  - ii. having a Conflict of Interest

**31. Rejection of Tender:**

Any Tender not conforming to the foregoing instructions will not be considered. The Employer does not bind himself to accept the lowest or any tender and has the right to reject any tender without assigning any reason thereof. No representation whatsoever will be entertained on this account.

**SIGNATURE OF BIDDER**

**SECTION III**  
**GENERAL CONDITIONS OF CONTRACT (GCC)**

**A. General**  
**1. Definitions**

- a) Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.
- b) Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.
- c) Compensation Events are those defined in Clause 44
- d) The Completion Date is the date of completion of the Work as certified by the Engineer or his nominee in accordance with Sub Clause 52
- e) The Contract is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2(c) below.
- f) The Contract Data defines the documents and other information which comprise the Contract
- g) The Contractor is a person or corporate body who Bid to carry out the Works has been accepted by the Employer.
- h) The Contractor's Bid is the completed Bidding documents submitted by the Contractor to the Employer.
- i) The Contract Price is the price stated in the letter of acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
- j) Days are calendar days, months are calendar months.
- k) A Defect is any part of the Works not completed in accordance with the Contract.
- l) The Defects Liability Period is the period named in the Contract Data and calculated from the Completion Date.
- m) The Employer is the party who will employ the Contractor to carry out the Works.
- n) Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- o) The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.
- p) The Intended Completion Date is the date on which it is intended that the Contractor shall complete the works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer or his nominee by issuing an extension of time.
- q) Market Rate is the rate as decided by the Engineer on the basis of the cost of materials and labour at the Site where the Work is to be executed plus 15% to cover all overheads and profits.
- r) Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.

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- s) The Engineer or his nominee is the person named in the Contract Data (or any other competent person appointed and notified to the Contractor to act in replacement of the Engineer or his nominee) who is responsible for supervising the Contractor, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time and valuing the Compensation Events.
- t) Plant is any integral part of the Works which is to have mechanical, electrical, electronic or chemical or biological function.
- u) Ruling Percentage is the percentage by which the tendered amount of the works actually awarded is higher or lower than the corresponding estimated amount of the works actually awarded.
- v) The Site is the area defined as such in the Contract Data.
- w) Site Investigation Reports are those which were included in the Bidding documents and are factual interpretative reports about the surface and sub-surface conditions at the site.
- x) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer or his nominee.
- y) The Start Date is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Date
- z) A Sub Contractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.
- aa) Temporary Works are works designed, constructed, installed and removed by the Contractor which are needed for construction or installation of the Works
- bb) A Variation is an instruction given by the Engineer or his nominee which varies the Original Works.
- cc) The Works are what the Contract requires the Contractor to construct, install and turn over to the Employer as defined in the Contract Data.

## **2. Interpretation**

- a) In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer or his nominee will provide instructions clarifying queries about the Conditions of Contract.
- b) If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works).
- c) The documents forming the Contract shall be interpreted in the following order of priority:
  - (1) Agreement
  - (2) Letter of Acceptance and notice to proceed with works
  - (3) Contractor's Bid
  - (4) Contract Data
  - (5) Conditions of Contract including Special Conditions of Contract
  - (6) Specifications
  - (7) Drawings
  - (8) Bill of quantities and
  - (9) Any other documents listed in the Contract Data as forming part of the Contract.

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### **3. Language and Law**

- a) The language of the Contract and the law governing the Contract are stated in the Contract Data.

### **4. Engineer or his nominee's Decisions**

- a) Except where otherwise specifically stated, the Engineer or his nominee will decide contractual matters between the Employer and the Contractor in the role representing the Employer.

### **5. Delegation**

- a) The Engineer or his nominee may delegate any of the duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

### **6. Communications**

- a) Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act 1872).

### **7. Contract Agreement**

- a) A suitable form is annexed as "FORM OF AGREEMENT" to the Tender Document. Upon signing the Contract Agreement, the Contractor shall make copies of Contract Documents, as indicated in the Contract Data, in hardbound cover which shall cover documents used in Contract/Agreement and provide the same to the Employer at no extra cost.
- b) Data made available by the Employer in accordance with provisions of the Condition of Contract shall be deemed to include data listed elsewhere in the Contract and open for inspection at the office of the Engineer as indicated in the Contract data of the Cochin Port Authority (by prior appointment with the Engineer).

### **8. Subcontracting**

- a) The Contractor may subcontract with the approval of the Engineer or his nominee but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

Notwithstanding any subcontracting with such approval as required under above and notwithstanding that the Engineer shall have received copies of any sub-contract, the Contractor shall be solely responsible for the quality and proper execution of the works, performance of all conditions of contract in all respects as if such subletting had not taken place and as if such work has been done directly by the Contractor.

If any Sub-Contractor engaged upon the works at the site executes any work, which in the opinion of the Engineer or his nominee is not in accordance with the Contract condition, written notice may be given to the Contractor requesting him to terminate such sub contract and the Contractor, upon receipt of such notice shall terminate such sub contract and the said Sub Contractor shall forthwith leave the works, failing which the Employer shall have right to remove such Sub Contractors from site. No action taken by the Employer under this clause shall relieve the Contractor of any of his liabilities under the contract or give rise to any compensation, extension of time or otherwise.

### **b) Observance by Sub-Contractors**

The Contractor shall be responsible for observance by his sub-Contractors of the foregoing provisions.

### **c) Other Contractors**

The Contractor shall co-operate and share the site with other Contractors, public authorities, utilities and the Employer between the dates given in the Schedule of other Contractors. The Contractor shall as referred to in the Contract Data, also provide facilities and services for them as described in the Schedule. The Employer may modify the schedule of other Contractors and shall notify the Contractor of any such modification.

### **9. Personnel**

- a) The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in *Signature of the Tenderer*

the Contract Data to carry out the functions stated in the Schedule or other personnel approved by the Engineer or his nominee. The Engineer or his nominee will approve any proposed replacement of key personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the schedule.

- b) If the Engineer or his nominee asks the Contractor to remove a person who is a member of the Contractor's staff from his work force stating the reasons, the Contractor shall ensure that the person leaves the site within seven days and has no further connections with the work in the contract.
- c) The Contractor shall engage an authorized agent experienced and qualified technical personnel for managing and supervising the work and shall see that all of them are always at the work spot during the working hours, personally checking all items of work. He shall take such orders as may be given to him by the Engineer-in-charge from time to time and shall be responsible to carry them out properly. In case contractor fails to provide an agent as per terms given above, EMPLOYER reserves the right to deduct a reasonable amount from the contractor's bill, subject to a maximum of Rs.25,000/- per month, for every month of absence

#### **10. Employer's and Contractor's Risks**

- a) The Employer carries the risks which this Contract states are Employer's risks and the Contractor carries the risks which this Contract states are Contractor's risks.

#### **11. Employer's Risks**

##### **The Employers risks are**

- (a) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract;
- (b) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and
- (c) any operation of the forces of nature (in so far as it occurs on the Site) which an experienced Contractor:
  - (i) could not have reasonably foreseen, or
  - (ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:
    - (A) prevent loss or damage to physical property from occurring by taking appropriate measures, or
    - (B) insure against.

#### **12. Contractor's Risks**

- a) All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.
- b) 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 usurped power or a cause solely due to use of occupation by the Employer of any portion of the work, any operation of the forces of nature that the Contractor could not have foreseen or reasonably provided against. (All of such are herein collectively referred to as the excepted risks).

#### **13. Insurance**

- a) The Contractor shall provide in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractors risks.
  - a) loss of or damage to the Works, Plant and Materials
  - b) loss of or damage to Equipment;
  - c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract; and
  - d) personal injury or death.
- b) Policies and certificates for insurance shall be delivered by the Contractor to the Engineer or his

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nominee for approval before the start date. All such insurances shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

- c) If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from any payments due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- d) Alterations to the terms of insurance shall not be made without the approval of the Engineer or his nominee.
- e) Both parties shall comply with all conditions of the insurance policies.

**14. Site Investigation Reports**

- a) The Contractor, in preparing the Bid, shall rely on the Site Investigation Report referred to in the Contract Data, supplemented by any information available to the Bidder.

**15. Queries about the Contract Data**

- a) The Engineer or his nominee will clarify queries on the Contract Data.

**16. Contractor to Construct the Works**

- a) The Contractor shall construct and install the works in accordance with the Specification and Drawings.
- b) The Contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the Specifications. The Contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer or his nominee and the Contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the Specifications specified in Contract Data or in any Bureau of Indian Standard or any other published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the Contract.
- c) The Contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

**d) SITE MAINTENANCE DURING CONSTRUCTION**

The Contractors shall time to time clear and remove all rubbish and obstructions from the site and the work area shall be kept clear and unobstructed at all times. Nothing extra shall be paid on this account.

**17. The Works to Be Completed by the Intended Completion Date**

- a) The Contractor may commence execution of the works on the Start Date and shall carry out the works in accordance with the program submitted by the Contractor as updated with the approval of the Engineer or his nominee, and complete them by the Intended Completion Date.
- b) The work shall be done in phases, in close co-ordination with civil/electrical/air conditioning false ceiling works and other works as directed by EMPLOYER.
- c) The Contractor shall note that the site for installation will be made available in parts or in phases. It is the responsibility of the contractor to programme his work accordingly. No extra amount will be paid on account of site being made available in phases/parts.

**18. Approval by the Engineer or his nominee**

- a) The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works or Permanent Works, in the case of Contractor's design to the Engineer or his nominee, who is to approve them if they comply with the specifications and Drawings.
- b) The Contractor shall be responsible for design of Temporary Works.

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- c) The Engineer or his nominee's Approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- d) All Drawings prepared by the Contractor for the execution of the temporary works, are subject to prior approval by the Engineer or his nominee before their use.

**19. Safety**

- a) The Contractor shall be responsible for the safety of all activities on the Site.
- b) Reporting of Accidents

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the local police authorities immediately by the available means.

**20. Discoveries**

- a) Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Engineer or his nominee of such discoveries and carry out the Engineer or his nominee's instructions for dealing with them.

**21. Possession of the Site**

- a) The Employer shall give possession of all parts of the Site to the Contractor, free from encumbrances. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be a Compensation Event.

**22. Access to the Site**

- a) The Contractor shall allow the Engineer or his nominee and any person authorised by the Engineer or his nominee access to the Site or to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured, fabricated and /or assembled for the works.
- b) Port Entry Permission - The Contractor shall submit prior application for Port entry passes to the concerned Port authority for his labours and the staffs engaged in the works. The Contractor shall retain the original passes obtained by them in respect of their labour and staff engaged in the Works and produce the same to the Engineer as and when called for. It should not be either destroyed or allowed to be taken by the labour/staff after its use.

**23. Instructions**

- a) T  
The Contractor shall carry out all instructions of the Engineer or his nominee which comply with the applicable laws where the Site is located.

**24. Disputes**

If the Contractor believes that a decision taken by the Engineer or his nominee was either outside the authority given to the Engineer or his nominee by the Contract or that the decision was wrongly taken, the decision shall be referred to the Employer within 28 days of the notification of the Engineer or his nominee's decision.

**25. Settlement of Disputes & Arbitration**

**25.1. Dispute Resolution**

- i) The Parties agree to use their best efforts for amicably resolving all Disputes arising under or in respect of this Agreement by mutual discussions.
- ii) Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation,

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termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:-

- (i) If the Contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Engineer in writing for written instruction or decision. Thereupon, the Engineer shall give his written instructions or decision within 30 days of receipt of the Contractor's letter.
- (ii) If the Engineer fails to give his instructions or decision in writing within the aforesaid period or if the Contractor is dissatisfied with the instructions or decision of the Engineer, the Contractor may, within 15 days of the receipt of Engineer's decision, appeal to the Chairperson who shall afford an opportunity to the Contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Chairperson shall give his decision within 30 days of receipt of Contractor's appeal.
- (iii) If the Contractor is dissatisfied with this decision, the Contractor shall within a period of 30 days from receipt of the said decision, shall take further action in accordance with the conciliation procedure set forth in Clause 25.2.3.

## **25.2. Conciliation**

- 25.2.1.** In the event of any dispute or differences between the Port Authorities and the Contractor, which could not be resolved amicably by mutual consultations / Arbitration, then the Chairperson of Cochin Port Authority may refer such unresolved disputes or differences to the Conciliation and Settlement Committee (CSC) comprising of independent subject experts, constituted by the IPA and adopted by the Board of Major Port Authority for Cochin Port in its meeting dated 02.03.2022, to enable speedy disposal of pending / new cases.
- 25.2.2.** Either the Port or the Contractor may send a reference about the dispute to the other party. The party initiating conciliation shall send to the other party a written invitation to settle or conciliate under this Part, briefly identifying the subject of the dispute. The concerned Technical Division in the Port shall send a request or response within 7 working days if a reference is received from the contractor thereby inviting the Contractor to depute a team of their representatives to interact with the Contract Management Division (CMD) constituted by each Port.
- 25.2.3.** The procedure for referring disputes to the CSC will be as per the guidelines issued by IPA dated 05.10.2021, its amendment dated 21.03.2022 and subsequent amendments, if any. Recourse to such conciliation shall be open before, during or after the arbitration proceedings. The award of the Conciliation Committee / Council, if agreed by both the parties, shall then be placed for consideration of the Board of Major Port Authority for subject to the delegation of powers.

## **25.3. Arbitration**

- (i) Any disputes of a total value less than Rs.10 crores shall be resolved through arbitration by a Sole Arbitrator appointed by mutual consent of the parties.
- (ii) Either party shall within a period of 30 days from the date of termination of conciliation proceedings, give notice to other party for appointment of arbitrator.
- (iii) 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 sole arbitrator shall be appointed jointly by both parties. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.
- (iv) It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each such dispute along with the notice for appointment of arbitrator and giving reference to the rejection by the Chairperson of the appeal.
- (v) It is also a term of this contract that if the Contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer that the final bill is ready for payment, any claim of the Contractor shall be deemed to have been abandoned and absolutely barred and the Employer or his authorized representative shall be discharged and released of all liabilities under the contract in respect of these claims.

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- (vi) The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.
- (vii) It is also a term of this contract that the Arbitrator / Arbitral Tribunal shall adjudicate only on such disputes as are referred to him and give separate award against each dispute and claim referred to.
- (viii) It is also a term of the contract that if any fees are payable to the arbitrator the same shall be paid equally by both the parties.
- (ix) It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he / they issues notice to both the parties calling them to submit their statement of claims and counter statement of claims.
- (x) The seat and venue of the arbitration shall be at Cochin.
- (xi) The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any party by whom and in what manner, such costs or any part thereof shall be paid.

#### **25.4. Litigation**

- (i) Any disputes of total value above Rs. 10 crores not covered in the aforesaid arbitration clause shall be adjudicated by the courts.
- (ii) Only Courts in Cochin alone shall have jurisdiction to adjudicate any disputes between the parties.

#### **25.5. Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD)**

Notwithstanding anything contained above, in the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contracts between Central Public Sector Enterprises (CPSEs/ Port Authorities inter se and also between CPSEs and Government Departments/ Organizations, such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22.05.2018.

#### **26. Computerised Measurement Book**

- a) Engineer or his nominee shall, except as otherwise provided, ascertain and determine by measurement, the value of work done in accordance with the contract.
- b) All measurement of all items having financial value shall be entered by the Contractor and compiled in the shape of the Computerised Measurement Book having pages of A-4size as per the format of the department so that a complete record is obtained of all the items of works performed under the Contract.
- c) All such measurements and levels recorded by the Contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the Contractor from the Engineer or his authorized representative as per interval or program fixed in consultation with Engineer or his authorized representative. After the necessary corrections made by the Engineer or his nominee, the measurement sheets shall be returned to the Contractor for incorporating the corrections and for resubmission to the Engineer for the dated signatures by the Engineer or his nominee and the Contractor or their representatives in token of their acceptance.
- d) Whenever bill is due for payment, the Contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer- and/or his authorized representative. The Contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks. The final, fair, computerized measurement book given by the Contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in

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the measurements would thereafter be allowed. If at all any error is noticed, the Contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the Divisional Office records, and allotted a number as per the Register of Computerised MBs. This should be done before the corresponding bill is submitted to the Division Office for payment. The Contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

- e) The Contractor shall also submit to the department, separately his computerized Abstract of Cost and the Bill based on these measurements, duly bound, and its pages machine numbered along with three spare copies of the Bill. Thereafter, this Bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.
- f) The Contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.
- g) Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the Specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.
- h) The Contractor shall give not less than seven days' notice to the Engineer or his authorised representative in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer or his authorised representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.
- i) Engineer or his authorised representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.
- j) It is also a term of this Contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the Contractor from liabilities from any over measurement or defects noticed till completion of the Defects Liability Period.

## **B. TIME CONTROL**

### **27. Program**

- a) After the acceptance of his Tender, the Contractor shall, within fifteen days, submit to the Engineer-in-Charge for his approval, a detailed programme taking into account the total time period stipulated in the contract showing the order, the procedure and method in which he proposes to carry out the works.
- b) He shall furnish the particulars in writing of his arrangements of manpower, plant and machinery and all other resources owned and dedicated to this work. Cash flow during the execution of project for procurement of materials and for carrying out of the works including temporary works which the Contractor intends to construct shall also be furnished.
- c) In support of this programme, the Contractor shall submit a work schedule in the form of a CPM/PERT Chart. The Engineer-in-Charge shall if necessary modify the programme submitted by the Contractor and approval shall be given by the Engineer-in-Charge indicating the major milestones. The programme approved by the Engineer-in-Charge shall be final and binding on the Contractor. The approval by the

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Engineer-in-Charge of such programme, or furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the contract.

- d) During the progress of work, the Contractor shall be required to furnish the resource mobilization plan as required by Engineer-in-Charge to keep up the target date of completion.
- e) This CPM/PERT programme will be required to be updated every month or more frequently as directed by the Engineer-in-Charge, based on the actual progress, resource mobilisation and other field conditions actually prevailing.
- f) **PROGRESS REPORTS AND SCHEDULES**  
The Contractor shall submit to the Engineer-in-Charge by the third day of every fortnight, six (6) copies of a report in a duly approved format showing the progress made in construction of the works, mobilization of resources etc. during the previous fortnight.
- g) The Contractor shall also submit by the end of every month his anticipated progress schedule for all items of work for the following month in six (6) copies in an approved proforma to the Engineer-in-Charge.
- h) An order book of work shall be maintained and the Contractor shall acknowledge the orders given by the Engineer-in-charge and shall carry them out accordingly.
- i) The Contractor shall particularly note that the tender rates of the various items shall be inclusive of all incidental charges, such as bailing, shoring, bunding, barricading and lighting, etc. if found necessary during execution and no extra shall be due therefore on any account to the Contractor.
- j) The Contractor should see that the labour and staff employed by him behave in a proper manner and should dispense with services of such person or persons from the site as directed by the Engineer-in-charge.

**28. Revised Program**

- a) The Engineer or his nominee's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer or his nominee again at any time for approval. A revised Program is to show the effect of Variations and Compensation Events.

**29. Extension of the Intended Completion Date**

- a) The Engineer or his nominee shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost.
- b) The Engineer or his nominee shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer or his nominee for a decision upon the effect of a Compensation Event or Variation or any other events causing delay, beyond the control of the Contractor and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.
- c) Such Request for extension of time, to be eligible for consideration, shall be made by Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- d) **Extension of Time:**
  - i) If at any time during performance of the contract, the Contractor or its Sub-Contractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services, pursuant to GCC Clause 29, the Contractor shall promptly notify the Employer in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Contractor's notice, the Employer shall evaluate the situation and may at its discretion extend the Contractor's time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.
  - ii) Except in case of Force Majeure, as provided under GCC Clause 33, a delay by the Contractor in the performance of its Delivery and Completion obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to GCC Clause 48 (Liquidated Damages), unless an extension of time is agreed upon, pursuant to GCC Clause 29.

**30. Delays Ordered by the Engineer or his nominee**

- a) The Engineer or his nominee may instruct the Contractor to delay the start or progress of any activity within the Works.

**31. Management Meetings**

- a) Either the Engineer or his nominee or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- b) The Engineer or his nominee shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer or his nominee either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

**32. Early Warning**

- a) The Contractor is to warn the Engineer or his nominee at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price or delay the execution of works. The Engineer or his nominee may require the Contractor to provide an estimate of the expected effect of the event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- b) The Contractor shall cooperate with the Engineer or his nominee in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer or his nominee.
- c) The Contractor shall immediately give notice in writing to the Engineer or his nominee upon happening of any event as detailed below if the work is delayed by:
  - i) force majeure, or
  - ii) abnormally bad weather, or
  - iii) serious loss or damage by fire, or
  - iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
  - v) delay on the part of other Contractors or tradesmen engaged by Engineer in executing work not forming part of the Contract, or
  - vi) any other cause which, in the absolute discretion of Engineer, is beyond the Contractor's control.

**33. Force Majeure**

"Force Majeure" means an exceptional event or circumstance:

- (a) which is beyond a Party's control,
- (b) which such Party could not reasonably have provided against before entering into the Contract,
- (c) which, having arisen, such Party could not reasonably have avoided or overcome, and
- (d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- (i) war and hostilities (whether war be declared or not), invasion, act of foreign enemies;
- (ii) rebellion, revolution, insurrection, or military or usurped power, or civil war;
- (iii) ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste, from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;

- (iv) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds; and
- (v) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Sub Contractors and arising from the conduct of the Works;
- (vi) floods, tornadoes, earthquakes and landslides.

**C. QUALITYCONTROL**

**34. Identify Defects**

- a) The Engineer or his nominee shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer or his nominee may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer or his nominee considers may have a Defect.

**35. Tests**

- a) If the Engineer or his nominee instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and if the test shows that it has defect, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

**36. Defect Liability**

- a) The Engineer or his nominee shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- b) Every time notice of a Defect is given, the Contractor shall correct the notified defect within the length of time specified by the Engineer or his nominee's notice. To the intent that the works shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall :
  - (a) complete the work, if any, outstanding on the date stated in the Taking-Over Certificate within the date to be intimated by the Engineer and
  - (b) execute all such work of amendment, reconstruction, and remedying defects, shrinkages or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.

**c) Cost of Remedying Defects**

All work referred to in Sub-Clause 36(b) shall be executed by the Contractor at his own cost if the necessity thereof is, in the opinion of the Engineer, due to:

- a) The use of materials, Plant or workmanship not in accordance with the Contract, or
- b) Where the Contractor is responsible for the design of part of the Permanent Works, any fault in such design, or the neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

**d) Defects Liability Certificate**

The Contract shall not be considered as completed until a Defects Liability Certificate shall have been signed by the Engineer and delivered to the Employer, with a copy to the Contractor, stating the date on which the Contractor shall have completed his obligations to execute and complete the Works and remedy any defects therein to the Engineer's satisfaction. The Defects Liability Certificate shall be given by the Engineer within 28 days after the expiration of the Defects Liability Period, or, if different defects liability periods shall become applicable to different Sections or parts of the Permanent Works, the expiration of the latest such period, or as soon thereafter as any works instructed, pursuant to Clauses 36, have been completed to the satisfaction of the Engineer.

**e) Unfulfilled Obligations**

Notwithstanding the issue of the Defects Liability Certificate the Contractor and the Employer shall remain liable for the fulfillment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time such Defects Liability Certificate is issued and, for the purposes of determining the nature and extent of any such

obligation, the Contract shall be deemed to remain in force between the parties to the Contract.

f) **Uncorrected Defects.**

If the Contractor has not corrected a Defect within the time specified in the Engineer's or his nominee's notice the Engineer or his nominee will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

**D. COSTCONTROL**

**37. Bill of Quantities**

- a) The Bill of Quantities shall contain items for the construction, supply, installation, testing and commissioning work to be done by the Contractor.
- b) The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

**38. Changes in the Quantities**

- a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 % provided the change exceeds (+)10% of initial Contract Price, the Engineer or his nominee shall adjust the rate(s), to allow for the change.
- b) The Engineer or his nominee shall not adjust rates for changes in quantities if thereby the Initial Contract Price is exceeded by more than 10% except with the prior approval of the Employer.
- c) If requested by the Engineer or his nominee where the quoted rate (s) of any item(s) is abnormally high, the Contractor shall provide the Engineer or his nominee with a detailed cost breakdown of such rate in the Bill of Quantities.

**39. Variations**

- a) The Engineer shall make any Variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the Contractor to do and the Contractor shall do any of the following:
  - (a) increase or decrease the quantity of any work included in the Contract,
  - (b) omit any such work,
  - (c) change the character or quality or kind of any such work,
  - (d) change the levels, lines, position and dimension of any part of the Works,
  - (e) execute additional work of any kind necessary for the completion of the Works,
  - (f) change any specified sequence or timing of construction of any part of the Works.

No such Variation shall in any way vitiate or invalidate the Contract, by the effect, if any, of all such Variations shall be valued in accordance with Clause 40. Provided that where the issue of an instruction to vary the works is necessitated by some default of or breach of contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the Contractor. All Variations shall be included in updated Programs produced by the Contractor.

b) **Instructions for Variations**

The Contractor shall not make any such Variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.

**40. Payments for Variations**

- a) Variation permitted shall not exceed (+) 25% in quantity of each individual item, and (+)10% of the total contract price. Within 14 days of the date of instruction for executing varied work, extra work or substitution, and before the commencement of such work, notice shall be given either (a) by the Contractor to the Employer of his intention to claim extra payment or a varied rate or price, or (b) by the Employer to the Contractor of his intention to vary rate or price.
- b) For items not existing in the Bill of Quantities or substitution to items in the Bill of Quantities, rate

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payable should be determined by methods given below and in the order given below.

- i) Rates and prices derived from the rates of similar items in the Contract.
  - ii) Rates and prices in the Schedule of Rates applicable to the Contract plus Ruling Percentage.
  - iii) Market rates of materials and labour, hire charges of plant and machinery used, plus 15% for overheads and profits of Contractor.
- c) For items in the Bill of Quantities but where quantities have increased beyond the variation limits, the rate payable for quantity in excess of the quantity in the Bill of Quantities plus the permissible variation shall be as determined by methods given below.
- i) Rates and prices in the Schedule of Rates applicable to the Contract plus Ruling Percentage.
  - ii) Market rates of materials and labour, hire charges of plant and machinery used, plus 15% for overheads and profits of Contractor.  
whichever is lower, but not less than the rate in the Bill of Quantities.
- d) If there is delay in the Employer and the Contractor coming to an agreement on the rate of an extra item, rates as proposed by the Employer shall be payable provisionally till such time as the rates are finally determined or till date mutually agreed.
- e) If the Engineer or his nominee decides that the urgency of varying the work prevent a quotation being given and considers not delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

#### **41. Cash flow forecasts**

- a) When the Program is updated, the Contractor is to provide the Engineer or his nominee with an updated cash flow forecast.

#### **42. Payment Certificates**

**42.1.** The Contractor shall submit to the Engineer or his nominee monthly statements of the estimated value of the work completed less the cumulative amount certified previously.

**42.2.** The Engineer or his nominee shall check the Contractors' monthly statement within 14 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in sub-clause 51.6 of the Contract Data (Secured Advance).

- a) The value of work executed shall be determined by the Engineer or his nominee.
- b) The value of work executed shall comprise the value of the quantities of the items in the Bill of quantities completed.
- c) The value of work executed shall include the valuation of variations and Compensation Events.
- d) The Engineer or his nominee may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

#### **43. Payments**

- a) Bills shall be prepared and submitted by the Contractor. Joint measurements shall be taken continuously and need not be connected with billing stage. System of 4 copies of measurements, one each for Contractor, Employer and Engineer or his nominee, and signed by both Contractor and Engineer or his nominee shall be followed.
- b) Payment of Bills for civil works shall be regulated as detailed hereunder:
  - i) Interim Bills shall be paid within 21 days of date of submission of bills in full shape by the Contractor. 75% of the bill amount shall be paid within 7 days of submission of the bill, if on request by the Contractor. Balance amount of the verified bill shall be paid within 21 days of the submission of the bill.
  - ii) Final Bill shall be paid within 3 months as detailed below on issue of Taking Over Certificate by the Engineer or his nominee. The Contractor shall submit final Bill within 30 days of issue of Taking Over Certificate. Engineer or his nominee shall check the bill within 30 days after its receipt and return the bill to Contractor for corrections, if any. The Contractor should re-submit the bill with

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corrections within 15 days of its return by the Engineer or his nominee. The re-submitted bill shall be checked and paid within 30 days of its receipt.

- c) Payment for Electrical and Mechanical works shall be regulated as detailed below:
- i) The Contractor shall be entitled upon certificates of the Engineer or his nominee to payments in accordance with the following provisions:
    - I) For supply portion :
      - i) 75% of the value, as certified by the Engineer or his nominee, of the materials from time to time delivered on the site.
      - ii) Balance 25% after completing the work in all respects, commissioning and handing over the installation to the Employer to the satisfaction of the Engineer and his nominee and his certification.
    - II) For erection portion :
      - i) 85% of the value as certified by the Engineer or his nominee, of the installation portion on completion of the erection work under contract, for which payments are claimed.
      - ii) Balance 15% along with other payments if any, after completing the work in all respects, commissioning and taking over the installation by the Employer to the satisfaction of the Engineer and his nominee and his certification.
  - ii) For HT works, the work shall not be considered as completed until the installation is energized after obtaining approval certificate from Central Electrical Authority (CEA) and upon the issuance of taking over certificate by Engineer or his nominee. The final payment shall be made only after taking over the installation by the Employer.
- d) All the interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer or his nominee relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer- or his nominee-charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.
- e) Pending consideration of extension of date of completion interim payments shall continue to be made as herein provided, without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.
- f) No further claims shall be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished.
- g) If an amount certified is increased in a later certificate as a result of an award by the Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in the award. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.
- h) Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
- i) All payments to the Contractor under the contract shall unless otherwise stated elsewhere be made to the Contractor in Indian currency through e- payments through designated Bank.

#### **44. Compensation Events**

The following mutually agreed Compensation Events unless they are caused by the Contractor would be applicable:

- (a) The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.
- (b) The Employer modifies the schedule of other Contractors in a way which affects the work of

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- the Contractor under the contract.
- (c) The Engineer or his nominee gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety.
  - (d) Other Contractors, public authorities, utilities or the Employer does not work within the dates and other constraints stated in the Contract that cause delay or extra cost to the Contractor.
  - (e) The effect on the Contractor of any of the Employer's Risks.
  - (f) Any other Compensation Events listed in the Contract Data or mentioned in the contract.

Whenever any compensation event occurs, the Contractor will notify the Employer, within 14 days and provide a forecast cost of the compensation event.

If a Compensation Event would cause additional cost or would prevent the work being completed in the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Engineer or his nominee shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast has been provided by the Contractor, it is to be assessed by the Engineer or his nominee and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable the Engineer or his nominee shall adjust the Contract Price based on Engineer or his nominee's own forecast. The Engineer or his nominee will assume that the Contractor will react competently and promptly to the event.

Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss:

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the Board without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

**45. Rates for items to be inclusive of Taxes**

- a) The Contractor's rates and prices shall include all taxes, duties and fees including Port charges like wharfage, Port dues, berth hire, pilotage etc. if any applicable, all charges and taxes whatsoever excluding Goods and Service Tax (GST) [For Civil/Mechanical/ Electrical works invited through e-tender portal [www.tenderwizard.com](http://www.tenderwizard.com) /COPT and including Goods and Services Tax (GST) For Mechanical/Electrical works invited through e-tender portal [www.tenderwizard.com/COPT](http://www.tenderwizard.com/COPT) in respect of materials, labour and plant and all other things obtained or used by the Contractor for the execution and maintenance of the Work or any temporary works.
- b) GST as may be applicable from time to time shall be shown separately in the invoice. The invoice to be submitted by the Contractor shall include the GST Registration Number of the Contractor as well as the Employer.
- c) The Employer will perform such duties in regard to the deduction of such taxes at sources as per applicable law. Any new taxes, levies, duties, imposed after signing the Contract shall be reimbursed by the Employer on production of documentary evidence.
- d) The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Work and of the rates and prices stated in the Schedule of Quantities.
- e) The percentages/ rates / lumpsum amount as applicable shall except in so far as the Contract otherwise provides, cover all obligations of the Contractor under this Contract and all matters and things necessary for the proper completion and maintenance of the Work. The percentages/ rates / lumpsum amount quoted for each item shall be all inclusive value of the finished Work as per drawings and specifications and shall cover the cost of all constructional plants, temporary works, appliances, materials, both for the Work and temporary works, labour and all other matter in connection with each item quoted for.

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#### **46. Currencies**

- a) All payments shall be made in Indian Rupees unless specifically mentioned.

#### **47. Retention**

- a) The Employer shall retain from each payment due to the Contractor the proportion stated in the Contract Data until Completion of the whole of the Works.
- b) Retention Money shall be deducted at 5% of the gross amount of the bill from the first Running Account bill onwards till the recovered sum along with Performance Security amounts to 10% of the Contract value or the value of the work done, whichever is higher at all times. Retention Money shall be refunded to the Contractor after One month after Defect liability/Guarantee period.

#### **48. Liquidated Damages**

- a) In case of delay in completion of the contract, liquidated damages (L.D) may be levied at the rate of half per cent (½%) of the contract price per week of delay, subject to a maximum of 10 per cent of the contract price. the amount of liquidated damages can be adjusted or set-off against any sum payable to the contractor.
- i) the employer, if satisfied, that the works can be completed by the contractor within a reasonable time after the specified time for completion, may allow further extension of time at its discretion with or without the levy of L.D. in the event of extension granted being with L.D, the employer will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the contractor as agreed damages equivalent to half per cent (½%) of the contract value of the works for each week or part of the week subject to the ceiling defined in sub-clause 48 a.
- ii) the employer, if not satisfied that the works can be completed by the contractor, and in the event of failure on the part of the contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.
- iii) the employer, if not satisfied with the progress of the contract and in the event of failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.
- iv) in the event of such termination of the contract as described in clauses 48a(ii) or 48a(iii) or both the employer shall be entitled to recover LD upto ten per cent (10%) of the contract value and forfeit the security deposit made by the contractor besides getting the work completed by other means at the risk and cost of the contractor.
- b) **Reduction of liquidated damages**  
If, before the time for completion of the whole of the works or, if applicable, any section, taking over certificate has been issued for any part of the works or of a section, the liquidated damages for delay in completion of the remainder of the works or of that section shall, for any period of delay after the date stated in such taking over certificate, and in the absence of alternative provisions in the contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the works or section, as applicable. The provisions of this sub-clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.
- c) For levying LD, the employer is not required to have documentary evidence to quantify or prove the losses suffered by the employer due to delay in completion of work by the contractor, as per agreement conditions.

#### **49. Nominated Sub Contractors**

- a) All specialists, merchants, tradesmen and others executing any work or supplying any good, materials, Plant or services for which provisional Sums are included in the Contract, who may have been or be nominated or selected or approved by the Employer or the Engineer, and all persons to whom by virtue of the provisions of the Contract, the Contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, Plant or services, be deemed to be Sub Contractors to the Contractor and are referred to in this Contract as “Nominated Sub Contractors”.

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## **50. Securities**

- a) **Security Deposit (SD) shall be at 10% of the contract value or value of the work done whichever is higher and it shall consist of two parts:**
- (i) Performance Security to be submitted at award of the work
  - (ii) Retention Money to be recovered from Running Bills as detailed in Clause 47 above and Clause 33 in ITB
- The total amount thus deposited towards SD will be retained as security for the due and proper fulfillment of the contract and will not carry any interest. Such deposit shall be forfeited on failure to perform or non-fulfillment by the Contractor of the terms and conditions of the contract.
- b) **Performance Security shall be as below:**
- a) For civil works : 10 % of the Contract value (5% SD & 5% Retention)
  - b) For all Electrical and Mechanical works : 10% (5% SD & 5% Retention) of the Contract value.
  - c) The Performance Security shall be provided by the Contractor to the Employer not later than 21 days for domestic bids and 28 days for international bids from the date of letter of acceptance and shall be furnished in one of the following forms:
    - i. Insurance Surety Bond/ Banker's Cheque/ Account Payee Demand Draft from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority.
    - ii. An irrevocable Bank Guarantee (BG) enforceable and encashable at Cochin, drawn in favour of FA&CAO, CoPA from any Commercial Bank having its branch at Cochin acceptable by Cochin Port Authority.
    - iii. Payment online in an acceptable form safeguarding the purchaser's interests in all respects.
  - d) The BG furnished towards the Performance Security shall be valid for a period **until a date 30 days of 5 years** from the day of expiry of the defect liability period stipulated as per the terms of the contract.
  - e) Unless performance Security is furnished within the period as specified in clause 50b above or such extension of that period as may be permitted by the Engineer in writing, the Earnest Money will be liable to forfeiture and the contract to cancellation.
  - f) Performance Security will be released / refunded to the Contractor not later than 60 days from the date of completion of Defect Liability / warranty period of the work.

## **51. Cost of Repairs**

- a) Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability period shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

## **E. FINISHING THE CONTRACT**

### **52. Completion**

- a) After completion of the work, the Contractor will serve a written notice to the Engineer or his nominee/Employer to this effect. The Engineer or his nominee/Employer upon receipt of this notice shall conduct a complete joint survey of the work within 7 days and prepare a defects list jointly. The defects pointed out by the Engineer or his nominee/ Employer would be rectified by the Contractor within 14 days and thereafter acceptance report be signed jointly by the Contractor and the Employer. This joint acceptance report shall be treated as 'Completion Certificate'. The Completion Report / Certificate to the Contractor will be issued only after obtaining 'No Claim Certificate' from the Contractor in the format approved by the department stating that they have no further claims against CoPA in respect of the Work.
- b) **No Claim Certificate:**  
No dispute or difference on any matter whatsoever, pertaining to the contract can be raised by the Contractor after submission of 'No Claim Certificate' as per the format in the tender document.
- c) **Substantial Completion of Parts**  
If any part of the Permanent Works has been substantially completed and satisfactorily passed any Tests on Completion prescribed by the Contract, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent works before completion of the whole of the Works and, upon the issue of

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such Certificate, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work in that part of the Permanent Works during the Defects Liability Period.

d) **Surfaces Requiring Reinstatement**

Provided that a Taking Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Taking Over Certificate shall expressly so state.

**53. Taking Over**

a) The Engineer or his nominee shall take over the Site and the Works within seven days of the Engineer or his nominee issuing a certificate of Completion.

b) **Taking Over Certificate**

When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, with a copy to the Employer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer or his nominee to issue a Taking-over Certificate in respect of the Works. The Engineer or his nominee shall, within 21 days of the date of delivery of such notice, either issue to the Contractor, with a copy to the Employer, a Taking-Over Certificate, stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instruction in writing to the Contractor specifying all the work which in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer or his nominee shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Taking Over Certificate within 21 days of completion, to the satisfaction of the Engineer or his nominee, of the Works so specified and remedying any defects so notified.

**54. Termination:**

a) **Termination for Default:**

The Employer, without prejudice to any other remedy for the breach of Contract, by written notice of default sent to the Contractor, may terminate the contract in the whole or in part:

If the Contractor fails to deliver any or all of the Goods within the period specified in the Contract, or within the extensions granted by the Employer pursuant to GCC Clause 25.

If the Contractor fails to perform any other obligation under the contract or

If the Contractor, in the judgment of the Employer has engaged in fraud and corruption as defined in Clause 27 under Instruction to Tenderers, in competing for or in executing the contract.

In the event the Employer terminates the contract in whole or in part, pursuant to GCC Clause 26.1.1, the Employer reserves its right to take any one or more of the following actions:-

The Performance Security is to be forfeited;

The Employer may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Contractor shall be liable to the Employer for any additional costs for such similar Goods or Related Services. However, the Contractor shall continue performance of the Contract to the extent not terminated.

b) **Termination for Insolvency:**

The Employer may at any time terminate the Contract by giving notice to the Contractor if the Contractor becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy that

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has accrued or will accrue thereafter to the Employer.

c) **Termination for Convenience:**

The Employer, by notice sent to the Contractor, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Employer's convenience, the extent to which performance of the Contractor under the Contract is terminated, and the date upon which such termination becomes effective.

If the contract is terminated for convenience of the Employer as stated in GCC Clause 26.3 (a), the Goods that are complete and ready for shipment within twenty-eight (28) days after the Contractor's receipt of notice of termination shall be accepted by the Employer at the Contract terms and prices. For the remaining Goods, the Employer may elect:-

- i. To have any portion completed and delivered at the Contract terms and prices; and/or
- ii. To cancel the remainder and pay to the Contractor an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Contractor.

**55. Payment upon Termination**

- a) If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer or his nominee shall issue a certificate for the value of the work done less advance payments received upto the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less any extra cost of completing the Works through other means which may be incurred by the Employer. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- b) If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer or his nominee shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and loss of profit on uncompleted works less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

**F. LABOUR LAWS AND MISCELLANEOUS CLAUSES**

**56. Labour**

- a) The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
- b) The Contractor shall, if required by the Engineer or his nominee, deliver to the Engineer or his nominee a return in detail, in such form and at such intervals as the Engineer or his nominee may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer or his nominee may require.

**57. Compliance with labour regulations.**

During continuance of the contract, the Contractor and his sub Contractors shall abide at all times by all existing labour enactment and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules) regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/ bye laws/ Acts/ Rules/ regulations including amendments, if any, on the part of the Contractor the Engineer or his nominee/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer or his nominee shall also have right to recover from the

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Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

**58. Insurance of Works and Contractor's Equipment**

- a) The Insurance shall be issued by any Insurance Company from its Branch at Cochin which has been determined by the Contractor to be acceptable to the Employer.

**59. Transport of Contractor's Equipment or Temporary Works**

- a) If it is found necessary for the Contractor to move one or more loads of heavy constructional plant or equipment materials or pre-constructed units or parts of units of work over roads, highways or bridges on which such oversized and overweight items are not normally allowed to be moved, the Contractor shall obtain prior permission from the concerned authorities. Payments for complying with the requirements, if any, for protection of or strengthening of the roads, highways or bridges shall be deemed to be included in his contract price.

**60. Transport of Materials or Plant**

- a) The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any claim made by the concerned authorities in respect of damage or injury to roads, highways or bridges. In case of failure of the Contractor to settle such claims and in case the Employer is held responsible for payment to the authorities, then the Employer shall settle the claim and the Employer's expenses in this regard, as certified by the Engineer, may be deducted by the Employer from any money due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly with a copy to the Employer.

**61. Labour Laws & Regulations**

The Contractor shall at all times during the continuance of the Contract comply fully with all existing Acts, regulations and bye-laws including all statutory amendments and re-enactment of State or Central Govt. and other local authorities and any other enactments and act that may be passed in future either by the State or the Central Govt. or local authority, including Indian Workmen's Compensation Act, Contract Labour (Regulation And Abolition) Act 1970 and Equal Remuneration Act 1976, Employees' State Insurance Act, 1948, Factories Act, Minimum Wages Act, Provident Fund Regulations. Employees' Provident Fund Act and schemes made under the same Act, Health and Sanitary Arrangements for Workmen, Insurance and other benefits and shall keep the Employer indemnified in case any action is commenced for contravention by the Contractor. If the Employer is caused to pay or reimburse any amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated here-forth on the part of the Contractor, the Engineer shall have the right to recover from the Contractor any sum required estimated to be required for making good the loss or damage suffered by the Employer. The Contract shall maintain the records prescribed under ESI Regulations & EPF scheme and make the contribution towards ESI and EPF in respect of persons employed by Contractor. The Contractor shall also make available such records for inspection by ESI Inspector and EPF organization during the inspection and furnish copies of all such records to the Employer regularly.

a) **Accident Prevention Officer**

The Contractor shall have on his staff on site an officer dealing with all matters regarding safety and protection against, accidents of all staff and labour. This officer shall be qualified for this work and shall have the authority to issue instructions and shall take protective measures to prevent accidents.

b) **Disorderly Conduct**

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his staff and labour and for the preservation of peace and protection of Persons and property in the neighborhood of the Works from the same.

c) **Health and Safety**

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Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour and, in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance services are available at the camps, housing and on the site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

d) **Supply of Water**

The Contractor shall, so far as is reasonably practicable, having regard to local conditions provide on the Site, to the satisfaction of the Engineer's Representative, an adequate supply of drinking and other water for the use of the Contractor's staff and work people.

e) **Alcoholic Liquor or Drugs**

The Contractor shall not import, sell, give, barter or otherwise dispose of any alcoholic liquor, or drugs or permit or suffer any such importation, sale, gift, barter disposal by his sub-contract agents or employees.

f) **Arms and Ammunition**

The Contractor shall not give, barter or otherwise dispose of to any persons or person, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

g) **Festivals and Religious Customs**

The Contractor shall in all dealings with labour in his employment have due regard to all recognised festivals, days of rest and religious or other customs.

h) **Epidemics**

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government, or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.

i) **Employment of Person in the Service of Others**

The Contractor shall not recruit or attempt to recruit his staff and labour from amongst persons in the service of the Employer or other agencies engaged for any works of the Employer.

j) **Housing for Labour**

Save in so far as the Contract otherwise provides, the Contractor shall provide and maintain such accommodation and amenities as he may consider necessary for all his staff and labour employed for the purposes of or in connection with the Contract, including all fencing water supply (both for drinking and other purposes), electricity supply, sanitation, cook houses fire prevention and fire-fighting equipment, furniture other requirements in connection with such accommodation or amenities. On completion of the Contract, unless otherwise agreed with the Employer, the temporary camps/housing provided by the Contractor, shall be removed and the site reinstated to its original condition, all to the approval of the Engineer. The land for construction of labour camps shall be allotted only outside the security area to the extent available and such areas allotted as per the prevailing lease rent.

k) **Fair Wages, Records, Inspection**

The Contractor shall pay the labourers engaged by him on the work not less than a fair wage which expression shall mean whether for time or piecework the respective rates of wages as notified under the provisions of the Minimum Wages Act from time to time.

The Contractor shall maintain records of Wages and other remuneration paid to his employee in such form as may be convenient and to the requirements of the Employer/Engineer and the Labour Enforcement Officer (Central), Ministry of Labour, Govt. of India, or such other authorized person appointed by the Central Govt. The Contractor shall allow inspection of the aforesaid Wage Records and Wage Slips to the Engineer and to any of his workers or to his agent at a convenient time and place after due notice is received, or to any other person authorized by him on his behalf.

l) **Reporting of Accidents**

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the local police authorities immediately by the available means.

m) **Observance by Sub-Contractors**

The Contractor shall be responsible for observance by his sub-Contractors of the foregoing provisions.

n) **Port Entry Permission**

The Contractor shall submit prior application for Port entry passes to the concerned Port authority for his labours and the staffs engaged in the works.

The Contractor shall retain the original passes obtained by them in respect of their labour and staff engaged in the Works and produce the same to the Engineer as and when called for. It should not be either destroyed or allowed to be taken by the labour/staff after its use.

o) **Site - Protected Area**

The Site of Work is a protected area. Entry to the Port premises is regulated by entry passes. These passes will be issued by the Central Industrial Security Force or any other authority authorized by the Employer. The Contractor should furnish a list of person for whom the passes are to be issued to the Engineer and arrange to obtain the passes from the appropriate authority, based on the recommendation of the Engineer and abide by the Rules of the Cochin Port Authority with regard to entry etc. For the entry of trucks and other vehicles also, the Contractor should obtain necessary permits at his own cost .

The Contractor shall retain the original passes obtained by them in respect of their labour and staffs engaged in the Works and produce the same to the Engineer as and when called for. It should not be either destroyed or allowed to be taken by the labour/staff after its use.

**62. Life Saving Appliances And First Aid**

- a) The Contractor shall provide and maintain upon the Works sufficient proper and efficient life saving appliances and first aid equipment to the approval of the Engineer. The appliances and equipment shall be available for use at all times.

**63. Action in case Work not done as per Specifications**

All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Engineer or his authorised subordinates in charge of the work and all the superior officers, officer of the Quality Control Organisation of the Department, Vigilance Commissions, and the Contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the Contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself.

If it shall appear to the Engineer or his nominee or his authorised subordinates in charge of the work or to the Chief Vigilance Commissioner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract the Contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer or his nominee specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer or his nominee in his demand aforesaid, then the Contractor shall be liable to pay compensation at the same rate as under Clause 49 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer or his nominee may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the competent authority may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and

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cost of the Contractor. Decision of the Engineer or his nominee to be conveyed in writing in respect of the same will be final and binding on the Contractor.

**64. Action where no Specifications are specified**

- a) In the case of any class of work for which there are no such specifications as referred to in Clause 16, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there is no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer or his nominee.

**65. Bribes**

- a) If the Contractor, or any of his Sub Contractors, agents or servants gives or offers to give to any person any bribe, gift, gratification or commission as an inducement or reward for doing or forbearing to do any action in relation to the Contract or any other contract with the Employer, or for showing or forbearing to show favour or disfavor to any person in relation to the Contract or to any other contract with the Employer, then the Employer may enter upon the Site and the works and terminate the employment of the Contractor and the provisions of Clause 59 hereof shall apply as if such entry and termination had been made pursuant to that Clause.

The bidders shall give an undertaking that they have not made any payment or illegal gratification to any person/authority connected with the bid process so as to influence the bid process and have not committed any offence under the Prevention of Corruption Act in connection with the bid.

The bidders shall disclose any payments made or proposed to be made to any intermediaries (agents etc) in connection with the bid.

**66. Water Supply**

- a) Water required for the construction works including curing work shall be arranged by the Contractor on his own at his cost.

**67. Power Supply**

- a) The Electricity connection for lighting, welding and other mechanical works to the extent available will be made available by the Employer within the Port area. Drawing of power lines/cables etc. from the available source of supply of power to the actual work site, providing switches and making connections etc. shall be arranged by the Contractor at his cost. The temporary lines and connections by the Contractor shall be approved by the Engineer's representative before availing power. The Contractor shall provide Energy Meter to read consumption in units.
- b) The Contractor shall indicate his requirement of power to the Engineer within 15 days from the date of the letter of acceptance of the tender. The Contractor shall pay to the Employer, the power charges as per the prevailing Tariff schedule of Cochin Port Authority in force during the work of the Contractor. The Contractor shall also pay the connection and disconnection charges as applicable.
- c) The Contractor shall submit a complete drawing of the power points, wiring, diagram indicating all electrical loads, earthing etc. in complete shape along with the completion report. The Energy Meter provided is calibrated by Kerala State Electrical Inspectorate /TMR division, KSEB and such a Certificate to be produced. For non supply of power at any stage port will not be responsible and the Contractor shall not have any claim whatever for loss or damage.
- d) If there is any disruption in the power supply due to supply failure/restrictions imposed by the Kerala State Electricity Board, the department shall not be held responsible and the Contractor has to make suitable alternative arrangements like generator, welding set etc. at their cost.

**68. Taxes and Duties**

- a) The Price will be fixed and inclusive of all the duties and taxes excluding GST. All investments, operating expenses, incidentals, overheads etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total Bid price submitted by the bidder.
- b) The Contractor shall be solely responsible for all taxes that may be levied on the Contractor or on the

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earnings of any of his employees or personnel engaged by him and shall hold the Owner/Purchaser indemnified and harmless against any claims that may be against the Owner/Purchaser in this behalf. The Owner/Purchaser does not undertake any responsibility whatsoever regarding taxes under Indian Income Tax Act of the Contractor or his personnel. If it is obligatory under the provision under the Indian Income Tax deduction of Income Tax at source shall be done by the Owner/Purchaser.

- c) Cess as per Building and other Construction Workers Welfare Cess Act (Act 28 of 1996) at the rate of one percent or at the rates prevailing in force at the time of payment of bills, of the cost of construction should be borne by the contractor and the same will be deducted from contractor's bills while making payment or when crediting amount to contractors account.
- d) GST will be governed as per the prevailing Rules. TDS Under GST Law shall be deducted as per prevailing rate.
- e) **Income Tax**

The Contractor and his staff shall be responsible for payment of all personal income taxes to the concerned authorities as per the law in force from time to time. Deduction of Income Tax shall be made by the Employer from each certificate of payment to the Contractor at the rate as per prevailing rates or such other rates as may be specified by the Central Government from time to time, on the gross amount of the Contractor's bill for payment. The Contractor shall comply with all the GST Regulations, viz. timely uploading of bills, issue of debit/ credit notes etc

#### **69. Noise and Disturbance**

- a) All works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify the Employer from and against any liability for damages on account of noise or other disturbance created while or in carrying out the work and from and against all claims demands proceedings damages costs charges and expenses whatsoever in regard or in relation to such liability.

#### **70. Safety Code**

- a) Necessary Indian Dock Safety regulations for the safety purpose shall be adhered to by the Contractor and he will be held responsible for any violations of the same. The set of such conditions (regulation) is available with Cochin Port Authority and the Contractor is required to go through it before tendering.
- b) Besides the above, the Contractor shall also scrupulously adhere to and observe the following safety codes:
  - a) The Contractor has to provide sufficient barricades to site of work so that traffic plying nearby should not damage the recently concreted work. In case of any damage on account of above, the entire responsibility will remain with Contractor and nothing extra will be paid on this account.
  - b) Suitable and strong scaffolds should be provided for the workmen for all work that cannot be safely done from ground.
  - c) No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between the two adjacent rungs shall not be more than 30 cm.
  - d) Hoisting machines and tackles used in the works including their attachments, anchorage and supports shall be in perfect condition as per stipulations of the relevant Rules. The ropes used an hoisting or lowering materials or as means or suspension shall be of durable quality and adequate strength and free from defects.
  - e) The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of the trench, whichever is more. All trenches and excavation shall be provided with necessary fencing to lighting. Every opening in the floor of a building or in a working platform be provided with suitable fence to prevent the fall of persons or materials. No floor, roof or other parts of the structure shall be so overloaded with debris or materials as to render it unsafe
  - f) Workers employed on mixing and handling materials such cement, cement mortars concrete, lime mortar and asphalt shall be provided with protective footwear and rubber hand gloves and thin cloth for covering face and head.
  - g) Those engaged in welding work shall be provided with welder protective eye shield and glove.
  - h) All safety rules shall be strictly followed while working on live electrical systems or installations as stipulated in the relevant Rules.

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**71. Port Authority Rules**

- a) The Contractor shall observe the Conservancy Rules relating to the harbour and shall always take such necessary additional steps to keep the harbour waters free of noxious or unhygienic matters coming from his works as are required by the Employer. Under no circumstances shall inflammable materials be allowed to spill into the harbour waters.
- b) The Contractor shall always observe and comply with the working rules and regulations of the Port Authority in force or as issued from time to time.
- c) The Contractor's plants, equipments, floating crafts, dredgers, materials etc. which are brought to site for facilitating the proper execution of the contract work within the port area are not liable to port dues and charges like wharfage, berth hire and other charges during the period of contract and until expiry of defect liability period.

**72. Execution of work**

- a) The Contractor shall be required to execute the work in such a way so as not to cause any damage, hindrance or interference with port activities going on in the area or nearby. He should not also deposit the materials at such places which may cause inconvenience to the public and the work going on in the nearby area. The Contractor shall have to make good all damages done by him to the structures nearby while executing the work and no extra payment shall be made to him on that account.
- b) All the materials required to be used in the work shall have to be got approved from the Engineer-in-Charge before stacking at the site of work.
- c) Barricading, including proper lighting arrangement in the night at the required places shall have to be provided by the Contractor at his own cost, including necessary arrangements for proper movement of traffic by carefully maintained approaches and road diversions with suitable sign boards for indications of road signs etc. as directed by the Engineer-in-Charge.

**73. Indemnities**

The Contractor shall indemnify and hold harmless the Employer, the Employer's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of:

- a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, willful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and
- b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:
- c) arises out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, and
- d) is attributable to any negligence, willful act or breach of the Contract by the Contractor, the Contractor's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

## SECTION IV SPECIAL CONDITIONS OF CONTRACT

- 1 Special conditions shall be read in conjunction with the general conditions of contract, specifications, drawings and any other document forming part of this contract wherever the context so requires.

Notwithstanding the Sub-division of the documents into these separate section and volume every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.

Where any portion of the General Conditions of Contract is repugnant to or at variance with any provision of the Special Conditions, the provisions of the Special Conditions shall be deemed to over-ride the provisions of the General Conditions of Contract and shall to the extent of such repugnancy of variations, prevail.

- 2 **Measurements of Work Done:**

In addition to the Clauses in GCC- 'Computerised Measurement Book', measurement of the work can also be done as detailed below.

- 2.1 Superintending Engineer (hereinafter called the Engineer's Nominee) shall, except as otherwise provided, ascertain and determine by measurement the value in accordance with the Contract of work done.
- 2.2 All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the Contract.
- 2.3 All measurements and levels shall be taken jointly by the Engineer's Nominee or his authorised representative and by the Contractor or his authorised representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer's Nominee and the Contractor or their representatives in token of their acceptance. If the Contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.
- 2.4 Department shall not entertain any claim from Contractor for any loss or damages on this account. If the Contractor or his authorised representative does not remain present at the time of such measurements after the Contractor or his authorised representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer's Nominee or his representative shall be deemed to be accepted by the Contractor.
- 2.5 The Contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.
- 2.6 Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.
- 2.7 The Contractor shall give not less than seven days' notice to the Engineer's Nominee or his authorised representative in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer's Nominee or his authorised representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer's Nominee's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.
- 2.8 Engineer's Nominee or his authorised representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all

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- provisions stipulated herein above shall be applicable to such checking of measurements or levels.
- 2.9 It is also a term of this Contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the Contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.
- 3 PHASING OF WORKS**  
The work has to be carried out in phases as approved by COPA from time to time so that the total project work can progress smoothly with least obstruction to the operations and also works of other Contractors/agencies..
- 4 SAMPLES**  
The Contractor shall require to provide to COPA samples of all the materials sufficiently in advance free of cost to obtain approval of COPA. Approved samples shall be retained by COPA until the completion of the work and all materials and workmanship incorporated in the work are to conform to the approved samples in all respects. Rejected materials shall be removed from the site immediately under the supervision of COPA.
- 5 SCHEDULE OF QUANTITIES (SOQ)**  
The quantities given in the tender SOQ are tentative and shall vary as per the site/ COPA requirements. Only required items & quantities are to be supplied/ installed. Contractor shall take detailed site measurements, for the items like Supply of HT & LT cables, Earth strips, piping, ducting etc., before placing purchase order / taking procurement action.  
Contractor shall monitor the requirements of various items and shall report to COPA Engineer in charge with regard to deviations in the existing items and requirement of additional / extra items, if any, for taking necessary action.
- 6 GENERAL REQUIREMENTS OF COMPONENTS**
- 6.1 **Quality of materials**  
All materials and equipments supplied by the contractor shall be new. They shall be of such design, size and material as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.
- 6.2 **Inspection of material and Equipments**  
Materials to be used in the work shall be inspected by the engineer-in-charge. Such inspection will be of the following categories.
- a) Inspection of materials/Equipments to be witnessed at the Manufacturer's premises in accordance with relevant BTS/Agreement Inspection Procedure. The contractor has to give inspection call for each item at least three weeks in advance. The inspection call should include (i) Name of the item (ii) Reference number of schedule of quantity (iii) Details of approval of specification/drawings etc (iv) Address of the suppliers/sub suppliers and (v) Tentative date of inspection. No item/equipment should be supplied without giving inspection call. All arrangements for conducting the inspection and testing at the factory shall be responsibility of the contractor. Inspection / despatch clearance issued by Engineer in charge does not absolve the contractor for the responsibility to meet the tender specification. After the receipt of inspection call for an item from the contractor COPA will depute inspectors to suppliers works. In case the offered item is not ready or inspection could not be carried out due to lack of facilities for testing etc. at supplier's works, the inspector will return and the item has to be re-offered for inspection as per its readiness. In this case all the expenses (boarding, lodging, travelling expenses etc.) of the inspector for the second inspection shall have to be borne by the contractor. In case any defect is noticed at a later stage the contractor has to rectify / replace the entire lot to meet specified standards.
- b) To receive materials at site with manufacturer's Test Certificate(s)
- c) To receive materials after physical inspection at site.
- 6.3 **Ratings of components**  
All current carrying components in an installation shall be of appropriate ratings of voltage, current and frequency as required at the respective sections of the electrical installation in which they are used without their respective ratings being exceeded.

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## **7 LIQUIDATED DAMAGES**

For levying LD as per General Conditions of Contract, the employer is not required to have documentary evidence to quantify or prove the losses suffered by the Employer due to delay in completion of work by the contractor, as per agreement conditions.

## **8 PENALTY:**

**The amount of penalty as per the Annexure-6**, for non compliance of defect rectification and failure to upkeep the system, the contractor has to pay the penalty.

## **9 CONTRACTOR TO SUBMIT PROGRAMME**

After the acceptance of his Tender, the Contractor shall, within seven days, submit to the Engineer-in-Charge for his approval, a detailed programmetaking into account the total time period stipulated in the contract showing the order, the procedure and method in which he proposes to carry out the works.

He shall furnish the particulars in writing of his arrangements of manpower, plant and machinery and all other resources owned and dedicated to this work. Cash flow during the execution of project for procurement of materials and for carrying out of the works including temporary works which the Contractor intends to construct shall also be furnished.

In support of this programme, the Contractor shall submit a work schedule in the form of a CPM/PERT Chart. The Engineer-in-Charge shall if necessary modify the programme submitted by the Contractor and approval shall be given by the Engineer-in-Charge indicating the major milestones. The programme approved by the Engineer-in-Charge shall be final and binding on the Contractor. The approval by the Engineer-in-Charge of such programme, or furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the contract.

During the progress of work, the Contractor shall be required to furnish the resource mobilisation plan as required by Engineer-in-Charge to keep up the target date of completion.

This CPM/PERT programme will be required to be updated every month or more frequently as directed by the Engineer-in-Charge, based on the actual progress, resource mobilisation and other field conditions actually prevailing.

## **10 TAXES AND DUTIES**

All duties, taxes and other levies payable by the bidder/Contractor under the Contract, or for any other cause as applicable on the last date of submission of Bid, shall be included in the rates, prices and the total Bid Price submitted by the Bidder. All investments, operating expenses, incidentals, overheads etc. as may be attendant upon execution and completion of works shall also be included in the rates, prices and total Bid price submitted by the bidder. However, such duties, taxes, levies etc. which is notified after the last date of submission of Bid and/ or any increase over the rate existing on the last date of submission of Bid shall be reimbursed by the company on production of documentary evidence in support of payment actually made to the concerned authorities. Similarly if there is any decrease in such duties, taxes and levies the same shall become recoverable from the contractor. The details of such duties, taxes and other levies along with rates shall be declared by the bidder.

9.1 The Contractor shall be solely responsible for all taxes that may be levied on the Contractor or on the earnings of any of his employees or personnel engaged by him and shall hold the Owner/Purchaser indemnified and harmless against any claims that may be against the Owner/Purchaser in this behalf. The Owner/Purchaser does not undertake any responsibility whatsoever regarding taxes under Indian Income Tax Act of the Contractor or his personnel. If it is obligatory under the provision under the Indian Income Tax deduction of Income Tax at source shall be done by the Owner/Purchaser.

9.2 Cess as per Building and other Construction Workers Welfare Cess Act (Act 28 of 1996) at the rate of one percent or at the rates prevailing in force at the time of payment of bills, of the cost of construction should be borne by the contractor and the same will be deducted from contractor's bills while making payment or when crediting amount to contractors account.

9.3 The item wise rate quoted by bidder shall be inclusive of all taxes, duties & levies. Payment of GST is the responsibility of bidder/contractor.

9.4 The rates and prices quoted by the Bidder shall be fixed for the duration of the contract and shall not be subject to variations on any account except to the extent variations allowed as per the conditions of the

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contract of the bidding document. The Company reserved the right to deduct / withheld any amount towards taxes, levies etc. and to deal with such amount in terms of the provisions of the Statute or in terms of the direction of any statutory authority and the Company shall only provide with certificate towards such deduction and shall not be responsible for any reason whatsoever.

**11 AUTHORIZED PERSONAL**

The Contractor shall engage an authorised agent experienced and qualified technical personnel for managing and supervising the work and shall see that all of them are always at the work spot during the working hours, personally checking all items of work. He shall take such orders as may be given to him by the Engineer-in-charge from time to time and shall be responsible to carry them out properly. In case contractor fails to provide an agent as per terms given above, CoPA reserves the right to deduct a reasonable amount from the contractor's bill, subject to a maximum of Rs.25,000/- per month, for every month of absence.

**12 QUALITY PLAN FOR MANUFACTURE OF EQUIPMENT**

The Quality plan for manufacture is a document, which presents in a tabular form, the Quality Control checks to be exercised by the Contractor during the various stages of manufacture and dispatch in order to meet the requirements of this Contract. This plan shall detail the components manufactured, characteristics being controlled and acceptance norms for this characteristic and the agency responsible for performance and witnessing the checks.

After issuance of work order, the contractor shall submit to the Owner, the detailed quality plans to be followed during manufacture of all major equipment's. These quality plans shall be discussed mutually and updated by the Contractor taking into consideration the requirement of the Owner. The quality plan when approved shall form a part of the contract. This document shall be followed for inspection of the concerned equipment.

The details of the quality assurance/ quality checks envisaged by the Contractor during manufacturing of the equipment supplied by him or procured through his sub vendors/ sub-contractors shall be detailed out in the quality plans to be submitted by the Contractor. The contractor may also furnish any additional information regarding quality assurance/ quality checks in the additional sheets, if required. Quality plans for major equipment's manufactured by the Contractor or procured through his sub vendors/ sub-contractors shall be submitted during engineering. After approval of the Owner is accorded various quality plans shall be bound as a booklet and shall be submitted to the Owner as soon as possible. The contractor shall ensure that the approved quality plans are followed scrupulously by him and by his sub-vendors/ sub-contractors and manufacturing of the items covered under the quality plans shall be taken up only after Owner has approved the quality plan.

**13 TEST REPORTS OF EQUIPMENTS**

On completion of tests of equipment at manufacturer's works, the Contractor shall furnish four copies of test certificates to the Owner for approval and subsequent dispatch clearance. The test report shall invariably indicate identification data, including model no., sl. no. etc. of the equipment, method of application and duration of test along with test results. Only on approval of these test results by the Owner or Owner's representative, dispatch clearance will be issued for dispatch of material to site. Traceability certificate in original of testing equipment shall be submitted to the owner or his representative attending tests and a copy of the same shall be attached with the reports.

**14 LIST OF APPROVED MAKES**

It will be deemed that the contractor has priced the respective items on the basis of the approved makes. List of approved makes applicable for the contract is placed at respective volumes of technical specification.

- i) Where makes have not been indicated in the approved make list, such items shall be of ISI marked/reputed brands/UL certified. Reputed brand implies a brand which is supported by nationwide sales & service distributors/ dealers/network/centers. And all such items shall be got approved from Engineer-In-Charge.
- ii) Wherever "equivalent" mentioned against makes, suitable evidence shall be produced and get the prior approval of such makes from the Engineer-In-Charge.

## **15 TESTING AND MEASURING EQUIPMENTS**

Equipment for measurement of work and testing the installation shall be procured by the Contractor for their use at their own cost. The same shall also be made available to COPA without any charges to COPA.

## **16 SITE MAINTENANCE DURING CONSTRUCTION**

The Contractors shall time to time clear and remove all rubbish and obstructions from the site and the work area shall be kept clear and unobstructed at all times. Nothing extra shall be paid on this account.

## **17 CONTRACTOR'S STAFF AND LABOUR**

- 16.1 Workers above 60 years of age and below 18 years of age shall not be deployed by the contractor. All labour, skilled or unskilled shall be provided by the contractor. Settling any dispute with the labour, labour union, any Outside union, subcontractor will be contractor's responsibility. Loss of day in this regard should not be claimed for any hindrance at site. The workers engaged for works should have sufficient knowledge and experience in the respective fields. This shall be proved to the Engineer. The Owner may at any time request the contractor to remove from the Work/Site contractor's / subcontractor's supervisor or any other authorized representative including any employee of the Contractor or his Sub-contractor(s) or any person(s) deployed by Contractor for professional incompetence or negligence or for being deployed for work for which he is not suited.
- 16.2 The Owner may at any time object to and require the Contractor/sub-contractor to remove forthwith from the Site a supervisor or any other authorized representative or employee of the Contractor's /sub-contractor(s) or any person(s), if in the opinion of the Owner, the person in question has misconducted himself or his deployment is otherwise considered undesirable by the Owner, the contractor/sub-contractor shall forthwith remove and shall not again deploy the person in question of the Work Site without the written consent of the Owner.
- 16.3 The workmen deployed by the contractor are strictly banned from use of any kind of Narcotics drugs / Alcohol / smoking etc. at site and any illegal activity by the work men should be reported to Engineer without delay and the contractor shall remove such persons from the work site forthwith.

## **18 STATUTORY APPROVALS**

The scope of work also includes obtaining Initial and final approval/ NOC for the system from State Fire Department/concerned departments /local bodies/ other statutory bodies and liaison works with the department. All incidental expenses in this regard shall be borne by the contractor however the statutory fees paid to the authorities will be reimbursed at actual on submission of documentation evidence.

- a) All the equipment to be supplied and works to be executed should conform to the Electrical Inspectorate/CEA Standards including all protection and metering accessories.
- b) All necessary approvals for the items shall be obtained from CoPA prior to commencement of work.
- c) All testing/calibration, etc. are to be carried out as per the requirements of statutory authorities. The tests/calibration certificates shall be submitted to COPA
- d) Letters/documents required for obtaining sanction/ approval from various bodies like Navy, Railway, National Highway, Corporation, Traffic Police, PTCC etc. for laying of cables along side roads, railway lines, crossing of roads/railway line etc. for facilitating the work will be issued by CoPA as per the intimation from the contractor, however the contractor shall co-ordinate/ Liaison with respective bodies for getting sanction etc.
- e) On completion of work, the contractor has to make arrangements for obtaining necessary safety / energisation certificate from Electrical Inspectorate / CEA by submitting necessary completion certificates, drawings, equipment details, load details, test results, etc. before energisation.
- f) All costs incurred in obtaining such approval/certificates are to be borne by the contractor. Statutory fees paid shall be reimbursed on presentation of documents.
- g) If the current rating of any of the switchgears including circuit breakers mentioned in the Schedule of requirements is not available or is not in conformation to the Inspectorate standards then it shall be rated to the nearest higher rating available with the current rating/fuse rating as specified.
- h) The Electrical works shall be carried out as per Central/State Electrical Inspectorate standards/specifications /guidelines and the contractor shall get the approval and safety certificate from the inspectorate after the completion of work and before energisation.

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- i) The Contractor shall comply with proper and legal orders and directions of local or public authority or municipality and abide by their rules and regulations and pay all fees and incidental charges which may be liable during the contract period.

## **19 PERFORMANCE TESTING**

### **18.1 At Manufacturers works**

Before dispatching the equipment to site, the equipment will be inspected at the discretion of the COPA and tested for various parameters as detailed in the Technical Specifications, by the officials of COPA at the manufacturer's works and then cleared for shipment. The tenderer shall give adequate notice to enable COPA to plan their visit for such tests/inspection. The inspection conducted will however, not in any way absolve the contractor of his responsibility for the continued performance of the system/components after erection & commissioning at the designated site during the period of defects liability.

### **18.2 At site**

- (a) On-site testing shall be conducted to ensure that the machine performance continue to be with the contracted performance parameters for which contractor shall make necessary provisions during installation which will enable testing of the machines.
- (b) All the required equipments and measuring instruments for carrying out the testing have to be arranged by the contractor. The instruments used shall be calibrated to test and the valid certificate of calibration should be submitted to the COPA's Engineer in charge.

## **20 COMMISSIONING AND HANDING OVER OF EQUIPMENTS**

### **19.1 DEFECTIVE WORKS**

If the works or any portion thereof shall be damaged in any way excepting by the acts of the Purchaser, or if defects not readily detected by prior inspection shall develop before the final completion and acceptance of the whole work, the Contractor shall forthwith make good, without compensation, such damage or defects in a manner satisfactory to the Purchaser/Engineer. In no case shall defective or imperfect work be retained.

### **19.2 INITIAL TRIAL**

On completion of works, erection of equipment, each item of the work / equipment as applicable shall be thoroughly cleaned and inspected jointly by the Owner / Consultant and Contractor for correctness and completeness of installation and acceptability for initial trials of the equipment by the Contractor & Owner. During the above joint walk down, the list of equipment deficiency & defects shall be prepared and for such a punch list, action shall be initiated by the Contractor in agreed time frame. The list of tests to be performed prior to initial trials shall be mutually agreed and included in the Field Quality Plan by Contractor. Prior to starting of initial trials all site tests, calibrations and parameter settings as indicated in the technical specification shall be carried out. The purpose of these trials is to ensure integrity of each individual equipment for its operation in the system for initial operation.

### **19.3 INITIAL OPERATION**

After successful completion of works, initial trials of all the individual equipment, all equipment's shall be operated together as a system. The purpose of this initial operation is to ensure integrity of all the sub-systems which compose the total system. Based on the observations made during initial operation, necessary corrections shall be effected in the equipment / systems to ensure proper integrated operation of the system. After satisfactory completion of initial operation for each equipment & sub-system, the complete equipment shall be considered ready for trial operation/performance guarantee testing. The Contractor has also to ensure that he trains Owner's Engineers at site dealing with this system in proper way. During commissioning of major equipment, contractor has to ensure the presence of commissioning Engineers of OEMs wherever required.

### **19.4 TRIAL OPERATION / PERFORMANCE GUARANTEE TEST**

The method of trial operation, duration and loading conditions shall be discussed with the Engineer and a plan shall be prepared. During the period of trial operation, all the necessary adjustments in the plant/equipments shall be made by the Contractor to establish that the complete system as a whole with all subsystems and with all standby equipment is ready for continuous operation. During these trials, all the standby equipments also shall be run alternatively and continuously to prove their performance.

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A trial operation report comprising of dates and duration of trial, observations and recordings of various parameters to be measured shall be prepared by the Contractor and signed jointly by the Engineer and the Contractor. If the trial operation is not satisfactory, then based on the observations during trial operation, necessary modification/repairs to the plant/ equipment shall be carried out by the Contractor and on completion of such works, the trial operation shall be repeated again as per the relevant procedures.

**19.5 FINAL ACCEPTANCE:**

Final acceptance of the equipment/system is after obtaining statutory approvals from all statutory authorities as applicable as per Clause 22 of SCC.

**20 HANDING OVER / CERTIFIED DATE OF COMPLETION**

Up on the satisfactory commissioning of the entire system, the system shall be observed for 15 days. After this satisfactory trial period, the work shall be handed over officially and completion date recorded by Engineer-in-charge with all the prescribed formalities for handing over.

This date shall be reckoned, as the certified date of completion and the defects liability period shall commence from this date.

Until the handing over of the installation, the responsibility lies with the contractor for safety, upkeep etc.

**21 COMPLETION CERTIFICATE**

For all works completion certificate shall be submitted to COPA, after completion of work.

It is the responsibility of the contractor to provide and make arrangement of all spares including consumables for carrying out periodical/preventive maintenance during warranty / defect liability period without any cost to COPA. However, the tenderer should furnish a list of spares, they plan to make available at site, to take care of warranty period. These spares shall be supplied along with the equipment. In case, any spares are required other than the listed spares, contractor will provide the same without any cost to COPA including customs duty.

**22 GUARANTEE / WARRANTY**

All High Mast Smart LED fittings, CCMS, Monitoring & Contrplling and all the items of equipment and installations as per BOQ shall be guaranteed for a period of 5 years from the date of handing over. The shall be guaranteed to be free from defective workmanship or materials for a period of 5 years from the date of handing over. The Contractor at his own cost shall rectify any defect /replace material that may appear during the period. However for those items stipulated OEM warranty more than one year,the collection and handover of the necessary authorization from OEM for warranty is the responsibility of the contractor. Replacement of defective/ worn out parts/spares and consumables with new parts/spares and consumables shall be carried out as and when required by the Contractor at his own Cost during the guarantee Period. Any defects in the electrical and control wiring shall also be rectified.

During this 5 years guarantee period, the contractor shall attend to any difficulties and defects that may arise in the day to day operation of the system within 48 hrs of complaint reported by COPA.

The Contractor shall guarantee that all material, machinery, Consumables and components, supplied, fabricated, designed and installed by him shall be free from defects due to faulty material and/or workmanship and that the system shall perform satisfactorily, and the efficiency of the system and all the components shall not be less than the values laid down in the specifications and the capacities shall be at least equal to those specified. During the guarantee period any or all components found to be defective shall be replaced or repaired free of charge and shortcoming found in the system as specified shall be removed at no extra cost. The Contractor shall provide the necessary personnel and tools for fulfilling the guarantee. If the defects are not remedied within a reasonable time, COPA may proceed to get the defects remedied at the Contractor's risk & expenses without prejudices to his right. The Contractor shall without any cost to the Employer carry out during the guarantee period all routine and special maintenance of the system and attend to any defects that may arise in the operation of the system.

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The Contractor shall hold himself fully responsible for reinstallation or replace free of cost to COPA during the defect liability period as stipulated hereunder.

- a) Any defective material supplied by the Contractor or defective workmanship of the Contractor.
- b) Any material supplied by COPA which is proved to be damaged or destroyed as a result of defective workmanship by the Contractor.

23 **ARRANGEMENT OF MATERIALS**

All the materials required for this work should conform to relevant BIS Specifications unless otherwise specified. The copies of Purchase Vouchers & Gate Passes should be produced along with the materials. The test certificates, Routine test certificates and acceptance test certificates are also to be submitted.

24 **STORAGE OF MATERIALS**

The storage and custody of materials brought to site is the full responsibility of the contractor. Necessary store rooms if necessary should be constructed by the contractor. The land required for stores will be provided by the COPA free of cost. The store should have double lock arrangement with one key with the CoPA Engineer-in-charge and the other with the Contractor. **All materials supplied by the contractor should be covered under storage insurance.**

25 **PROCUREMENT OF MATERIALS**

Contractor shall make his own arrangements for the timely procurement of all materials required for the work. Status of procurement of every item required for the project is to be submitted every week. In case materials are not supplied in time, Engineer in charge will arrange for procurement directly from the supplier and the expenses incurred will be deducted from the contractor's bill. Immediately on award of contract, the contractor has to submit the list of makes of item, which he is planning to procure for the project and approval has to be obtained from the engineer in charge. After the make approval, detailed specification/drawings/ test reports etc of every item has to be submitted.

26 **BYE-LAWS**

- a) The contractor shall comply with all bye-laws and regulations of local and statutory authorities having jurisdiction over the works and shall be responsible for obtaining prior approval, if any, and payment of all fees and other charges, giving and receiving of all necessary notices and keeping the Engineer-in-Charge informed of the said compliance with the bye-laws, payments made, notices issued and received. The Contractor shall indemnify COPA against all claims in respect of royalties, patent rights, design trademarks of name or other protected rights in respect of any plant, machine, work or materials used for or in connection with the work or temporary works and from and against all claims, demands proceedings, costs, charges and expenses whatsoever in respect of or in relation thereto. The Contractor shall defend all actions arising from such claims and shall himself pay all royalties, license fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof.
- b) The Electrical works shall be carried out as per the local electrical inspectorate standards/specifications/guide lines and the contractor shall get the approval and safety certificate from the inspectorate after the completion of work and before energisation.
- c) The Contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fees and charges which he may be liable.
- d) The contractor should liaise with local authorities to ascertain the underground cables, pipes, ducts etc., if any, in the areas of construction site and furnish to the Engineer-in-Charge the information and precautions that are being taken to avoid damages.
- e) The work shall be carried out without infringing on any of the local Municipal Bye-Laws.

## **27 CONFORMITY TO RULES AND REGULATIONS**

27.1 The work shall be carried out in the best workmanlike manner in conformity with this specification, the relevant specification/codes of practice of the Bureau of Indian Standards or IEC recommendations (Except where specified otherwise) and other relevant Indian/International standards with latest amendments, approved drawings and the instructions issued by the Engineer-in-charge or his authorised representative, from time to time. Equipment meeting any other authoritative standard, which ensures an equal or better quality than the above standards, will also be acceptable.

### **27.2 In addition to the standards, all works shall also conform to the requirements of the followings:**

- a) All Electrical works shall be carried out in accordance with the provisions of Indian Electricity Act- 2003, Indian Electricity Rules 1956 amended up to date (Date of call of tender unless specified otherwise)
- b) The works shall also conform to relevant Bureau of Indian Standards' Codes of practice (COP) for the type of work involved.
- c) Materials to be used in work shall be ISI marked/UL certified wherever applicable.
- d) In all electrical installation works, relevant Safety codes of practices shall be followed.
- e) Fire Insurance Regulations.
- f) Regulations laid down by the Chief Electrical Inspector of the State Electrical Inspectorate/State Electricity Board/ Central Electrical Authority or any other agencies concerned.
- g) Regulations laid down by Fire & Rescue Services and National Building Code.
- h) Any other regulations laid down by the local authorities.
- i) Installation & operating manuals of original manufacturers of equipment.

## **28 SAFETY**

The contractor shall take necessary precautions to ensure safety of his crew, materials, equipment and the works during the period of the contract. No claim from the contractor for loss of or damage to equipment, materials, crew of the works during the course of the work due to natural causes like cyclones, gales, floods, rains or other cause or combination of causes will be entertained by COPA. The contractor shall be fully liable to compensate COPA for any loss or damage to works till the time of taking over of the work by COPA.

## **29 TESTING AND MEASURING EQUIPMENTS**

Equipment for measurement of work and testing the installation shall be procured by the Contractor for their use at their own cost. The same shall also be made available to the Engineer-in-charge without any charges to COPA. Equipment for measurement shall be made available at site for use of Engineer-in- Charge and shall be periodically calibrated.

## **30 SECURITY RULES**

The contractor shall follow all Security rules existing in the Port premises and strictly adhered to security norms. The Port security is under CISF and entry to the restricted area will be subject to security checks and other security procedures existing in working Ports. Only selected persons will be permitted to enter to restricted areas under special permission as required for the completion of the project.

The contractor shall also follow at site all Security rules as may be framed by the COPA from time to time regarding removal of materials from site, issue of identity cards, control of entry of personnel and all similar matters. The contractor and his personnel shall abide by all security measures imposed by the Managing Director or his duly authorised representative from time to time.

The contractor shall take ultimate care while working in a running port and minimize nuisance to the public. All the work sites shall be separated by providing temporary partitions as directed by Engineer-in-charge. Fencing, partitions, signage shall be provided as per directions of Engineer-in-charge.

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## SECTION V TECHNICAL SPECIFICATION

### 1) SCOPE OF WORK

The Smart Lighting works proposed consist of two parts. Part 1 for 31 Nos. of existing High Mast lights fitted with obsolete technology of Metal Halide/ Sodium Lamps and few of them having Non- Dimmable LED Luminaries. Part 2 for New Installations of 9 M Lamp poles with Dimmable LED Luminaries controlled by Smart Lighting Technology, CCMS. The brief descriptions of works involved are:

Part 1: SITC of Smart Lighting System in existing 31 Nos. High Mast Lights with software features - Removal of Existing SON/MH/LED Lamps, chokes & other light fixtures, Design Smart Lighting with Centralised Control & Monitoring System(CCMS) as per requirement, Rewiring the lantern carriage, Modifications in lighting arms to suit mounting of new LED fitting if required, Fixing of new Dimmable LED fittings as per Lux requirement, Balancing lantern carriage with counter weights if required, replacement of Existing Control box including its cabling to High Mast, External cabling from the power source, install new Control box etc. and replacement of main trailing cables & wire ropes in 21 Nos. old High masts.

Part 2: SITC of 18 nos. of 9M Lamp Poles with Dimmable Luminaries with Cabling from Substation, utility cabling, Feeder pillar, Junction boxes etc. and interconnection of lamp poles with SITC of Smart lighting Controls, CCMS etc.

**The Contractor shall maintain the Smart Lighting System for 5 years after satisfactory commissioning and acceptance by the Engineer-in-Charge. Necessary SIM card charges, Cloud Storage and any other soft ware related charges for 5 years shall be included in the quote.**

**In case any repair for luminaries/CCMS panel is required during the 5 years period, the same shall be done by the Contractor at his own cost and penalty shall be levied for default as per the procedure detailed in Annexure- 7.**

### 2.1 PART A - SMART LIGHTING OF EXISTING HIGH MASTS IN VARIOUS LOCATIONS OF PORT AREA IN W/ISLAND

#### a) **Background:**

There are 31 nos. of High Mast Lights located in various road junctions, yard area, wharfs etc. A few of them are equipped with LED lights, but majority of Masts are fitted with SON/MH Lamps. These SON/MH lamps are obsolete and having high power consumption. The total list of high masts with details and locations are attached as [Annexure -1](#).

Only 9 nos. high masts are comparatively new. All others are installed more than 10 years ago. The condition of lantern carriage wire ropes are not safe on the old high masts, which are to be replaced in this project work.

Some of the High Masts were having power supply cabling defects in underground, which are presently made operational by temporary rectification of cables or looping of phases. Hence external cabling work of these high masts are to be done. The details of external cabling works are detailed in [Annexure -2](#).

#### b) **Brief Concept of Smart Lighting Technology:**

The Smart Control Panels are to be installed near each High Masts with cable connections to the Mast and the LED fittings are to be of Smart type with Dimmable Drivers. The Smart Control Panels are to communicate to the Smart LED Fitting for Dimming through Power Line Carrier Communication in

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High Masts. The lights are to control and dim to the required lux level as per the requirement. These activities are to be performed through direct operation in box/ panel near the High Mast or through remote operation using suitable software platform like PC/ Mobile Phone. The lights are also to be controlled and dimmed remotely in pre-set levels through software at scheduled time intervals throughout the year.

The Smart Lighting system is proposed to have the capability of sending signals for dimming through power phase cables to the top side of the mast. The functionality of Dimming may be achieved by using 0-10 V, 1-10V signals. The communication between Smart Control Panel in the bottom of the High Mast and the Smart LED fittings shall be carried out through the EPR power trailing cable used for both power and signal for Dimming. No separate cable is required for signal of Dimming. Each LED fittings in the lantern Carriage should have the capability of receiving communication signals from the Smart Lighting Control Panel without any intermediate device and shall perform Dimming.

Group Dimming with 0-10 V/1-10 V Analogue Control shall be achieved through Power Line Carrier Communication (PLCC).

c) **Lighting Design Criteria:**

**The essential Design Criteria of the luminaires of High mast Lighting are as the following:**

- i. The Measurement Area of Surface Luminance shall be the area covered under a radius of 1.25 times the Height of each Mast. Those areas where lighting is not required, like roof side, other obstructions etc. shall be excluded from the Measurement Area as per the site survey details of the requirement in [Annexure -3](#). (See the [Illustration Diagram of Measurement area](#))**
- ii. The Light measurements will be taken in 3m x 3m grid in anywhere within the Measurement Area in actual site conditions after the installation work.**
- iii. The Average Surface Luminance of 40 Lux shall be maintained in the Measurement Area with 100% Brightness without Dimming for Photometric Measurement for the acceptance after the installation. After the commissioning of lights, the normal operation of lights in the peak requirement hours will be carried out with 15% Dimming for the first two years and then may be increased to full brightness, considering the reduction of lights due to ageing.**
- iv. Surface Luminance - The lux ratio of Minimum to the Average shall be greater than 0.4 and the lux ratio of Minimum to the Maximum shall be greater than 0.3**
- v. The selection of luminaire model shall be limited to three types for High Masts all together. Combination of different types are not allowed in a single High Mast.**
- vi. The total maximum power for 31 Nos. of High Masts is stipulated as 50 KW. The details of power limitations of individual High Masts are detailed in Annexure 4.**

After completion of the entire work, the contractor shall furnish the total system power in **Annexure-5**. The energy charge due to additional power requirement shall be compensated by the Contractor for a period of 5 years usage and penalty shall be levied for default as per the procedure detailed in **Annexure-6**. In the event of illumination level not found adequate as per the requirement during testing, the contractor shall have to maintain the required Lux level by increasing the lumens keeping the Power within the specified limit at his own cost to complete the work within the stipulated time and as per the requirement.

It is desirable that the design shall have consideration of Glare effects, reduction in Obtrusive lights. The Upward Light Ratio (ULR) may be minimum possible. The angle of installation and the optic lenses of LED Luminaries shall be selected to suit these aspects.

**d) The Scope of work:**

- i. Carry out the External Cabling work as per the Work Schedule [Annexure -2](#).
- ii. Conduct study, prepare photometric designs of 31 High Masts based on the lighting requirements, Specifications of Light fittings and other specifications of CoPA and submit for the Design Approval including all details of Smart Lighting System, CCMS etc. Submit a DPR of the Smart Lighting System proposed. The maximum power consumption, Illumination Lux level etc. are to be maintained as per the conditions of [Annexure -3](#).
- iii. The contractor shall carry out the overhauling/Greasing/reconditioning of High Mast Winch Mechanism, Lantern carriage, Pulleys, fasteners, shackles & thimbles etc. without any extra cost.
- iv. The Contractor shall arrange tools & tackles, equipments such as Scaffolding, Cranes for carrying out the work without any extra cost..
- v. Carry out full set Wire Rope Changing work of lantern Carriage of 21 nos. of High Masts by using AISI 316 wire ropes as per Specification.
- vi. Removal of Existing SON/MH/LED Lamps, chokes & other light fixtures in all 31 Nos. High Masts. All the removed materials shall be handed over to CoPA.
- vii. Supply & Installation of new Smart LED fittings as per Photometric Design with communication for the Dimming feature, suitable Junction boxes, Single Dome LED Aviation lights-2 nos. each, and internal wiring in lantern Carriage. The required modifications shall be done in the existing lantern carriage to suit the light fittings. (Welding work is not permitted).
- viii. Checking the level and stability of lantern carriages and balancing of lantern carriage by providing suitable counter weights if required.
- ix. Supply, laying and Termination of EPR trailing Cable as per the given specification from bottom Terminal box to Mast lantern Carriage Terminal Box through Mast Structure for 21 nos. of High Masts.
- x. Supply & Installation of Smart Lighting Control Box(CCMS) to be installed in the bottom of each High Masts with complete internal wiring in 3 Phase system, all devices required for Protections & Controls including GPRS Communication Module with SIM Cards. The cabling to the Mast, Earth interconnection using G.I Strips to the Mast Earthing Terminals.
- xi. Establishing GPRS communication of the Smart Lighting Control Panels, Design and providing Software platform for Remote Operation through PC and Mobile including the required cloud storage of data and commissioning of the system.

**e) The Specifications:**

**1. Wire Rope:**

Non-corrosive stainless steel of AISI 316 or better grade. 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 2350kg individually. The thimbles shall be secured on ropes by compression splices. 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, either bolted or else is provided on the wire ropes between winch and lantern carriage.

**2. Cables:**

- i. Cable Laying from Source to High mast through using 4X4 Sq.mm Copper, PVC UG Cable. 1100 Volt grade, PVC, PVC Sheathed, Galvanized Round/Flat Steel Armoured Cable conforming to IS 1554 Part I(4 Core )
- ii. Cable Laying from Smart Control Box to the terminal box of High Mast Structure: 5X4 Sq.mm Copper, PVC UG Cable. 1100 Volt grade, PVC, PVC Sheathed, Galvanized Round/Flat Steel Armoured Cable conforming to IS 1554 Part I (5 Core)

**3. External Cabling Works:**

The External Cabling works of High Masts shall be carried out by laying Copper 4 X 4 Sq.mm, Armoured PVC insulated PVC Sheathed Cables through HDPE Pipe from source to Smart Control Box. The cutting in Road Crossing shall be minimum and to be done re-plaster the cut portion with cement concrete.

**4. Internal Cabling works:**

- i. Inside the Mast through top Pulley: EPR Coated PCP Sheathed flexible Copper Cable for High Mast 2.5 Sq.mm x 5 Core as per IS.
- ii. Wiring in Lantern Carriage: The internal wirings shall be in done by grouping in a balanced three phase four wire system. Each LED light and the Single Dome Aviation Light pair shall be wired individually from the common junction box using 3 Core 1.5 Sq. mm multi strand Copper FR PVC Insulated PVC Sheathed flexible cable as per IS. The internal wiring/laying shall be done through inside the pipe structure of the lantern Carriage and the routing & laying of cables in exposed area shall be done through Polyamide Corrugated Flexible conduit of IP 67 or above of temperature withstand rating - 40Dgree C to 105 degree C with suitable glands of same grade specified.

**5. Aviation Light:**

Single Dome 2 nos. each in High Masts above 12 Metres. The Aviation lights are to be of LED type, IP67,with installation fixtures.

**6. Other Conditions**

Luminaries, Software, CCMS panel shall be of same OEM.

No additional cabling is allowed from control panel to lantern carriage other than power trailing cable.

In case of any software failure/cloud storage/SIM issues, the luminaries shall function in manual mode without dimming.

Reports and visual representation of:

- i. Percentage of dimming each high mast
- ii. Status of lights.
- iii. ON/OFF/dimming status of luminaries
- iv. Error Log

Photo metric design stipulating CoPA criteria as per Annexure-3 shall be submitted along with the TENDER by the TENDERER.

**2.2 PART B – SITC of 18 Nos. of 9 M Lamp Poles With Smart Lighting Control(CCMS) in Q8-Q9 Back Side Area of Ernakulam Wharf**

**a) Description of Work:**

18 nos. of new 9 metres lamp poles each with 2 nos. of 150 W LED lamps are required to be installed for the area lighting. Cabling work is required from Substation, interconnection cabling of lamp poles and cabling to the Smart control Panels are required. The utility feeder pillar is also required.

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The Luminaries shall be dimmable, equipped with dimmable driver in each unit. Smart Control Panel (CCMS) - 2 nos. are to be installed near the area for group control of lights. The communication for the dimming is to be carried out from luminaries to Smart Control Panel by either (i) through Power Line carrier communication technology or (ii) through GPRS technology with SIM cards.

**b) Scope of works:**

- i. Construction of foundations, Supply and Installation of 18 nos. 9 mtr. High Octagonal poles with ring arm bracket suitable for fixing 2 nos. of 150 W LED Flood light per pole for general lighting in the area.
- ii. Supply and Installation of 36 nos. of 150 W LED Flood lights with 2 nos. in each Masts with internal wiring.
- iii. SITC of Feeder Pillar- 1 no.
- iv. SITC of Polycarbonate Junction Boxes- 2 nos.
- v. SITC of SMC Junction Boxes of suitable size for providing supply to the poles by loop in loop out through Bolt & Nut type RYPN Connectors with Cable Gland etc., near to the Pole foundations -18 nos.
- vi. Main Cabling from Q9 Substation using 3.5 CX 95 Sq.mm AL. Armoured PVC APVC UG Cable, Internal Cabling between SMC Lamp Junction Boxes and Cabling to Smart Light Control Box(CCMS).
- vii. Cabling interconnection between SMC Junction boxes located near Mast foundation lamp poles by using 4CX4 Sq.mm Copper Armoured PVC APVC UG Cable through HDPE Pipe, Direct, Clamping etc.
- viii. Supply & Installation of Smart Lighting Control Box – 2 nos. with complete internal wiring in 3 Phase system, Providing Earth, all devices required for Protections & Controls including GPRS Communication Module with SIM Cards for 2 nos. of circuit groups of 18 nos. of Masts.
- ix. Commissioning of the System by establishing GPRS communication, Integrate the System with common Software platform of Smart Lighting designed for High Masts as specified in Part -1 for Remote Operation through PC and Mobile

**c) Specifications:**

**1) Lamp Poles:**

- i. The Octagonal Poles shall be in single section of 9 metres. There shall not be any circumferential weld joint. The poles shall be hot dip galvanized as per IS 2629 / IS 2633 / IS 4759 standards with average coating thickness of 70 micron. The galvanizing shall be done in single dipping. The Octagonal Poles shall be designed to withstand the maximum wind speed as per IS 875. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS: 5649 Part VI 1982. The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process. All octagonal pole shafts shall be provided with the rigid flange plate of suitable thickness with provision for fixing 4 foundation bolts. This base plate shall be fillet welded to the pole shaft at two locations i.e. from inside and outside.
- ii. Octagonal Poles shall be HT Steel Conforming to grade S355JO, Base Plate shall be Fe 410 conforming to IS 226 / IS 2062 and Foundation Bolts shall be EN.8 grade. The Octagonal Poles shall be bolted on a foundation with a set of four foundation bolts for greater rigidity.
- iii. The octagonal Poles shall have door of approximate 500 mm length at the elevation of 500 mm from the Base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section.

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- iv. The galvanized mounting ring arm bracket suitable for fixing 2 to 4 nos. of light fixtures shall be supplied along with the Octagonal Poles for installation of the luminaries.
  - v. RCC pedestal using M-20 grade concrete ,tor steel shuttering etc are envisaged ,scope also includes supply and embedment of 1 nos -100 mm dia bent GI pipes for taking cables .The other consumable required to complete the job in all respects is in contractor's scope.
  - vi. Installation of poles shall be done as per design and drawing of the Manufacturer. Foundation drawing shall submitted for approval.
  - vii. Installation of street light fixtures: This includes fixing of street light fitting complete with accessories and lamps at the end of the pole/bracket, connecting it with designed capacity and size copper conductor, PVC insulated cable from terminal block mounted in bottom of pole, testing and commissioning. The third core shall be connected to earth point of pole.
- 2) **Lamp pole Junction Box:**  
Sheet Moulded Compound (SMC) Junction Box shall be mounted in the foundation of each Lamp Poles. The Junction Box shall be fitted with suitable RYB-N Connector, suitable Cable Glands for series power distribution between Lamp poles using 4CX6 Sq.mm Armoured Copper PVC APC Cable. The SMC Junction Box shall be Weatherproof, Shock proof, Fire retardant Class FV-0as per IS:11731 Part 2 or V-0 as per UL-94 and have high Heat Distortion temperature of 200 C as per IS: 10192
- 3) **Feeder pillar& Junction Boxes:**
- i. Feeder Pillar is used for Main Power distribution for lighting and for providing utility supply to the area. The feeder Pillar shall be made by polycarbonate thermoplastic Feeder pillar, outdoor with 200 Amp 4 Pole MCCB as incomer and outgoing MCCB /MCB's as per requirements.
  - ii. Polycarbonate Feeder junction Boxes of Size 450MM X 315MMx 170MM with 3P+N Cu bus bar are used for power distribution.
- 4) **Cables:**
- i. Main Cable to the feeder Pillar, Polycarbonate Junction boxes and to the Smart Control Box: 1100V, 3.5 CX 95 Sq.mm Aluminium Armoured PVC APVC U.G Cable as per IS.
  - ii. Interconnection cables between Poles: 1100V, 4CX4 Sq.mm Copper Armoured PVC APVC U.G Cable as per IS.
- 5) **Cabling works:**
- i. The Main Cable of size 3.5 CX 95 Sq.mm shall be laid from Substation Panel to the Feeder Pillar in underground through 90 mm Dia HDPE Pipe and through direct laying as per the work schedule. The Cabling shall be done in Ring structure between smart control Panels for the redundancy of the power supply.
  - ii. The interconnection cables of size 4CX4 Sq.mm between Masts shall be laid underground through 63 mm Dia HDPE Pipe and rise to the SMC junction boxes for terminations. The internal wiring in each Pole shall be in single phase with phase balanced arrangement.

## 2) GENERAL SPECIFICATIONS & WORKS:

### 2.3 LED Luminaries:

#### a) General Description:

Light Fittings with Bracket mount, Outdoor, Pressure Die-Cast Aluminum frame, High power SMD LED with integral, high efficient LED Dimmable driver, Chorded Receiver, Surge Protection device etc. Complete with all accessories.

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b) **Power Requirements:**

System Power:

Part A - High Masts: As per Photometric Design submitted by the Manufacturer for each High Masts;

Part B - Lamp Masts 9 M: 150 W (+/- 10 W)

Operating Voltage: 140 V – 270 V AC

Power Factor: 0.95 or Above

THD: < 10%

c) **Optical Requirements:**

Luminous Efficacy: 140 lm/W or Above

Colour Temperature: 5700° K (+/- 100° K)

Colour Rendering Index : >70

Life Expectancy: Not less than 75,000 glow hours at 35° C with 70% Lumen maintenance

LED Optics: Suitable Narrow Beam/ Asymmetrical / Symmetrical Wide Beam Lens may be used as per the design of the Manufacturer Design Expert.

(The Bidder shall submit Photometrical Data sheet.)

d) **Construction:**

i. Housing Material: Pressure Die cast Aluminum

ii. Mounting Bracket: Stainless Steel AISI 316 or GI with 500 Hrs. Salt Spray Tested as per ASTM B117 or equivalent standard. The Thickness of the material shall be suitable for bearing the load of light fitting and shall withstand the vibration of lighting fixture.

iii. Cover: Polycarbonate with high impact resistance

iv. The Light fittings shall have separate compartment for Control part which is provided by Driver, Chorded Mains Receiver/ GPRS Communication Device and External Surge Protection Device.

v. The Brand Name should be engraved on the body of the fittings.

e) **Standards:**

i. Ingress Protection: IP 66

ii. Impact Resistance: IK 09 or Above

(Attach Type Test Certificates for i & ii)

iii. Luminaires General requirement as per IS 10322 / IEC 60598

iv. Driver: as per IS 15885 / IEC 61347

v. Chorded Receiver/ Controller: Dimmable 0-10V,/ 1-10 V

The luminaire and Driver shall be separately BIS Approved. (BIS Certificates for Luminaire and Driver shall be submitted along with quotation. The R number of each in BIS Certificates shall be provided in the Bid Sheet)

LM 79 & LM 80 Test Reports from NABL Accredited Laboratories shall be submitted.

f) **Surge Protection:**

20 KV or Above Surge Protection Device and Internal 4 KV for High Mast Lights; 10 KV or Above Surge Protection Device and Internal 4 KV for Q8-Q9 150 W in lamp posts.

g) **Warranty:**

5 years from the date of Receipt. Warranty document shall be submitted from the Service Division of the Manufacturer

h) **Make:**

Luminaire: Philips/ Wipro/Osram/ Crompton/Bajaj/Kesslec

Driver: Philips/ Wipro/Osram/ Crompton/Bajaj/Kesslec

LED: Osram/Lumileds/Nichia/Bridgelux

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## 2.4 Smart Control & Monitoring Specification (For Part – A work ,High Mast lights):

### **I. STU (Smart Timer Unit) Technical Specifications:**

<b>Supply Voltage</b>	: 415 (Three Phase)
<b>Battery Backup</b>	: At least 2 hour
<b>Supply Frequency</b>	: 50/60 Hz
<b>Operating temperature</b>	: Between 0 to $\geq 65^{\circ}$ C
<b>Relay Contact Rating</b>	: $\geq 10A$ 250VAC
<b>Communication Technology</b>	: Inbuilt 4G modem with 2G fall back
<b>Device Timing</b>	: RTC with battery backup
<b>Metering</b>	: Inbuilt, $\leq$ Class 1 Accuracy
<b>LED Indication</b>	: Device Status, Network Connectivity, Software Connection & Modem Power

### **II. STU (Smart Timer Unit) Functional Specifications:**

- 1) The device used in Panel shall have ability to get install without replacing any circuit components inside existing panel.
- 2) The device shall have scheduled the lamp on/off based on remote configuration from software.
- 3) The device shall have three relay contacts to control load phase wise/separate circuits which can be scheduled independently.
- 4) The device shall have flexible control options to configure on-off schedule as,
  - Instant Mode – Immediate ON-OFF with software and mobile application
  - Fixed Mode – User defined ON and OFF timing.
  - Astronomical Mode – Automatic scheduling based on sunset and sunrise timing
  - Hybrid Mode – Automatic scheduling for turning ON as per sunset and turning OFF as per user defined time or Turning ON as per user defined time and turning OFF as per sunrise time.
  - Interval Mode – Automatic scheduling based on user defined intervals. Provision for at least 24 intervals.
  - Weekly Scheduling & 20 holiday configuration required.
- 5) The device shall have provision to add offset time to sunset-sunrise timing for finer configuration.
- 6) The device shall have configuration setting to be stored in non-volatile memory in device.
- 7) The device shall have On-Off scheduling to work even without internet connectivity.
- 8) The device shall have internal real time clock with CMOS (Complementary Metal-oxide-semiconductor) battery backup  $\geq 3$  years
- 9) The device shall have self-recovery mechanism like watchdog in the case of abnormal behavior due to external conditions.
- 10) The device to measure all three-phase electrical parameters like voltage, current, power factor, power, frequency, energy, with At least class 1 accuracy and compliant with IS13779 standard.

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- 11) The device shall have inbuilt three phase energy meter, communication module, Three Timer Relays in one single compact unit having size not more than 120x120x80 mm.
- 12) The device shall have UV (Under Voltage) – OV (Over Voltage) protection. Device shall turn off all relays when input voltage is less than UV threshold or greater than OV threshold. UV, OV threshold shall be configurable from software.
- 13) The device shall have electrical parameters to be synced with software as per user defined sampling time.
- 14) The Electrical parameter sampling timing to be configurable from 1 minute to 30 minutes via user interface.
- 15) The device shall have ability to store electrical parameter data for last 6 weeks at interval time of 1 hour and sync it with software. However, interval time to store data in device memory while no network condition should be configurable from software.
- 16) The device shall have events like power-up & relay on-off and sync it with software.
- 17) The device shall have provision to connect to internet via 4G technology.
- 18) The device shall be designed modular in such a way that it can be upgraded to 5G or higher technology without complete replacement.
- 19) For GPRS connectivity, device shall have easily accessible sim card slot and antenna connector.
- 20) All communication from device to software shall be secured through TCP protocol with AES- 128 encryption.
- 21) The device shall have provision to update device firmware remotely through software.
- 22) The device shall have provision to connect to external current transformers in all phases.
- 23) The device shall have provision to connect door switch and MCB Auxiliary contact.
- 24) The device shall have battery backup of at least 2 hours.
- 25) The device shall have external 3 phase power supply which should work if any one or two phases are missing or neutral is missing.
- 26) The device shall have provision to connect additional module to measure branch level current consumption. Module can measure current of at least 9 output branches 20A each.
- 27) Controller shall have provision for at least 1 analog input.
- 28) Device shall have provision for at least 2 isolated digital inputs.
- 29) Device shall have manual switch provision for on-field device ON/OFF.
- 30) The device shall have minimum 1 channel for Dimming 0 to 10v compatible with led driver specified in given tender.
- 31) The device shall have RS 485 communication port for communication with dimming module.
- 32) The device shall have din rail mounting provision to have easy access and maintenance purpose.
- 33) Software and configuration can be updated remotely from the server and stored on the CPU module enabling it to autonomously execute tasks e.g. turn the street light on/off or collect meter reading based on the configuration set up by the user.

### **III. Smart Lighting Control Panel Specification:**

#### **1. Mechanical / Enclosure :**

- 1) The Smart High Mast Control & Monitoring Panel shall be installed open to sky in outdoor conditions by the side of the road / footpath / junction.

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- 2) The Enclosure of Control panel shall be made of Stainless Steel SS316 Grade with impact resistance of IK10 & ingress protection IP 56. The powder coating shall be done with proper cleaning & process of base material to ensure rust free material throughout the life of the enclosure.
- 3) The enclosure shall have Smart Control & monitoring device which includes (In built Metering, Communications and Control Circuitry), Output Terminals / MCB / Contactors.
- 4) The arrangement of all the items in panel shall be suitable for easy access for repairs and maintenance.
- 5) Additional 20% space shall be left inside the box for any future upgrades.
- 6) The enclosure shall have locking system which cannot be easily opened by common tools.
- 7) The input / output cable access holes shall have proper sealing arrangement to prevent humidity, dust, pollution & insects from entering the enclosure throughout the life of the panel.
- 8) The mounting of the enclosure shall be at least two feet above the ground level.
- 9) The suitable strong mounting arrangement shall be provided along with the Panel. The smart control box must be fixed on a PCC foundation as required.
- 10) The design of the enclosure shall have a “smart panel” appearance.
- 11) The internal wiring shall be done as per proper industrial electrical code with terminals, connectors, casing, numbering ferrules, etc.
- 12) The enclosure shall have a permanently fixed electrical wiring diagram inside.
- 13) The other details on the name plate shall be :
  - i) Panel Nominal rating:
  - ii) Voltage rating:
  - iii) Maximum Current rating per phase:
- 14) The Panel shall have a proper earthing terminal.
- 15) All the mounting channels inside should be finished with rust proof electroplating.

## **2. Electrical & Control:**

- 1) The Smart High Mast Control & Monitoring Panel shall work on three phase four wire input of 415 V AC of capacities.
- 2) The Smart High Mast Control & Monitoring Panel shall continue to work on any one of the three input supply phases in case there is no supply on one phase or two phases.
- 3) The Smart High Mast Control & Monitoring Panel shall work from 100V AC to 300V AC of any of the phase available.
- 4) There shall be three separate input terminal pins for three phase and separate Neutral terminal. The terminal shall be of Bakelite or appropriate capacity rating.
- 5) The incoming shall be properly fitted with an appropriate capacity lug and then connected to the input terminal.
- 6) The Input compartment shall house the input terminals, earthing point and separate MCB's / Fuses for each phase and separate for Neutral.
- 7) The connection cables from the terminals to the MCB's / Fuses and to further circuit shall be of fire retardant industrial grade and of capacity which is at least two times the average load current on each phase.

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- 8) The cables shall have proper grommets while passing through from one compartment to the other through any holes or cut-outs.
- 9) The cables shall be properly tied to the base guiding the cable.
- 10) The Smart High Mast Control & Monitoring Panel shall use all electrical components of reputed manufacturers such as L&T, ABB, Schneider, or equivalent. Engineer in charge may ask the Agency to change component of a particular make if he has reason to believe that the make used is of substandard quality.
- 11) The following minimum control system components shall be used :
  - i) **ELCB/MCB**: For the three input phases and neutral connection.
  - ii) **MCB**: separate for each phase and neutral of each output three phase cable starting from the panel and supplying to a different load.
  - iii) **Contactor**: For the three phases at input.
  - iv) **Auto-Manual switch**: to be provided to manually switch On/Off the High mast load for any malfunction or breakdown in the Smart High Mast Control & Monitoring Panel. It should also be able to operate the Auto-Manual switch On/Off for any on-site work on the output streetlight load network.
  - v) **Automatic Timer**: to be activated in case of any malfunction or breakdown in Smart High Mast Control & Monitoring Panel. In this mode the High Masts will be made On/Off through the timer settings of the Automatic Timer. (Rating)
- 12) The Smart High Mast Control & Monitoring Panel shall have proper industrial grade connector/ terminals of Bakelite or equivalent fire retardant material at output for connecting the individual phase and neutral connection of output cables for every road separately.
- 13) The terminal connectors shall be able to handle current of double the capacity of maximum load current.
- 14) The output cables shall be connected to the terminals using industrial grade lugs of maximum current carrying capacity of the cables.
- 15) The capacity of all electrical components in each phase shall be twice the nominal load capacity.
- 16) The Smart High Mast Control & Monitoring Panel shall have a Smart Timer Unit (STU) with minimum specifications as given above. The 4G modem shall be a part of this STU and shall house a SIM card holder with inbuilt Energy Meter Circuit.
- 17) The Bidder shall purchase SIM cards of the suitable company which has the best signal strength in project area.
- 18) The Bidder shall pay for the rental and all other charges related to the SIM cards and server space during the period of 5 years.
- 19) The Bidder shall purchase the Server space on the web, maintain and pay for the same during the period of 5 years.
- 20) The Smart High Mast Control & Monitoring Panel shall have three modes of operation :
  - a. Auto mode, where all operations are running as per the programmed software
  - b. Digital Timer mode, where the Smart High Mast Control & Monitoring Panel operations are done through Digital Timer
  - c. Manual mode, where the Smart High Mast Control & Monitoring Panel is totally bypassed and operates in manual on / off mode. It shall be possible to set the timings of this Digital Timer manually.

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- 21) Minimum 2 hours battery back-up shall be kept for 4G communication in case of mains Power failure. Mains failure Alerts will be sent until the power is restored.
- 22)
- 23) Nominal Rating (kW) of the Highmast Panel for each phase (including rating of safety equipment's - MCB, Contactor etc.) should be - 5 KW connected load is to be considered.
- 24) The Smart High Mast Control & Monitoring Panel shall have provision to manual control operation of the motor which operates winch of 0.75KW; this should work in forward and reverse direction.
- 25) Surge-Trap shall be fixed in each Control Box. The Surge Trap shall be Pluggable Type 1+2 / Class I+II combined lightning current arrester (10/350µs) and surge protective device (8/20µs) as per IEC/EN 61643-11 shall be provided. The preferred Make & Model nos. are EMERSON STPT12-12K275V- 4PG or OBO V25B + C 275V.
- 26) Three Phase Whole Current Smart meter to integrate with the existing AMI system of CoPA with specifications approved by the EIC shall be provided inside the Smart Control Box.

#### **IV. Cloud Software & Mobile application:**

##### **A. Data Security :**

1. The application should be hosted on cloud server with uptime of 99.99%. The server should be physically located in India.
2. Application should be hosted on secured http server with SSL certification.
3. It should have ability to integrate with third party software in future. All communication between front-end and back-end should be through Restful API.
4. Communication with the hardware device should be secured with encryption.
5. Web Application, Android & IOS Applications shall be needed.
6. Provision for Login ID, email id or phone number shall be there. Login can be done through OTP or password.

##### **B. Dashboard :**

1. Web dashboard should be completely configurable. There should be provision of design dashboard as per requirement by drag and drop widgets are must to have different dashboard for different user levels for common panels.
2. The provision for widgets such as : -
  - Energy trend comparison (daily, monthly, yearly)
  - unresolved fault list
  - maps with device location (fault in different colour)
  - operation hour vs non-operational charts(daily, monthly, yearly)
  - It should display energy consumption, energy savings, total load & Offline devices.
  - Electrical Parameter graph (Voltage, Current, Power Factor, Power, Frequency)

##### **C. Device Configuration:**

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1. It shall have provision to configure time, location and other settings together for multiple devices.
2. It shall have provision to save configuration in software even if device is not in network. These saved configurations should be auto synced with device when it is online again.
3. It shall have provision to add zones or groups. Devices can be added in any zone.
4. In an emergency, the user can control the lights manually using the web application or SMS commands from a pre-configured mobile device.

**D. Alert Configuration:**

1. Alerts configuration should be completely flexible.
2. All electrical parameters such as voltage, current, power, energy consumption, frequency, power factor should have upper and lower thresholds. Devices can have different threshold values.
3. Data missing alerts should be generated if device connectivity is lost or power cut is detected.
4. Provision for daily relay ON-OFF notification shall be there.
5. Provision to send an alert if any relay is configured in instant mode from automatic mode.
6. Time window for fault detection should be configurable as per alert.
7. WhatsApp, SMS, Email and Push notification for all alerts with 3 escalation levels. The escalation time period should be configurable.
8. There shall be provision to send present fault list on email to level 1 escalation users.
9. Main Breaker Error
10. Contactor Fault
11. Circuit Breaker off.
12. Main Power Failure.
13. Leakage to ground.
14. Manual switch activated.
15. Phase current out of range

**E. Reports:**

1. The Software should have provision to generate tabular report and download it in excel & csv format.
2. The Software should have provision to extract following reports: -
  - Energy Consumption Report
  - Event Report
  - Meter Log Report
  - Software Activity Report
3. These reports should have advanced filter setting. Provision to save filter setting user-wise.
4. Auto mail facility for daily and monthly energy reports to user as per user requirement shall be provided.

**F. Users & Roles:**

1. The provision to add at least 10 users with email id and phone number shall be there. Alert notification medium (WhatsApp, SMS, Email & Web Notification) for user should be

configurable.

2. Configuration for each user should be based on alert type and escalation level.
3. Software should have the ability to assign user roles and privilege.
4. Admin can add new User Role and assign privileges as access as per requirement.

## 2.5 **Smart Control & Monitoring Specification (For Part – B work ,High Mast lights):**

For Q8/Q9 lamp Poles the communication to the luminaries shall be achieved either through PLCC as detailed in Part A or through SIM communications to the individual luminaries of lamp poles

- 2.6 **HDPE PIPE** – HDPE pipe shall be provided for external laying. The HDPE pipes shall be 63 mm/90 mm dia: with thickness of not less than 5 mm. The HDPE pipe shall be made from high-density polyethylene (HDPE) resins meeting. The HDPE material supplied under this specification shall be high density, high molecular weight conforming to relevant IEC/BIS. The HDPE material shall conform to ASTM D 3350/ ISI. Suitable size PVC flexible pipe with collar shall be provided for the end portion of HDPE pipe.

The HDPE pipes shall be laid in the excavated trenches as required for cable laying.

## 3) **LAYING OF CABLE THROUGH TRENCHES/ CLAMPING ALONG WALLS/THROUGH HDPE PIPES ETC.**

Cable drums shall be checked for any damage in transit. Insulation test of the cable shall be carried out between phases and phase to earth before unwinding the drum.

### 3.1 **Excavation of Trenches**

LT cable shall be laid along the open trench/ pipes/ the excavated trench/clamping through cable tray etc. as per IS. Necessary material such as fastening materials etc., if required , shall also be supplied by the contractor.

Contractor shall construct the cable trenches required for directly buried cables. The scope of work for construction of cable trenches shall include excavation, back filling and reaming, supply and installation of route markers and joint markers. The bidder shall ascertain the soil parameters prevailing at site, before quoting the unit rates. The trenches after that shall be excavated manually/by using JCB and utmost care shall be taken while excavating the trenches. The trenches shall be excavated with 50 cm width and 60 cm depth from the ground level. The trenches shall be resurfaced and provide the compaction after laying the cable.

If cables has to laid below the beams/rails etc. from the ground level the excavation has to done without causing any damage to the structures etc. with suitable depth for laying the cables through GI pipes etc.

### 3.2 **Laying of cables**

Cable drums shall be checked for any damage in transit. Insulation test of the cable shall be carried out between phases and phase to earth before unwinding the drum.

When the cable has been properly straightened, the cores are tested for continuity and insulation resistance and the cable is then measured. In case of PVC cables, suitable moisture seal tape shall be used for this purpose

Cables shall be laid direct in ground through HDPE pipes of suitable size as per the BOQ, masonry trench, pipes/closed ducts, open ducts or on racks as per requirement.

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### 3.3 Providing End Termination of LT Cables

Supply and making of end terminations with brass/ pvc glands, lugs etc complete suitable for cables as per schedule of work. the item shall be single compression type tinned/nickel plated (coating thickness not less than 20 microns in case of tin and 10 to 15 microns in case of nickel) brass cable/pvc glands shall be provided by the contractor for all power and control cables to provide dust and weather proof terminations. they shall comprise of heavy duty brass casting, machine finished and tinned to avoid corrosion and oxidation. rubber components used in cable gland shall be neoprene and of tested quality. required number of packing glands to close unused openings in gland plates shall also be provided. for copper cable the termination materials shall be copper materials.

#### 4) FOUNDATION FOR 9M HIGH LIGHTING POLE

The pedestal for foundation shall be size of 45 CM x 45CM with 45 CM above ground level and also as per OEM Specs. The type of RCC, 12 MM size of tor steel, stirrup, anchor plate etc shall be finalized as per the approval of Engineer in charge and as per the pole manufactures design. Suitable PVC pipe for cable entry shall be provided.

The information given above is only indicative. The drawings of foundation may be got approved from the engineer in charge before carrying out the foundation work and as per OEM recommendation.

#### 5) EARTHING

##### 5.1 Applicable Standards

Earthing Materials shall conform to latest applicable standards

IS: 2062 Grade A Quality Specification for MS angles, MS channel & MS Flat

IS: 2062 Chemical & Physical composition of materials.

IS: 1852 Rolling & Cutting tolerances for Hot Rolled Steel products

##### 5.2 Pipe/ Rod Earthing

Providing pipe/rod earthing for lighting poles with 1 M Cu bonded Rod 100 Micron with 4mm Dia along with required length of CU wire and giving connections to poles etc. as required.

Length : 1 meter (1000mm).

Diameter : 4mm

Copper Bonding Thickness: 100 microns ( $\mu\text{m}$ ).

Base Material : A core of high tensile, low-carbon steel (SAE 1018, BS 970). The steel provides the mechanical strength to be driven into the ground without bending or breaking.

Copper Purity : The copper layer is typically 99.9% pure electrolytic grade copper.

Application : Used for grounding systems in various applications, including residential, commercial, and industrial electrical systems, as well as for lightning protection

##### 5.3 Servicing of existing high mast poles (16 m, 20 m, 25 m)

Servicing of existing high mast poles of 16 m, 20 m and 25 m poles by changing the wire ropes, existing light fittings with new ones, cables wiring, counter weights and winch mechanisms as given below.

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- i. Carry out full set of 3 nos. of Wire Ropes (6 mm) Changing work of High Masts by using AISI 316 wire ropes as per Specification for the following High Masts including lubrication of new wire ropes with suitable lubrication material.
- ii. Removal of existing Mast Cable from the structure, Supply, laying and Termination of New EPR PCP, braided, Sheathed trailing Cable ( CU, 5C x 2.5 sq mm) as per the given specification from bottom Terminal box to Mast lantern Carriage Terminal Box through Mast Structure of the following High Masts
- iii. Removal of Existing SON/MH/LED Lamps, chokes & other light fixtures and internal wiring in lantern Carriage,. All the removed materials shall be handed over to CoPA. The required modifications shall be done in the existing lantern carriage to suit the light fittings. Checking the level and stability of lantern carriages and balancing of lantern carriage by providing suitable counter weights.
- iv. The Wiring in Lantern carriage shall be carried with load balance in Three Phase 4 wire system. The modifications for fixing the LED fittings, Terminal Boxes, Junction Boxes etc. and Counter Weight Balancing shall be done without any welding work in the structure.
- v. Service of Winch gear mechanism of high masts including removing old grease, rust and lubricating using suitable lubricating material.

#### **6) SPECIAL CONDITIONS FOR ELECTRICAL WORKS**

- a) All current carrying components in all installation shall be of appropriate rating of voltage and frequency as required at respective areas.
- b) All equipments to be supplied and works to be executed shall conform to the CEA standards including protection and metering accessories. No extra amount will be paid in this regard.
- c) All testing and calibration etc are to be carried out as per requirement of statutory authority concerned.
- d) On completion of work the contractor has to obtain necessary safety/energisation certificate from statutory agency concerned, by submitting necessary completion statement/ drawing, equipment details etc. before energisation.
- e) All costs incurred in obtaining such approval/certificate are to be borne by the contractor. Statutory fees paid shall be reimbursed on presentation of document.
- f) Arc welding/cutting shall be avoided while retrofitting/replacing the poles/light fittings etc.
- g) The contractor will be held responsible for all the structural damages caused at the time of installation/retrofitting of the equipments etc.

#### **7) GENERAL CONDITIONS:**

1. The bid rates are in comprehensive manner calculated for 5 years. The items coming under the scope of Smart Lighting system shall be under warranty of 5 years. Any Repair / Replacement of the items coming under the scope of the Project shall be Repaired/ Replaced by the Firm with cost including the Labour, Conveyance and Transportation cost associated with the rectification work.
2. The bid rates include the Cost of Data Storage, complete SIM Card Charges for a period of 5 years.
3. The Rectification work shall be carried out within 48 hours on reporting complaints. For failure, penalty shall be applicable as per Annexure 6.

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8) ANNEXURES

8.1 ANNEXURE -1: TOTAL LIST OF HIGH MASTS

Sl. No.	Location of High Mast	Make	Year of Installation	Existing no. of lighting arms	Height of the mast (M)	GPS Location	
						Latitude	Longitude
1	BTP No.4 (Near Water Metro Jetty)	ASTER	2008	10	25	9.9644567	76.2632747
2	BTP No.1 (Near Parrisons BTP)	BAJAJ	2005	8	25	9.9673065	76.2597620
3	BTP No.2 (Near BTP Substation)	BAJAJ	2005	8	25	9.9666785	76.2606636
4	BTP No.3 (Near Samudrika Hall)	BAJAJ	2005	8	25	9.9661607	76.2613938
5	Ernakulam Wharf Q7	BAJAJ	2007	8	20	9.9674274	76.2673564
6	CFS No.1 (Near Gate)	BAJAJ	2007	9	20	9.9611493	76.2762013
7	Matt.Wharf inside no.2	BAJAJ	2007	10	20	9.9586752	76.2665494
8	South Coal Berth	BAJAJ	2007	8	20	9.9545959	76.2672367
9	Cruise Terminal 1	Crompton	2020	6	20	9.9665038	76.2696654
10	Cruise Terminal 2	Crompton	2020	6	20	9.9672979	76.2678238
11	Cruise Terminal 3	Crompton	2020	6	20	9.9672765	76.2682345
12	Cruise Terminal 4	Crompton	2020	6	20	9.9669047	76.2680987
13	Cruise Terminal 5	Crompton	2020	6	20	9.9664747	76.2693147
14	Cruise Terminal 6	Crompton	2020	6	20	9.9667201	76.2690287
15	Ernakulam Wharf Q5	BAJAJ	2007	9	20	9.9685795	76.2652934
16	Ernakulam Wharf Q6	BAJAJ	2007	10	20	9.9679785	76.2667029
17	Matt.Wharf inside no.3 (Near Ambuja)	BAJAJ	2007	10	20	9.9573814	76.2669007
18	EDC Junction	ASTER	2008	9	16	9.9680208	76.2631849
19	Terminus Junction	ASTER	2008	9	16	9.9608831	76.2681818
20	Church Junction	ASTER	2008	9	16	9.9614300	76.2699508
21	Ernakulam Wharf Entrance	ASTER	2008	9	16	9.9668379	76.2664106
22	RO-RO	BAJAJ	2010	9	16	9.9616056	76.2768273
23	Near Cruise Terminal Berth	Crompton	2012	6	16	9.9667858	76.2696014
24	Cruise Terminal Parking Area 1	Crompton	2020	10	16	9.9651535	76.2683039

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25	Cruise Terminal Parking Area 2	Crompton	2020	10	16	9.9654910	76.2681859
26	Kannangattu Bridge Walkway (near anchor)	Crompton		10	16	9.9280749	76.2877988
27	Matt.Wharf inside no.1 (Gate inside)	ASTER	2007	9	16	9.9602045	76.2660626
28	DLD Junction	ASTER	2008	9	16	9.9642000	76.2652690
29	CFS No.3 (Back Side)	BAJAJ		10	12	9.9628823	76.2760407
30	CFS No.4 (Back Side)	BAJAJ		6	12	9.9620352	76.2764826
31	CFS No.2	BAJAJ		10	12	9.9619623	76.2752196

## 8.2 ANNEXURE-2: SMART LIGHTING SYSTEM OF HIGH MAST LIGHTS - CABLING WORKS

External Cabling Work: Cable Laying from Source to High mast through HDPE Pipe

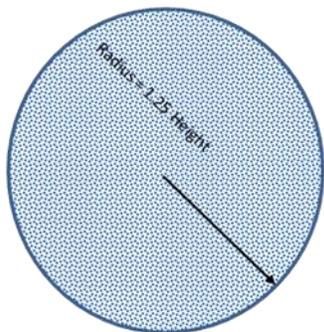
SL. No.	High Mast description	Road Cutting	Excavation in footpath	Clamping through Post (Including Termination to OH Lines)	Clamping through Wall	Looping (Including Terminations at both ends)	Total (Mtrs)
1	BTP No.1 (Near Parrisons BTP)	16	11	0	96	3	126
2	BTP No.2 (Near BTP Substation)	0	3	0	83	3	89
3	BTP No.3 (Near Samudrika Hall)	14	58	0	0	3	75
4	BTP No.4 (Near Water Metro Jetty)	51	0	10	0	3	64
5	EDC Junction	40	0	10	0	3	53
6	Terminus jn.	20	5	0	0	9	34
7	Church Jn.	16	0	10	0	3	29
8	Ernakulam Wharf Entrance	22	0	0	5	3	30
<b>Total</b>		<b>179</b>	<b>77</b>	<b>30</b>	<b>184</b>	<b>30</b>	<b>500</b>

Works:

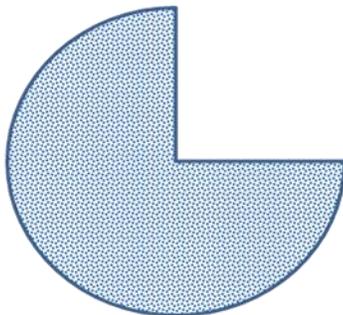
- i. Laying of 63 mm HDPE Pipe with its bends & other accessories as per the table above (Excluding looping & termination length) : 470m
- ii. Cable Laying from Source to High mast through HDPE Pipe using, 1.1 KV, 4X4 Sq.mm Copper, PVC APVC Armoured UG Cable : 500m

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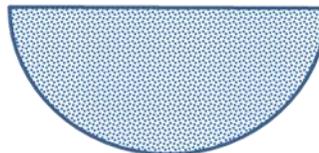
**8.3 ANNEXURE-3: PHOTOMETRIC ILLUSTRATION OF HIGH MASTS**



360 Degree  
Full Circular Lighting  
Area



270 Degree  
3/4 Circular Lighting Area



180 Degree  
Half Circular Lighting Area

**Surface Luminance without Dimming:**

Average: Not less than 40 Lux

Min/Ave: Not less than 0.4

Min/Max: Not less than 0.3

(3mtr x 3mtr Point measurement)

#### 8.4 ANNEXURE-4: LIGHT DESIGN REQUIREMENT

Sl no	Location of High Mast	Make	Year of Installation	Existing no. of lighting arms	Height of the mast (M)	Lighting arrangement required in the surrounding circle (Degree)	Radius (Mtrs) at which the Illumination maintained with Ave:>40 Lux, Min/Ave: >0.4; Min/Max: <0.3	Calculated illumination area at ground level required maintenance of Lux level as per Prev. Colmn. (Sq.M)	Maximum Total Power (KW)
1	BTP No.4 (Near Water Metro Jetty)	ASTER	2008	10	25	360	31.25	3,066.41	2.5
2	BTP No.1 (Near Parrisons BTP)	BAJAJ	2005	8	25	270	31.25	2,299.80	2.25
3	BTP No.2 (Near BTP Substation)	BAJAJ	2005	8	25	270	31.25	2,299.80	2.25
4	BTP No.3 (Near Samudrika Hall)	BAJAJ	2005	8	25	180	31.25	1,533.20	1.875
5	Ernakulam Wharf Q7	BAJAJ	2007	8	20	360	25.00	1,962.50	1.875
6	CFS No.1 (Near Gate)	BAJAJ	2007	9	20	360	25.00	1,962.50	1.875
7	Matt.Wharf inside no.2	BAJAJ	2007	10	20	360	25.00	1,962.50	1.875
8	South Coal Berth	BAJAJ	2007	8	20	360	25.00	1,962.50	1.875
9	Cruise Terminal 1	Crompton	2020	6	20	360	25.00	1,962.50	1.875
10	Cruise Terminal 2	Crompton	2020	6	20	360	25.00	1,962.50	1.875
11	Cruise Terminal 3	Crompton	2020	6	20	360	25.00	1,962.50	1.875
12	Cruise Terminal 4	Crompton	2020	6	20	360	25.00	1,962.50	1.875
13	Cruise Terminal 5	Crompton	2020	6	20	360	25.00	1,962.50	1.875

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14	Cruise Terminal 6	Crompton	2020	6	20	360	25.00	1,962.50	1.875
15	Ernakulam Wharf Q5	BAJAJ	2007	9	20	270	25.00	1,471.88	1.625
16	Ernakulam Wharf Q6	BAJAJ	2007	10	20	270	25.00	1,471.88	1.625
17	Matt.Wharf inside no.3 (Near Ambuja)	BAJAJ	2007	10	20	270	25.00	1,471.88	1.625
18	EDC Junction	ASTER	2008	9	16	360	20.00	1,256.00	1.375
19	Terminus Junction	ASTER	2008	9	16	360	20.00	1,256.00	1.375
20	Church Junction	ASTER	2008	9	16	360	20.00	1,256.00	1.375
21	Ernakulam Wharf Entrance	ASTER	2008	9	16	360	20.00	1,256.00	1.375
22	RO-RO	BAJAJ	2010	9	16	360	20.00	1,256.00	1.375
23	Near Cruise Terminal Berth	Bajaj	2012	6	16	360	20.00	1,256.00	1.375
24	Cruise Terminal Parking Area 1	Crompton	2020	10	16	360	20.00	1,256.00	1.375
25	Cruise Terminal Parking Area 2	Crompton	2020	10	16	360	20.00	1,256.00	1.375
26	Kannengattu Bridge Walkway (near anchor)			10	16	360	20.00	1,256.00	1.375
27	Matt.Wharf inside no.1 (Gate inside)	ASTER	2007	9	16	270	20.00	942.00	1.125
28	DLD Junction	ASTER	2008	9	16	270	20.00	942.00	1.125
29	CFS No.3 (Back Side)			10	12	360	15.00	706.50	1.125
30	CFS No.4 (Back Side)			6	12	360	15.00	706.50	1.125
31	CFS No.2			10	12	180	15.00	353.25	0.625
									<b>50.00</b>

Total Power (KW) : 50KW

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## 8.5 ANNEXURE-5 : LIGHTS COMPLETION REPORT

Sl. No.	Location of Lights	No. of Luminaries installed	System Power of each Luminaries (Watts)	Total System Power (Watts)
	<b>High masts</b>			
1	BTP No.4 (Near Water Metro Jetty)			
2	BTP No.1 (Near Parrisons BTP)			
3	BTP No.2 (Near BTP Substation)			
4	BTP No.3 (Near Samudrika Hall)			
5	Ernakulam Wharf Q7			
6	CFS No.1 (Near Gate)			
7	Matt.Wharf inside no.2			
8	South Coal Berth			
9	Cruise Terminal 1			
10	Cruise Terminal 2			
11	Cruise Terminal 3			
12	Cruise Terminal 4			
13	Cruise Terminal 5			
14	Cruise Terminal 6			
15	Ernakulam Wharf Q5			
16	Ernakulam Wharf Q6			
17	Matt.Wharf inside no.3 (Near Ambuja)			
18	EDC Junction			
19	Terminus Junction			
20	Church Junction			
21	Ernakulam Wharf Entrance			
22	RO-RO			

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23	Near Cruise Terminal Berth			
24	Cruise Terminal Parking Area 1			
25	Cruise Terminal Parking Area 2			
26	Kannengattu Bridge Walkway (near anchor)			
27	Matt.Wharf inside no.1 (Gate inside)			
28	DLD Junction			
29	CFS No.3 (Back Side)			
30	CFS No.4 (Back Side)			
31	CFS No.2			
	<b>TOTAL SYSTEM POWER OF HIGH MAST LUMINARIES (Watts)</b>			
32	<b>Lamp Poles Lights</b>			
33	<b>Aviation Lights</b>			

**8.6 ANNEXURE-6 : ILLUSTRATION OF PENALTY CALCULATION FOR HIGH MASTS & Q8-Q9 AREA LAMP POLE LIGHTS**

<b>Assume work completed for all High Masts &amp; 18 Nos. of Lamp Poles for an amount of Rs.1,80,00,000/-</b>				
			Example	
Total No. of High Masts (Nos.)	H1		31	
Total No. of High Mast Commissioned after the completion of Work (Nos.)	H2		31	
Q8-Q9 Area Lamp pole Lights 36 Nos. set	P		1	
Aviation Lights 56 Nos. Set	A		1	
Total Lighting = L	H2 + P + A		33	
(*Note: See Annex-6 Light Completion Report)				
<b>CASE:1</b>				
No. of lights Defective in High mast No.6	D6		2	
Total No. of Lights Installed in High mast No.6	L6		7	

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% Defective = D%	$100 \times (D_6 / L_6) / L$	$100 \times (2 / 7) / 33$ = 0.8658%	0.8658%
10% of Total Work Amount (Rs.)	W	Rs.18,00,000	1800000
Deduction of amount (Rs.) after 48 Hrs. up to 1 week	$W \times D\% \times 20\%$	$Rs.18,00,000 \times 0.8658\% \times 20\%$	3116.88
Deduction of amount (Rs.) after 1 week up to 2 week	$W \times D\% \times 25\%$	$Rs.18,00,000 \times 0.8658\% \times 25\%$	3896.10
Deduction of amount (Rs.) after 2 week up to 3 week	$W \times D\% \times 30\%$	$Rs.18,00,000 \times 0.8658\% \times 30\%$	4675.32
<b>Total Penalty Amount for High Mast No.6 for the Defective period of 3 Weeks(Cumulative) (Rs.)</b>	<b>P<sub>6</sub></b>		<b>11688.30</b>
<b>Deduction after 3 weeks(Non-Cumulative)</b>	$W \times D\% \times 100\%$	$Rs.18,00,000 \times 0.8658\% \times 100\%$	<b>15584.40</b>
<b>CASE:2</b>			
No. of lights Defective in Q8-Q9 Lamp poles	D <sub>32</sub>	1	
Total No. of Lights Installed in Q8-Q9 Lamp poles	L <sub>32</sub>	36	
% Defective = D%	$100 \times (D_{32} / L_{32}) / L$	$100 \times (1 / 36) / 33$ = 0.0843%	0.0843%
10% of Total Work Amount (Rs.)	W	Rs.18,00,000	1800000
Deduction of amount (Rs.) after 48 Hrs. up to 1 week	$W \times D\% \times 20\%$	$Rs.18,00,000 \times 0.0843\% \times 20\%$	303.48
Deduction of amount (Rs.) after 1 week up to 2 week	$W \times D\% \times 25\%$	$Rs.18,00,000 \times 0.0843\% \times 25\%$	379.35
Deduction of amount (Rs.) after 2 week up to 3 week	$W \times D\% \times 30\%$	$Rs.18,00,000 \times 0.0843\% \times 30\%$	455.22
<b>Total Penalty Amount for Lamp Poles Lights for the Defective period of 3 Weeks (Cumulative) (Rs.)</b>	<b>P<sub>32</sub></b>		<b>1138.03</b>
<b>Deduction after 3 weeks(Non-Cumulative)</b>	$W \times D\% \times 100\%$	$Rs.18,00,000 \times 0.0843\% \times 100\%$	<b>1517.40</b>
<b>CASE:3</b>			
No. of Aviation lights Defective in High Masts	D <sub>33</sub>	1	
Total No. of Lights Aviation lights Installed in High Masts	L <sub>33</sub>	56	
% Defective = D%	$100 \times (D_{33} / L_{33}) / L$	$100 \times (1 / 56) / 33$ = 0.0541%	0.0541%
10% of Total Work Amount (Rs.)	W	Rs.18,00,000	1800000
Deduction of amount (Rs.) after 48 Hrs. up to 1 week	$W \times D\% \times 20\%$	$Rs.18,00,000 \times 0.0541\% \times 20\%$	194.76

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Deduction of amount (Rs.) after 1 week up to 2 week	$W \times D\% \times 25\%$	$Rs.18,00,000 \times 0.0541\% \times 25\%$	243.45
Deduction of amount (Rs.) after 2 week up to 3 week	$W \times D\% \times 30\%$	$Rs.18,00,000 \times 0.0541\% \times 30\%$	292.14
<b>Total Penalty Amount for Aviation Lights for the Defective period of 3 Weeks (Cumulative) (Rs.)</b>	<b>P<sub>33</sub></b>		<b>730.35</b>
<b>Deduction after 3 weeks(Non-Cumulative)</b>	$W \times D\% \times 100\%$	$Rs.18,00,000 \times 0.0541\% \times 100\%$	<b>973.80</b>
<b>CASE: 4</b>			
No. of CCMS Panels Defective	C	1	
Total No. of CCMS Panels Installed	C <sub>1</sub>	33	
% Defective = D%	$100 \times (C / C_1)$	$100 \times (1/33) = 3.0303\%$	3.0303%
10% of Total Work Amount (Rs.)	W	Rs.18,00,000	1800000
Deduction of amount (Rs.) after 48 Hrs. up to 1 week	$W \times D\% \times 20\%$	$Rs.18,00,000 \times 3.0303\% \times 20\%$	10909.08
Deduction of amount (Rs.) after 1 week up to 2 week	$W \times D\% \times 25\%$	$Rs.18,00,000 \times 3.0303\% \times 25\%$	13636.35
Deduction of amount (Rs.) after 2 week up to 3 week	$W \times D\% \times 30\%$	$Rs.18,00,000 \times 3.0303\% \times 30\%$	16363.62
<b>Total Penalty Amount for CCMS Panel for the Defective period of 3 Weeks (Cumulative)(Rs.)</b>	<b>P<sub>c</sub></b>		<b>40909.05</b>
<b>Deduction after 3 weeks(Non-Cumulative)</b>	$W \times D\% \times 100\%$	$Rs.18,00,000 \times 3.0303\% \times 100\%$	<b>54545.40</b>
<b>CASE:5</b>			
Complete Outage of CCMS System	C	1	
Total No. of CCMS Panels Installed	C <sub>1</sub>	33	
10% of Total Work Amount (Rs.)	W	Rs.18,00,000	1800000
Deduction of amount (Rs.) after 48 Hrs. up to 1 week	$W \times 5\%$	$Rs.18,00,000 \times 5\%$	90000
Deduction of amount (Rs.) after 1 week up to 2 week	$W \times 7.5\%$	$Rs.18,00,000 \times 7.5\%$	135000

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Deduction of amount (Rs.) after 2 week up to 3 week	$W \times 10\%$	Rs.18,00,000 x 10%	180000
<b>Total Penalty Amount for complete outage of CCMS system for the Defective period of 3 Weeks (Cumulative)(Rs.)</b>	<b>P<sub>TC</sub></b>		<b>405000</b>
<b>Deduction after 3 weeks(Non-Cumulative)</b>	$W \times 30\%$	Rs.18,00,000 x 30%	<b>540000</b>

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## SECTION VI

### 1. PREAMBLE TO BILL OF QUANTITIES

#### 1 General Instructions

##### General

- a) This Bill of Quantities must be read with the Drawings, Conditions of Contract and the Specifications, and the Contractor shall be deemed to have examined the Drawings, Specifications, General Conditions of Contract and to have acquainted himself with the detailed descriptions of the Works to be done, and the way in which they are to be carried out.
- b) Notwithstanding that the work has been sectionalized every part of it shall be deemed to be supplementary to and complementary of every other part and shall be read with it or into it so far as it may practicable to do so.
- c) The detailed descriptions of work and materials given in the Specifications are not necessarily be repeated in the Bill of Quantities.
- d) The Contractor shall be deemed to have visited the Site before preparing his tender and to have examined for himself the conditions under which the work will proceed and all other matters affecting the carrying out of the works and cost thereof.
- e) The Tenderer will be held to have familiarized himself with all local conditions, in so far as they affect the work, means of access and the locality of existing services, in order to execute the Works measured and described hereinafter. No claims for want of knowledge in this respect will be reimbursed.

##### Rates and Prices to be Inclusive

- 1.1 RATES and prices set against items are to be the all-inclusive value of the finished work shown on the Drawings and/or described in the Specification or which can reasonably be inferred there from and are to cover the cost of provision of plant, labour, supervision, materials, test charges, freight, transportation, erection, installation, performance of work, care of works, insurance, maintenance, overheads and profits and every incidental and contingent cost and charges whatsoever including all taxes and duties such as turnover tax, excluding GST, and every kind of temporary work executed or used in connection therewith (except those items in respect of which provision has been separately made in the Bills of Quantities) and all the Contractor's obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.
- 1.2 The Specifications are intended to cover the supply of material and the execution of all work necessary to complete the works. Should there be any details of construction or material which have not been referred to in the Specifications or in the Bill of Quantities and Drawings, but the necessity for which may reasonably be implied or inferred there from, or which are usual or essential to the completion of all works in all trades, the same shall be deemed to be included in the rates and prices entered in the Bill of Quantities. The rates and prices are to cover the item as described in the Bill of Quantities and if there is inconsistency in the description between the Bill of Quantities, Specifications or Drawings, the interpretation will be done according to General Conditions of Contract.
- 1.3 The quantities given in the Bill are approximate and are given to provide a common basis for tendering. They are not to be taken as a guarantee that the quantities scheduled will be carried out or required or that they will not be exceeded. The Employer / Engineer reserves the right to delete any

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item and / or increase / reduce quantities indicated in the Bills of Quantities at any time. Payment will be made according to the actual quantities of work ordered and carried out in the contract. However, the rates quoted shall be valid for any extent of variation in quantity of each individual item provided that the total contract value does not get altered by more than indicated in conditions of contract. No claim whatsoever for extra payment due to variation of quantities within the above said limit would be entertained.

- 1.4 The rates and prices shall include (except where separate items are given) for the provision and operation of the following items, for compliance with the Condition of Contracts, Special Conditions, the specifications and Tender drawings:
- a) Supervision and labour for the Works;
  - b) All materials, installation/erection, handling and transportation;
  - c) All Contractor's Equipment;
  - d) All testing, commissioning, insurance, maintenance, security, welfare facilities, overheads and profit and every incidental and contingent costs and charges whatsoever including;
  - e) All temporary fencing, watching, lighting, sanitary accommodation, general security arrangements, welfare facilities and first aid provision;
  - f) Provision and maintenance of Contractor's Site offices, cabins, huts, maintenance and storage areas;
  - g) All taxes and duties including General Tax, Turn-Over tax, Duties etc.
  - h) All necessary temporary services including fresh water, compressed air lines, electrical cabling and switchgear, telephone, walkie-talkie and facsimile facilities
  - i) The maintenance of all Contractor's services;
  - j) All insurances for the Works;
  - k) Allow for complying with all environmental aspects as specified;
  - l) For carrying out hot work of any kind contractor should consider safety of vessel in adjoining berth;
  - m) Detail design of components of temporary works, wherever necessary as directed by Engineer.

## **2. Method of Measurement**

Standard Method: The work included in Bill of Quantities once completed will be presented to the Engineer's representative for checking quality and quantity of work. The Engineer's representative after satisfying himself issue a certificate to that effect. Unless stated or billed otherwise quantities shall be measured in accordance with Indian Standard Code No.1200 for civil work and shall be not as they are provided in the works. The rates and prices shall include whatsoever allowance is considered to be necessary for wastage, working spaces, construction slopes and batters.

The mode of measurement and payment described in the relevant technical specifications shall apply for the relevant items.

## **3. Currency**

All monetary reference herein and the Bill of Quantities shall be priced in Indian Rupee Currency.

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**SECTION VI**  
**2. BILL OF QUANTITIES**

<b>PART A: Smart Lighting of Existing High Masts at Various Locations of Port area in Willingdon Island</b>					
<b>SL NO.</b>	<b>ITEM DESCRIPTION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE(Rs.)</b>	<b>AMOUNT(Rs.)</b>
<b>I</b>	<b>SUPPLY</b>				
1	Carry out the External Cabling work for providing power to the High Masts from the Source point				
(i)	Supply of 63 mm HDPE Pipe with its bends & other accessories by Road Cutting, Excavation in footpath, Clamping through Posts walls etc. as detailed in the Annexure- 2 External Cabling Works	470	Mtrs	171.67	80683.33
(ii)	Supply of Cable 1.1 KV, 4X4 Sq.mm Copper, PVC APVC Armoured UG Cable from Source terminal to High mast through HDPE Pipe including Terminations as detailed in the Annexure-2 External Cabling Works	500	Mtrs	283.33	141666.67
2	Supply of Full set of AISI 316 Wire Ropes with accessories for the Rope Changing work including items required for servicing/ overhauling of winch mechanism, pulley etc., of High Masts as per Specification for the following High Masts				
(i)	Height 25 Mtrs	4	Nos.	27732.00	110928.00
(ii)	Height 20 Mtrs	7	Nos.	22541.00	157787.00
(iii)	Height 16 Mtrs	7	Nos.	18421.00	128947.00
(iv)	Height 12 Mtrs	3	Nos.	15626.67	46880.00
3	Supply of New EPR PCP Sheathed trailing Cable as per the given specification from bottom Terminal box to Mast lantern Carriage Terminal Box through Mast Structure of the following High Masts				
(i)	Height 25 Mtrs	4	Nos.	13300.67	53202.67
(ii)	Height 20 Mtrs	7	Nos.	11000.00	77000.00
(iii)	Height 16 Mtrs	7	Nos.	9230.33	64612.33
(iv)	Height 12 Mtrs	3	Nos.	7593.33	22780.00

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4	Supply of set of LED luminaries as per the photometric design satisfying the illumination & other criteria as per the Annexure-3 of illumination Design, suitable Junction boxes, , and internal wiring in lantern Carriage using 3 Core 1.5 Sq.mm FR PVC Sheathed cables. The required modifications shall be done in the existing lantern carriage to suit the light fittings. Checking the level and stability of lantern carriages and balancing of lantern carriage by providing suitable counter weights if required.				
(i)	High Mast of Height 25 Mtrs with Full Circumference area lighting measurements required	1	Nos.	201626.22	201626.22
(ii)	High Mast of Height 25 Mtrs with 3/4 Circumference area lighting measurements required	2	Nos.	151219.67	302439.33
(iii)	High Mast of Height 25 Mtrs with Half Circumference area lighting measurements required	1	Nos.	100813.11	100813.11
(iv)	High Mast of Height 20 Mtrs with Full Circumference area lighting measurements required	10	Nos.	133224.38	1332243.81
(v)	High Mast of Height 20 Mtrs with 3/4 Circumference area lighting measurements required	3	Nos.	99918.29	299754.87
(vi)	High Mast of Height 16 Mtrs with Full Circumference area lighting measurements required	9	Nos.	109513.08	985617.71
(vii)	Height 16 Mtrs with 3/4 Circumference area lighting measurements required	2	Nos.	82134.81	164269.62
(viii)	High Mast of Height 12 Mtrs with Full Circumference area lighting measurements required	2	Nos.	118239.20	236478.40
(ix)	High Mast of Height 12 Mtrs with Half Circumference area lighting measurements required	1	Nos.	59119.60	59119.60
5	Supply of Single Dome, IP67 LED Aviation lights	56	Nos.	6431.67	360173.33
6	Supply of Smart Lighting Control Panel with complete internal wiring in 3 Phase system, all devices required for Protections & Controls including GPRS Communication Module with SIM Cards near each High Mast. Cable Laying from High Mast Control Panel to High Mast bottom Terminals using 1.1 KV, 5X4 Sq.mm Copper, PVC APVC UG Cable including Terminations, Earth interconnection using G.I Strips to the Mast Earthing Terminals as detailed in Technical specifications.	31	Nos.	199514.00	6184934.00

*Signature of the Tenderer*

7	Supply of Centralized monitoring and control system (CCMS), Establishing GPRS communication of The Smart Lighting Control Panels, Design and providing Software platform for Remote Operation through PC and Mobile including the required storage of data and Commissioning of the system including cost of SIM Cards and data storage for the operation period of 5 years	1	L.S	966666.67	966666.67
<b>TOTAL FOR A(I)-SUPPLY (EXCLUDING GST)</b>					<b>12078623.67</b>
<b>II INSTALLATION</b>					
8	Carry out the External Cabling work for providing power to the High Masts from the Source point				
(i)	Laying of 63 mm HDPE Pipe with its bends & other accessories by Road Cutting, Excavation in footpath, Clamping through Posts walls etc. as detailed in the Annexure-2 External Cabling Works	470	Mtrs	381.67	179383.33
(ii)	Laying of Cable 1.1 KV, 4X4 Sq.mm Copper, PVC APVC Armoured UG Cable from Source terminal to High mast through HDPE Pipe including Terminations as detailed in the Annexure-2 External Cabling Works	500	Mtrs	90.00	45000.00
9	Carry out full set of Wire Ropes Changing work including servicing/ overhauling of winch mechanism, pulley etc., of High Masts by using AISI 316 wire ropes as per Specification for the following High Masts				
(i)	Height 25 Mtrs	4	Nos.	9566.67	38266.67
(ii)	Height 20 Mtrs	7	Nos.	8353.33	58473.33
(iii)	Height 16 Mtrs	7	Nos.	6686.67	46806.67
(iv)	Height 12 Mtrs	3	Nos.	6186.67	18560.00
10	Removal of existing Mast Cable from the structure, laying and Termination of New EPR PCP Sheathed trailing Cable as per the given specification from bottom Terminal box to Mast lantern Carriage Terminal Box through Mast Structure of the following High Masts				
(i)	Height 25 Mtrs	4	Nos.	11933.33	47733.33
(ii)	Height 20 Mtrs	7	Nos.	9700.00	67900.00
(iii)	Height 16 Mtrs	7	Nos.	8366.67	58566.67
(iv)	Height 12 Mtrs	3	Nos.	7866.67	23600.00

Signature of the Tenderer

11	Removal of Existing SON/MH/LED Lamps, chokes & other light fixtures,. All the removed materials shall be handed over to CoPA. Installation of set of LED luminaries as per the photometric design satisfying the illumination & other criteria as per the Annexure-3 of illumination Design, suitable Junction boxes, , and internal wiring in lantern Carriage using 3 Core 1.5 Sq.mm FR PVC Sheathed cables. The required modifications shall be done in the existing lantern carriage to suit the light fittings. Checking the level and stability of lantern carriages and balancing of lantern carriage by providing suitable counter weights if required.				
	(i) High Mast of Height 25 Mtrs with Full Circumference area lighting measurements required	1	Nos.	11583.33	11583.33
	(ii) High Mast of Height 25 Mtrs with 3/4 Circumference area lighting measurements required	2	Nos.	11583.33	23166.67
	(iii) High Mast of Height 25 Mtrs with Half Circumference area lighting measurements required	1	Nos.	11583.33	11583.33
	(iv) High Mast of Height 20 Mtrs with Full Circumference area lighting measurements required	10	Nos.	9435.67	94356.67
	(v) High Mast of Height 20 Mtrs with 3/4 Circumference area lighting measurements required	3	Nos.	9435.67	28307.00
	(vi) High Mast of Height 16 Mtrs with Full Circumference area lighting measurements required	9	Nos.	9333.33	84000.00
	(vii) Height 16 Mtrs with with 3/4 Circumference area lighting measurements required	2	Nos.	9333.33	18666.67
	(viii) High Mast of Height 12 Mtrs with with Full Circumference area lighting measurements required	2	Nos.	8888.67	17777.33
	(ix) High Mast of Height 12 Mtrs with with Half Circumference area lighting measurements required	1	Nos.	8888.67	8888.67
12	Installation , Testing & Commissioning of Single Dome LED, IP67 Aviation lights in each Highmasts	56	Nos.	950.00	53200.00
13	Installation of Smart Lighting Control Panel with complete internal wiring in 3 Phase system, all devices required for Protections & Controls including GPRS Communication Module with SIM Cards near each High Mast. Cable Laying from High Mast Control Panel to High Mast bottom Terminals using 1.1 KV, 5X4 Sq.mm Copper, PVC APVC UG Cable, including Terminations, Earth interconnection using G.I Strips to the Mast Earthing Terminals as detailed in Technical Specifications.	31	Nos.	17500.00	542500.00

Signature of the Tenderer

14	Installation of Centralized monitoring and control system (CCMS) by establishing GPRS communication of the Smart Lighting Control Panels, Design and providing Software platform for Remote Operation through PC and Mobile including the required storage of data and Commissioning of the system including cost of SIM Cards and data storage for the operation period of 5 years	1	LS	56666.67	56666.67
	TOTAL FOR A(II)-INSTALLATION (EXCLUDING GST)				<b>1534986.34</b>
	<b>GRAND TOTAL FOR PART A : SUPPLY &amp; INSTALLATION (EXCLUDING GST)</b>				<b>13613610.01</b>
<b>PART B : SUPPLY &amp; INSTALLATION OF FLOOD LIGHT POLES ALONG Q8 AND Q9 BERTH/ YARD AT ERNAKULAM WHARF</b>					
SL NO.	ITEM DESCRIPTION	QTY	UNIT	RATE(Rs.)	AMOUNT(Rs.)
<b>I</b>	<b>SUPPLY</b>				
1	Supply of 9 M GI Octagonal flood light pole with ring arm bracket suitable for fixing 2 to 4 no of light fixtures fixing the flood lights at top ,GI foundation bolts, etc. as per Technical Specifications.	18	Nos	24453.33	440160.00
2	Supply of 150 W LED, IP66, IK 08, Min 120 Lum/watt Flood light fittings as per Technical Specifications.	36	Nos.	15696.33	565068.00
3	Supply of SMC Pole Junction Box, MCB , RYB connector, cables for connecting to lights etc. including supply of all items for internal wiring in lamp poles and materials as per Technical Specifications.	18	Nos	3866.67	69600.00
4	Supply of all materials for providing RCC foundation of Lamp poles including foundation Bolts, Nuts, Plates etc.	18	Nos	7166.67	129000.00
5	Supply of Smart Lighting Control Panel Complete with internal wiring in 3 Phase system, all devices required for Protections & Controls including GPRS Communication Module with SIM Cards	2	Nos	171677.33	343354.67
6	Supply of materials for Earthing for poles/ Smart Control Panels with class B, GI pipe of 50MM of minimum 1 m length. With nut ,bolts, washers, Cu wire for connecting etc.	20	Nos	3866.67	77333.33
7	Supply of outdoor thermoplastic polycarbonate Feeder pillar with 200 Amp 4 Pole MCCB as incomer and outgoing 125 4P MCCB-1no., 63 A 4P MCB -2 nos. as per Technical Specifications.	1	No.	121166.67	121166.67
8	Supply of outdoor Polycarbonate Feeder JB of Size 450MM X 315MMx 170MM CM with 3P+N Cu bus bar	2	Nos	43100.00	86200.00

Signature of the Tenderer

9	Supply of 3.5C X 95 Sq.mm, 1.1 KV, Al armoured , PVC insulated , UG cables	500M		666.67	333333.33
10	Supply of 1.1 KV, 4Cx 4 Sq.mm , CU armoured , PVC insulated , UG cables.	600M		270.00	162000.00
11	Supply of 90 mm HDPE Pipe	300M		268.33	80500.00
12	Supply of 63 mm HDPE Pipe	400M		151.67	60666.67
	TOTAL FOR B(I) SUPPLY (EXCLUDING GST)				2468382.67
<b>II</b>	<b>INSTALLATION</b>				
13	Providing RCC foundation, Erection of GI poles	18Nos.		19666.67	354000.00
14	Installation of 2 nos. of Flood led lights, SMC Pole Junction Box, MCB , RYB connector, cables , internal wiring of Pole and commissioning lamp poles as per Technical Specifications.	18Nos.		2800.00	50400.00
15	Installation, Testing & Commissioning of Smart Lighting Control Box Complete with internal wiring in 3 Phase system, all devices required for Protections & Controls including GPRS Communication Module with SIM Cards	2Nos.		14333.33	28666.67
16	Providing Earthing for poles / Smart Control Panels with class B, GI pipe of 40MM of minimum 1 m length. With nut ,bolts, washers, Cu wire for connecting etc.	20Nos		4600.00	92000.00
17	Installation, Testing & Commissioning of outdoor thermoplastic polycarbonate Feeder Pillar with 200 Amp 4 Pole MCCB as incomer and outgoing 125 A 4P MCCB -1 no.,63 4P MCB- 2 nos. as per Technical Specifications.	1Nos		4833.33	4833.33
18	Installation, Testing & Commissioning of outdoor Polycarbonate Feeder JB of Size 450MM X 315MMx 170MM CM with 3P+N Cu bus bar	2Nos.		3833.33	7666.67
19	Excavation of road surface/hard surface/CC area at a depth of 60 cm and laying of 90/63 mm HDPE Pipe and re-filling	500M		523.33	261666.67
20	Excavation of loose soil a depth of 60 cm and laying of 90/63 mm HDPE Pipe and re-filling	200M		250.00	50000.00
21	Laying of 1.1 KV, 3.5CX95 sqmm of Al armoured PVC APVC UG cable through 90 mm HDPE Pipe	300M		95.00	28500.00
22	Laying of 1.1 KV, 4CX4 Sq.mm of Copper armoured PVC APVC UG cable through 63 mm HDPE Pipe	400M		45.00	18000.00
23	Laying/ Clamping of 1.1 KV, 3.5CX95 sqmm of Al armoured PVC APVC UG cable	200M		113.33	22666.67

Signature of the Tenderer

24	Laying/ Clamping of 1.1 KV, 4CX4 Sqmm of Copper armoured PVC APVC UG cable	200	M	46.67	9333.33
25	Providing end termination with suitable glands and sockets of 3.5CX95 sqmm of Al armoured PVC APVC UG cable	8	Nos.	766.67	6133.33
26	Providing end termination with suitable glands and sockets of 3.5CX95 sqmm of Al armoured PVC APVC UG cable	40	Nos.	533.33	21333.33
27	Providing cement concreting in excavated hard surface area , for fixing LT cables layed along the wall side, HDPE pipe etc.	1.5	CUM	16333.33	24500.00
	TOTAL FOR B(II) INSTALLATION (EXCLUDING GST)				979700.00
	<b>TOTAL FOR PART B: SUPPLY &amp; INSTALLATION (EXCLUDING GST)</b>				<b>3448082.67</b>
	<b>TOTAL FOR PART A &amp; PART B: (EXCLUDING GST)</b>				<b>17061692.68</b>

*Signature of the Tenderer*

**SECTION VII  
CONTRACT DATA**

[To be filled up before issuing tender document as applicable for each tender]

Items marked “N/A” do not apply in this Contract.

Sl. No.	Description	Reference Clause .No. in GCC
1	The following documents are also part of the Contract	
	The Schedule of other Contractors	
	The Schedule of Key personnel	
2	The Employer is	
	<b>The Board of Major Port Authority for the Cochin Port, Cochin -9</b>	
	Name of Authorized Representative:	
	Name: <b>Sri. B. Kasiviswanathan, IRSME The Chairperson, Cochin Port Authority, Cochin -9</b>	
3	The Engineer is	
	Name: <b>Shri. A. Jayasimha Chief Mechanical Engineer Cochin Port Authority, Cochin-9</b>	
	Name of Nominee is : <b>Will be notified in LoA/ LoI</b>	
	Name: <b>Shri..... Cochin Port Authority Cochin-9</b>	
4	Name of Contract: Smart Lighting of Existing High Masts at Various Locations and Installation of Mast Lights With Smart Control In the Q8-Q9 Back Side Area	
5	<b>4 copies</b> of Contract Agreement shall be furnished by the Contractor	
6	Tender document and other data are available at : e-tender portal <a href="http://www.tenderwizard.com/COPT">www.tenderwizard.com/COPT</a> , in the CoPA website <a href="http://www.cochinport.gov.in">www.cochinport.gov.in</a> as well as in the Central Public Procurement Portal of Govt. of India, <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a>	
7	The Intended completion Date for the whole of the Work is <b>120days</b> from date of issue of LoA with the following milestones:	
8	Milestone dates:	
	<b>Physical works to be completed</b>	<b>120 days from the date of Issue of LoA</b>

Signature of the Tenderer

Sl. No.	Description	Reference Clause .No. in GCC
9	<p>The following shall form part of the Contract Document:</p> <ul style="list-style-type: none"> <li>a. Agreement</li> <li>b. Letter of Acceptance</li> <li>c. Bill of quantities</li> <li>d. Contractor's Bid</li> <li>e. Correspondence exchanged after the opening of the Bid and before the issue of Letter of Acceptance by which the Condition of Contract are amended, varied or modified in any way by mutual consent (to be enumerated).</li> <li>f. Contract Data</li> <li>g. Conditions of Contract</li> <li>h. General Description and Special Conditions of Contract</li> <li>i. Technical Specifications</li> <li>j. Drawings and</li> <li>k. Any other documents listed in the Contract Data as forming part of the Contract.</li> </ul>	
10	The Contractor shall submit a Program for the Works	
11	<b>The site possession date:</b> The site will be handed over within immediately after issue of LoA/LoI and the site is free from encumbrances. Such possession will not be exclusive to the contractor. Refusal of the contractor to take over the possession, shall entitle CoPA to terminate the contract without payment of any compensation.	
12	The start date shall be 7 days after issue of LoA.	
13	The site is located in Willingdon Island.	
14	The Defects Liability Period is <b>five year from the date of completion of the work and handing over the site to CoPA.</b>	
15	The minimum insurance cover for physical property, injury and death is <b>Rs.7 lakh (Rupees Seven Lakh)</b> per occurrence with the number of occurrences unlimited. After each occurrence, Contractor will pay additional premium necessary to make insurance valid always.	
16	The language of the Contract documents is <b>English.</b>	
17	The law, which applies to the Contract, is the law of Union of India.	
18	The currency of the Contract is <b>Indian Rupees.</b>	
19	The maximum amount of liquidated damages for the whole of the works is <b>10%</b> of the contract price.	

Signature of the Tenderer

**LETTER OF SUBMISSION - COVERING LETTER**

(ON THE LETTER HEAD OF THE BIDDER)

Date:

To

The Chief Mechanical Engineer,

Cochin Port Authority.

Sir,

Sub: Tender for .....[Insert Title]

Being duly authorized to represent and act on behalf of ..... (Hereinafter referred to as “the Bidder”) and having reviewed and fully understood all of the requirements of the bid document and information provided, the undersigned hereby apply for the project referred above.

We are submitting hard copy of the following, with the details as per the requirements of the Bid Document, prior to the bid opening date, for your evaluation.

- (i) Letter of Submission – Covering Letter
- (ii) Cost of Tender Document in the form of DD / Pay Order / Banker’s Cheque bearing No -----  
-- dated -----, for Rs..... issued by ..... Bank
- (iii) Bid Security/EMD in the form of Account Payee DD / Banker’s Cheque/Insurance Surety  
Bond bearing No -----dated -----, for Rs..... issued by .....Bank / in the form of  
BG as per **Form-18**.
- (iv) Pre-Contract Integrity Pact signed & sealed (**Form-19**)
- (v) Power-of-Attorney (**Form-2**) (If applicable)

We have also uploaded the following documents for online submission of Technical Bid:

- (i) Tender Document along with Addendum / Corrigendum No...../ Addenda/Corrigenda  
Nos. ...., and General Conditions of Contract with Amendments, in PDF format.
- (ii) Scanned copy of financial instruments towards the Cost of Tender Document and Bid  
Security/EMD
- (iii) Self attested copy of Exemption Certificate towards the Cost of Tender Document & Bid  
Security/EMD / Udyam Certificate(If applicable)
- (iv) Organization Details (**Form-3**)
- (v) Details to fulfill the “Minimum Eligibility Criteria” and Certificates (**Form-4a/4b**)
- (vi) Self attested copies of work order &Completion Certificates of similar Works

Signature of the Tenderer

- (vii) Details of past experience of contractors for similar works executed in private organizations (**Form-5A**) certified by chartered accountant
- (viii) Average Annual Financial Turnover over the last three financial years (**Form-5**)
- (ix) Scanned copies of audited Financial Statements for the last three years
- (x) Scanned copies of EPF and ESI registration, if applicable/ Undertaking regarding EPF and ESI Registration (**Form-6**)
- (xi) Details of Pending Litigation of the Tenderer (**Form-7**)
- (xii) Details of Litigation History of the Tenderer (**Form-8**)
- (xiii) Details of Barred Cases of the Tenderer (**Form-9**)
- (xiv) Detailed Method Statement (Technical Note) (**Form-10**)
- (xv) List of Plant and Equipment (**Form-11**)
- (xvi) Declaration ( **Form-13**)
- (xvii) Banker's Details (**Forms-14& 15**)
- (xviii) Make In India(MII) declaration as per **Form-12**
- (xix) Scanned copy of Form of Tender, duly signed and sealed
- (xx) Scanned copy of Partnership Deed or Memorandum and Articles of Association of the Company and Registration Certificate of the Company, as the case may be.
- (xxi) Scanned copies of GST and PAN registrations.
- (xxii) Land Border sharing Declaration (**Form-20**)
- (xxiii) **MAF – Form 21/D**

**We also certify that further Tender related communication can be sent to the following e-mail IDs by CoPA:**

- (i) .....
- (ii) .....

**(Furnish two nos. current active email addresses)**

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**PROFORMA OF POWER- OF-ATTORNEY/LETTER OF AUTHORITY**  
**(To be submitted on Non-judicial Stamp Paper of appropriate value)**

To  
The Chief Mechanical Engineer,  
Cochin Port Authority,  
Cochin 682009.  
Kerala, India.

Dear Sir,

We \_\_\_\_\_  
do hereby confirm that Mr./Ms./Messrs \_\_\_\_\_ **[INSERT NAME AND ADDRESS]**, whose signature is given below, is /are authorized to represent us to bid, negotiate and conclude the agreement on our behalf with you against Tender for .....*[Insert Title]*(Tender No.....)

We confirm that we shall be bound by all and whatsoever our said agents shall commit.

Signature of the authorized person:

Name & Designation :

Yours faithfully,

Signature, name and seal of the certifying authority

*Signature of the Tenderer*

**ORGANIZATION DETAILS**

CONTRACT No.:

NAME OF APPLICANT:

1. Name of the Owner:
2. Address:  
Telephone No.:

Fax No.

e-mail id:

3. Description of Applicant  
(for e.g. A or B grade electrical contractor etc.)

4. Registration and Classification  
of Contractors

5. Name and address of bankers

6. Number of years of experience  
as a contractor :-

In own Country:

Internationally:

7. Name and Address of partners or  
associated companies to be involved  
in the project and whether Parent/  
Subsidiary/other

*Signature of the Tenderer*

8. Name and address of any associates knowledgeable in the procedures of customs, immigration and local experience in various aspect of the project etc.
  
9. Name and address of the companies/ Sub-contractors who will be involved in the execution of works, namely:
  
10. Name and address of companies who will be involved in the supply of bought out items
  - a) Insert item ..... :
  - b) Insert item..... :
  
12. Attach organization chart showing the structure of the company including names of Directors/ Key Personnel at Head Office who would be responsible for the project and a separate chart showing proposed Site Construction Organisation.

Signature  
(Authorised Signatory)

*Signature of the Tenderer*

Tenderer shall furnish Details of “eligibility works experience” as per Clause 12 of Minimum Eligible Criteria (MEC) of Instruction to Tenderer and certificates in the following format (CoPA Certificates/work completion certificates or any other documentary evidences with respect to the eligibility work)

### ELIGIBLE ASSIGNMENT DETAILS FOR MQC

Assignment Number :

Description	Bidder to fill up the details here
Name and Address of the firm	
Title of the Eligible Assignment	
Date of completion of the Eligible Assignment	
Project Completion Cost	
Reference No. of the enclosed firm Completion Certificate/ Documentary Evidence for having successfully completed the Eligible assignment	
Name, telephone no, telefax no and email address of the firm’s representative	
Description and Scope of Work	

Instructions:

- i) Bidders are expected to provide information in respect of Eligible Assignments in this Section. The assignments cited must comply with the criteria specified Clause No. 12(a) Minimum eligibility of the Instructions to Tenderers”.
- ii) A separate sheet should be filled for each of the eligible assignments.
- iii) The details are to be supplemented by documentary proof from the respective form /owner for having carried out such assignment duly certified by firms/ owner.
- iv) **The works indicated in this Form- 4 will be only being considered for evaluation. Mere submission of work completion certificate will not be considered as Eligible Assignments.**
- v) Original or notary certified copy of completion certificates of each work issued by the owner/ the responsible officers of the owner under whom he has executed such contracts shall be attached. The certificate shall invariably contain the following among other things.
  - a) Details of work involved specifying the nature of work
  - b) The completion cost of the work and
  - c) Date of commencement ; and
  - d) Date of completion of the work.

*Signature of the Tenderer*

- vi) If the experience in similar works is as a subcontractor, notary attested copy(s) of approval issued by the Employer(s) authorizing as a sub-contractor; in proof of the claim of the tenderer as a sub-contractor shall be attached.
- vii) If the experience in similar work is in works executed in Govt. organisations/ private sectors, the **Form-5a** along with self attested copy(s) work order and completion certificate.
- viii) The tenderer is also obliged to produce the original of the certified copy(s) on request by the department.

Signature

(Authorised Signatory)

*Signature of the Tenderer*

**DETAILS OF PAST EXPERIENCE OF CONTRACTORS FOR SIMILAR WORKS**

Sl. No.	Name & Location of Project	Owner’s Complete address including TeleFax No. with contact Person	Value of Contract	Duration of Contract			Details of work including major items of work involved	Reference No. & Date of letter of intent & completion certificate enclosed
				Commencement date	Scheduled completion date	Actual completion date		
1	2	3	4	5	6	7	8	9

**Note:** Bidder to enclose completion certificate issued by owner, certified by a Notary public or equivalent certifying authority.

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**FINANCIAL CAPABILITY**

Average Annual Turnover of the Bidder

<b>Turnover (Rs.)</b>			
<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Average ( 3 years )</b>
<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>	

**Certified by Chartered Accountant**

Signature

(Authorized Signatory)

**Instructions:**

- (i). The Bidder shall provide audited Annual Reports / Audited financial statements such as balance sheets and profit & loss account statements as required under this Bid Document.
- (ii). Annual turnover of the bidder shall be submitted duly verified by Chartered Accountant

*Signature of the Tenderer*

**DETAILS OF PAST EXPERIENCE OF CONTRACTORS FOR SIMILAR  
WORKS EXECUTED IN GOVT./ PRIVATE ORGANISATIONS**

<b>Sl. No</b>	<b>Name &amp; Location of Project</b>	<b>Owner's Complete address including Tele Fax No. with contact Person</b>	<b>Value of contract</b>	<b>Details of work including major items of work involved</b>	<b>Details of payment made</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

Note: Bidder to enclose completion certificate issued by owner, self certified

Signature  
 Certified by Chartered Accountant  
 (with UDIN (Unique Document Identification Number)  
 while certification with QR code if available.)

Signature  
 (Authorized Signatory)

*Signature of the Tenderer*

**UNDERTAKING REGARDING EPF AND ESI REGISTRATION**

I/We, M/s. ....(*Name & address of the Tenderer*) solemnly affirm and undertake that I/We do not have the required number of employees for taking registration under EPF Organisation and ESI Corporation. I/We also undertake that I/We take the full responsibility for all the consequences arising due the above and indemnify CoPA officials for any actions taken in this regard.

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**DETAILS OF PENDING LITIGATION OF THE TENDERER**

Details of Pending Litigation upto .....[Insert Date and Year - last day of the month previous to the one in which Tenders are invited]are as follows:

No	Date, month & Year of Dispute	Amount in Dispute	Contract Identification	Total Contract Amount
			Contract Identification : [indicate complete contract name, number, date and any other identification]  Name & Address of Employer: [insert full Name & Address]  Matter in dispute: [indicate main issues in dispute]  Party who initiated the dispute: [indicate “Employer” or “Contractor”]  Status of dispute: [Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]	

We declare that the information given above are true to the best of our knowledge and belief and nothing has been omitted / concealed and if at any stage it is found / noticed that any information provided by us thereon above is not true /incorrect and incase of receipt of adverse / unsatisfactory report from other Clients / Employers, our Tender may not be considered and CoPA may take further appropriate action against us.

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**DETAILS OF LITIGATION HISTORY OF THE TENDERER**

Details of Litigation History till .....[Insert Date and Year - last day of the month previous to the one in which Tenders are invited]are as follows:

Sl.N	Date, month & Year of Award	Amount in Award	Contract Identification	Total Contract Amount
			Contract Identification : [Indicate complete contract name, number, date and any other identification]  Name & Address of Employer: [Insert full Name & Address]  Matter in dispute: [Indicate main issues in dispute]  Party who initiated the dispute: [Indicate “Employer” or “Contractor”]  Status of dispute: [Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]	

We declare that the information given above are true to the best of our knowledge and belief and nothing has been omitted / concealed and if at any stage it is found / noticed that any information provided by us thereon above is not true /incorrect and incase of receipt of adverse / unsatisfactory report from other Clients / Employers, our Tender may not be considered and CoPA may take further appropriate action against us.

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**DETAILS OF BARRED CASES OF THE TENDERER**

Details of all barred cases by the Central/State Government, or any entity controlled by it, from participating in any Project till .....[Insert Date and Year - last day of the month previous to the one in which Tenders are invited] are as follows:

Sl.No	Date, month & Year of Contract	Amount of Contract	Contract Identification	Remarks
			Contract Identification : [Indicate complete contract name, number, date and any other identification]  Name & Address of Employer: [Insert full Name & Address]  Matter in dispute: [Indicate main issues in dispute]  Period of barring: [Indicate the date from which the Contractor is barred and the period for which he is barred]	

We declare that the information given above are true to the best of our knowledge and belief and nothing has been omitted / concealed and if at any stage it is found / noticed that any information provided by us thereon above is not true /incorrect and incase of receipt of adverse / unsatisfactory report from other Clients / Employers, our Tender may not be considered and CoPA may take further appropriate action against us.

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**DETAILS OF PROPOSED APPROACH & METHODOLOGY**

Bidder shall furnish a detailed method statement (Technical Note) for carrying out of the works, along with an implementation programme [ Preferably in MS project / Primavera] showing sequence of operation and the time frame for various segments of temporary and permanent works.

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**PLANT AND EQUIPMENT PROPOSED FOR THE WORK**

Please indicate the main plant and equipment considered to be necessary and proposed to be deployed for undertaking this Work and whether this plant is ready in ownership or will be purchased or hired.

Description of equipment	Requirement No. / Capacity	Owned / leased / to be procured	Nos / Capacity	Age / Condition	Remarks (From whom to be purchased)	At what Stage of contract period the Equipment will be available

**Note:**

The equipment indicated in the above statement will form part of Contract Agreement and as such, the Tenderers are requested to indicate the availability of the equipment at site and at what stage of the construction period, in a separate column

**SIGNATURE OF TENDERER**

*Signature of the Tenderer*

**Format for Self-Certification under Preference to “MAKE IN INDIA” Policy**

**CERTIFICATE**

In line with Government Public Procurement Order No. P-45021/2/2017-BE-II dt.15.06.2017 and No.:P-45021/2/2017-PP(BE-II) dt.04.06.2020 as amended from time to time along with clarifications/ amendments and other references as issued from time to time, where by certify that we

M/s \_\_\_\_\_ (supplier name)

are supplier meeting the requirement of **Minimum Local content** as per below declaration.

**(Class-I Supplier (50%) or Class-II Supplier (20%) or Non-Local Supplier (Less than 20%))**

as defined in above orders/ circulars/ clarifications/ amendments for the material against Tender No

Details of Location (Complete Address) at which local value addition will be made is as follows:

-----

We have also read the clarification issued vide Circular No.: P-45021/102/2019-BE-II-Part(1) (E-50310), Dtd.: 04.03.2021 and any other subsequent circular/ amendment/ order as issued by competent authority.

Total Value of local content addition/ manufacturing for offered material/ item(s)/ service is as per below declaration.

Accordingly, we declare to be (Tick One)

a. **Class-I Supplier (50% or more local content)**

b. **Class-II Supplier (20% to 50% local content)**

c. **Non Local Supplier (less than 20% local content)**

We also understand, false declaration swill be in breach of the Code of Integrity under Rule 175(1) (i) (h) of the General Financial Rule for which a bidder or its successors can be debarred for up two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

**Note:-“Make in India” certificate must be in the letter head of OEM/ Manufacturers.**

Seal and Signature of Authorized Signatory

*Signature of the Tenderer*

**DECLARATION**

We M/s (Name & address of the bidder) hereby declare that:-

1. All details regarding construction plant, temporary work and personnel for site organisation considered necessary and sufficient for the work have been furnished in the Form 12 and that such plant, temporary works and personnel for site organisation will be available at the site till the completion of the respective work.
2. No conditions are incorporated in the financial bid. In case any conditions are specified in the financial bid, the tender will be rejected summarily without making any further reference to the bidder.
3. We have not made any payment or illegal gratification to any persons/ authority connected with the bid process so as to influence the bid process and have not committed any offence under PC Act in connection with the bid.
4. We disclose with that we have \* made / not made payments or propose to be made to any intermediaries (agents) etc in connection with the bid.
5. We do hereby confirm that no changes have been made in the tender document downloaded and submitted by us for the above bid. Port Tender document will be treated as authentic tender and if any discrepancy is noticed at any stage between the Port's tender document and the one submitted by the tenderer, the Port's document shall prevail.

Signature

(Authorized Signatory)

**\* Note: Delete whichever is not applicable.**

*Signature of the Tenderer*

**DETAILS OF THE PARTY OPTING FOR  
REFUND OF EMD THROUGH E-PAYMENT SYSTEM**

Name of the Party :

Bank A/c No :

Account type : (Savings / Current / Overdraft)

Bank Name :

Branch :

IFSC Code Number : (11 digit code)

Centre (Location) :

FAX No. :

E-Mail ID : (For forwarding information of remittance)

Mobile No :

Signature of the Party

*Signature of the Tenderer*

**FORMAT FOR FURNISHING BANK INFORMATION FOR e-PAYMENT**

1	Name and full address of the beneficiary	
2	Credit Account No. (Should be full 14 digit)	
3	Account Type (SB or CA or OD)	
4	Name of the Bank	
5	Branch (Full address with telephone No.)	
6	MICR code (Should be 9 digit)	
7	Telephone/Mobile/Fax No. of the beneficiary	Telephone :
		Mobile :
		Fax :
8	Cancelled Cheque	

Signature with seal  
(Authorised Signatory)

*Signature of the Tenderer*

**FORM OF AGREEMENT  
TO BE EXECUTED ON KERALA STAMP PAPER (Rs.200/-)**

**AGREEMENT NO. .... OF 2025**

**Sub: “ ..... ”**

THIS agreement is made at Cochin on ..... day of .....Two thousand and Twenty Six (..... - .....-2026) between THE BOARD OF MAJOR PORT AUTHORITY FOR COCHIN PORT commonly known as COCHIN PORT AUTHORITY, a Body Corporate under the Major Port Authorities Act, 2021, with its Administrative Office at Willingdon Island, Cochin-682009, having PAN Card No. AAALC1134F, represented by its Chief Mechanical Engineer, ..... (hereinafter referred to as “The Employer” which expression shall include their successors, assignees and administrators in the office) of the one part AND M/s. .... represented by Sri/Smt.. ----- aged -----years, son/daughter of Sri. ----- residing at ----- (House name and No.) ----- District ----- State ----- (hereinafter referred to as “The Contractor” which expression shall include their successors, assignees and administrators) of the other part.

WHEREAS the “Employer” had called for the tenders for “ ” vide Tender Notice No. .... Dt: ..... and the contractor had submitted a tender for the same giving the rates subject to the terms and conditions etc.

AND WHEREAS the said tender of the contractor has been accepted by the employer and a letter of acceptance No..... Dt: ..... has been issued to the contractor accepting their tender subject to the “General Conditions of Contract”, “Instructions to the Tenderers” and such other contract documents. And as per one of the terms of the above work order, an agreement has to be executed between the contractor and the employer.

**NOW THESE PRESENT WITNESSES AS FOLLOWS:**

- 1. The contractor hereby agrees to execute the work “.....” as described in the schedule, its annexure etc. at the rates shown there under subject to the “General Conditions of Contract”, ‘Scope of work’ and ‘Technical Specifications’ and all hereunto annexed within ..... from the date of issue of Letter of Acceptance or in default to forfeit and pay to the employer the sum of money mentioned in the said conditions.

The contractor has furnished a Bank Guarantee for **Rs.....** (Rupees .....only)vide Bank Guarantee No. ----- Dated----- from -----, in lieu of Security Deposit for the due and proper fulfillment of the contract. The contractor further agrees that the aforesaid Bank Guarantee will be kept valid until one month beyond the expiry of the Guarantee Period. The contractor also agrees that the Bank furnished in lieu of Security Deposit

*Signature of the Tenderer*

for the due and proper fulfillment of the contract will be suitably enhanced so as to cover 10% cost of any additional items/works that may be required for the proper completion of the contract or otherwise the employer can deduct such additional amounts towards Security Deposit from the Contractor's bills.

2. The following documents shall be deemed to form and be read and construed as part of this agreement viz:
  - a) Cochin Port Authority's Bid No. .... Dt: .....
  - b) Offer from M/s. ....No:..... dated.....
  - c) Cochin Port Authority's LoA No.....Dt:.....
  - d) This office e-mail letter dated ..... and your reply through e-mail received on .....
3. The Conditions given in the LoA dated ..... shall over-ride the general conditions given in the tender document, wherever they differ. Any of the counter terms and conditions of the contractor shall not be taken as terms and conditions of this contract/ agreement unless the CoPA in writing specifically agree to it.

IN WITNESS WHEREOF THE CONTRACTOR hereunto set his hand and seal on behalf of M/s.....And on behalf of the Board of Major Port Authority for Cochin Port, the Chief Mechanical Engineer has set his hand and seal and common seal of CoPA as has been hereunto affixed the day and year first written above.

Signed, sealed and delivered  
by Shri. -----  
of M/s -----  
-----

**CONTRACTOR**

(COMMON SEAL OF THE FIRM)

Signed and affixed seal in the presence of:

- 1) Signature with address:
- 2) Signature with address:

- 1) Signed, sealed and delivered by  
The Chief Mechanical Engineer,  
Cochin Port Authority on behalf of  
Board of Major Port Authority  
For Cochin Port.
- 2) Signed and affixed the common  
seal of Board of Major Port Authority  
For Cochin Port in the presence of

**EMPLOYER**

**PROFORMA OF BANK GUARANTEE FOR SECURITY DEPOSIT**  
(TO BE EXECUTED ON STAMP PAPER WORTH RS.200/-)

GUARANTEE BOND NO.

In consideration of the THE BOARD OF MAJOR PORT AUTHORITY FOR COCHIN PORT commonly known as COCHIN PORT AUTHORITY (hereafter called the "Port Authority" which expression shall include their successors and assignees) having accepted the tender No. No..... dated ..... submitted by M/s.....(hereinafter called "the said tender") for name of work"....." as per the Chief Mechanical Engineer, Cochin Port Authority's order No..... dated .....and having agreed to exempt M/s..... (hereinafter called as the "Contractor (s)" which expression shall include their successors and assignees) from the demand under the terms and conditions of the said tender and the agreement to be executed between the Port Authority and the said contractor and which shall include any amendments, alterations or additions made with the mutual consent between the parties (hereinafter called " the said agreement") of Security Deposit for the due fulfillment by the said contractor(s) of the terms and conditions contained in the said tender and Agreement, on production of a Bank Guarantee for **Rs.....** (Rupees .....).

1. We,..... (Name of Bank) (hereinafter referred to as "the Bank") do hereby undertake to pay to the Port Authority an amount not exceeding **Rs.....** (Rupees .....only) against any loss or damage caused to or suffered by the or would be caused to or suffered by the port Authority by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the agreement.
  
2. We, ..... Bank Ltd., do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Port Authority stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding **Rs.....**(Rupees.....).
  
3. We,..... Bank Ltd., undertake to pay to the Port Authority any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

*Signature of the Tenderer*

4. We ..... Bank Ltd., further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Port Authority under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer – in – charge on behalf of the Port Authority certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.
  
5. We,..... Bank Ltd., further agree with the Port Authority that the Port Authority shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Port Authority against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor (s) or for any forbearance act or omission on the part of the Port Authority or any indulgence by the Port Authority to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision, have effect of so relieving us.
  
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
  
7. We, ..... Bank Ltd., lastly undertake not to revoke this guarantee except with the previous consent of the Port Authority in writing.

This guarantee shall be valid up to ----- unless extended on demand by Port Authority. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to **Rs.....**(Rupees ..... only).and unless in claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

**Dated the .....day of .....**  
for ..... Bank Ltd

**PROFORMA OF IRREVOCABLE BANK GUARANTEE FOR EARNEST MONEY DEPOSIT**

*(To be submitted on Non Judicial Stamp Paper of appropriate value)*

B.G. No.....dated.....

This Deed of Guarantee executed at .....by ..... (Name of Bank) having its Head/Registered office at ..... (hereinafter referred to as “the Guarantor”) which expression shall unless it be repugnant to the subject or context thereof include its executors, administrators, successors and assigns;

**In favour of**

The Board of Trustees of Cochin Port Authority (hereinafter called “the EMPLOYER”), having its office at Willingdon Island, Cochin – 682 009, which expression shall unless it be repugnant to the subject or context thereof include its executors, administrators, successors and assigns;

Whereas Sri..... / M/s. .... / ~~JV~~ Consortium of M/s. ...., M/s. .... & M/s. .... (Name of Tenderer) ..... (Composition and legal status of the Tenderer) (hereinafter called “the Tenderer”), which expression shall unless it be repugnant to the subject or context thereof include its executors administrators, successors and assigns, has Bid for the Work of “.....” [Insert Title], **AND TENDER No.....**[Insert Tender No.](hereinafter referred to as “the Work”).

Whereas in terms of the Tender Notice dated ..... (hereinafter referred to as “Tender Document”) the Tenderer is required to furnish to the Port Authority an unconditional and irrevocable Bank Guarantee for an amount of Rs. ....(Rupees ..... only) as Earnest Money Deposit (EMD) and the Guarantor has at the request of the Tenderer agreed to provide such Guarantee being these presents:

Now this deed witnesseth that in consideration of the premises, We, ..... Bank hereby declare, undertake and agree as follows:

We as primary obligor shall, without demur, pay to the Port Authority an amount not exceeding Rs. .... (Rupees ..... only), within 5 days of receipt of a written demand from the Port Authority stating that the EMD has been forfeited in terms of Clause 16.4 of the Instruction of Tenderers of Tender Document. Any such demand made on us by the Port Authority shall be conclusive and absolute as regards the forfeiture of the EMD and the amount due and payable under this Guarantee.

The above payment shall be made by us without any reference to the Tenderer or any other person and irrespective of whether the claim of the Port Authority is disputed by the Tenderer or not.

This Guarantee shall remain in full force for a period of ..... days (45 days beyond the final bid validity period) from (date)\* ..... or for such extended period as may be mutually agreed between the Port Authority and the Tenderer and shall continue to be enforceable till all amounts which are demanded by the Port Authority under this Guarantee are paid.

*Signature of the Tenderer*

In order to give full effect to this Guarantee, the EMPLOYER shall be entitled to treat the Guarantor as the principal debtor and the obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Tender Document or other documents or by extension of time of performance of any obligations by the Tenderer or any postponement for any time of the powers exercisable by the EMPLOYER against the Tenderer or forebear or enforce any of the terms and conditions relating to non-compliance of the Tender Document by the Tenderer and we shall not be relieved from our obligations by reason of any variation or extension being granted to the Tenderer or forbearance or omission on the part of the EMPLOYER or any indulgence by the EMPLOYER to the Tenderer to give such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

This Guarantee shall be irrevocable and shall remain in full force and effect until all our obligations under this Guarantee are duly discharged.

The Guarantor has power to issue this Guarantee and the undersigned is duly authorised to execute this Guarantee pursuant to the power granted under .....

In Witness whereof the Guarantor has set its hands hereunto on the day, month and year first hereinabove written.

Signed and Delivered by .....

Bank by the hand of Shri.....

its.....and authorised official

\*Fill in the scheduled date of submission of Tender.

*Signature of the Tenderer*

**PROFORMA OF PRE CONTRACT INTEGRITY PACT**

(To be signed on Plain Paper)

(To be submitted as part of Technical bid)

Tender No.....;

Tender Title: .....

This Agreement (hereinafter called the Integrity Pact) is made on \_\_\_\_ day of the month of \_\_\_\_\_ 2026 at \_\_\_\_\_, India BETWEEN THE BOARD OF MAJOR PORT AUTHORITY FOR COCHIN PORT commonly known as COCHIN PORT AUTHORITY, a Body Corporate under the Major Port Authorities Act, 2021, with its Administrative Office at Willingdon Island, Cochin-682009, represented by its Chief Mechanical Engineer, Sri ....., S/o Sri....., aged ...years residing at .....(address).....(hereinafter called the “The Principal”, which expression shall mean and include unless the context otherwise requires, his successors in office and assigns) of the First Part AND M/s. \_\_\_\_\_ represented by Shri.....Chief Executive Officer (hereinafter called the "BIDDER" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

**PREAMBLE**

“The Principal” intends to award, under laid down organizational procedures, contract/ s for \_\_\_\_\_, “The Principal” values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/ transparency in its relations with its Bidder(s) and/ or Contractor(s). In order to achieve these goals, the Principal shall appoint Independent External Monitors (IEMs) who shall monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1 -Commitments of the “The Principal”**

(1) “The Principal” commits itself to take all measures necessary to prevent corruption and to observe the following principles:

- a. No employee of the Principal, personally or through family members, shall in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- b. The Principal shall, during the tender process, treat all Bidder(s) with equity and reason. The Principal shall in particular, before and during the tender process, provide to all Bidder(s) the same information and shall not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
- c. The Principal shall exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees, which is a criminal offence under the IPC/ PC Act, or if there be a substantive suspicion in this regard, the Principal shall inform the Chief Vigilance Officer and in addition, can initiate disciplinary actions.

*Signature of the Tenderer*

## **Section 2 -Commitments of the “Bidder/ Contractor”**

(1) The “Bidder/ Contractor” commit themselves to take all measures necessary to prevent corruption. The “Bidder/ Contractor” commit themselves to observe the following principles during participation in the tender process and during the contract execution.

- a. The “Bidder/ Contractor” shall not, directly or through any other person or firm, offer, promise, or give to any of the Principal’s employees involved in the tender process or the execution of the contract, or to any third person any material or other benefit which he is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- b. The ‘Bidder/ Contractor’ shall not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the tender process.
- c. The ‘Bidder/ Contractor’ shall not commit any offence under the relevant IPC/ PC Act; further, the ‘Bidder/ Contractor’ shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals, and business details, including information contained or transmitted electronically.
- d. The ‘Bidder/ Contractor’ of foreign origin shall disclose the name and address of the Agents/ representatives in India if any. Similarly, the Bidder/ Contractors of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the “Guidelines on Indian Agents of Foreign Suppliers” shall be disclosed by the Bidder/ Contractor. Further, as mentioned in the Guidelines, all the payments made to the Indian agent/ representative have to be in Indian Rupees only. Copy of the “Guidelines on Indian Agents of Foreign Suppliers” is placed in Appendix to this agreement.
- e. The ‘Bidder/ Contractor’ shall, when presenting their bid, disclose any and all payments made, is committed to, or intends to make to agents, brokers, or any other intermediaries in connection with the award of the contract.
- f. Bidder/ Contractor who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.

(2) The ‘Bidder/ Contractor’ shall not instigate third persons to commit offences outlined above or be an accessory to such offences.

## **Section 3 -Disqualification from tender process and exclusion from future contracts**

If the ‘Bidder/ Contractor’, before award or during execution, has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Principal is entitled to disqualify the ‘Bidder/ Contractor’ from the tender process or take action as per the procedure mentioned in the “Guidelines on Banning of business dealings”.

## **Section 4 -Compensation for Damages**

(1) If the Principal has disqualified the „Bidder/ Contractor“ from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from „Bidder/ Contractor“ the damages equivalent to Earnest Money Deposit/ Bid Security.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover

*Signature of the Tenderer*

from the contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee.

#### **Section 5 -Previous transgression**

- (1) Bidder declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If Bidder makes an incorrect statement on this subject, he can be disqualified from the tender process, or action can be taken as per the procedure mentioned in “Guidelines on Banning of business dealings”.

#### **Section 6 -Equal treatment of all Bidders/ Contractors/ Subcontractors**

- (1) In the case of Sub-contracting, the Principal Contractor shall take responsibility for the adoption of the Integrity Pact by the Sub-contractor.
- (2) The Principal shall enter into agreements with identical conditions as this one with all Bidders and Contractors.
- (3) The Principal shall disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

#### **Section 7 -Criminal charges against violating Bidder(s)/ Contractor(s)/ Subcontractor(s)**

If the Principal obtains knowledge of the conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal shall inform the same to the Chief Vigilance Officer.

#### **Section 8 -Independent External Monitor**

- (1) The BUYER/ EMPLOYER has appointed the following panel of Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission:

(i) Shri. Harishwar Dayal, IDSE (Rtd.)  
H-2, Lawyer Colony, Bypass Road,  
Agra-282005 (UP)  
Mobile No:9412095786 Email: [dayalagra@gmail.com](mailto:dayalagra@gmail.com)

(ii) Shri. Deepak Chaturvedi, ITS (Retd)  
Flat No.1, Sanchar Vihar,  
C-58/4, Sector-62,  
Uttar Pradesh, Noida-201301  
Mobile No:9930408711 Email ID :[chaturvedideep@rediffmail.com](mailto:chaturvedideep@rediffmail.com)

The task of the Monitor is to review independently and objectively whether and to what extent the parties comply with the obligations under this agreement.

- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. The Monitor would have access to all Contract documents whenever required. It shall be obligatory for him/ her to treat the information and documents of the Bidders/ Contractors as confidential. He/ she reports to the Head of the Procuring Organization.

*Signature of the Tenderer*

- (3) The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal, including that provided by the contractor. The contractor shall also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors project documentation. The same is applicable to Sub-contractors.
- (4) The Monitor is under contractual obligation to treat the information and documents of the Bidder/ Contractor(s)/ Sub-contractor(s) with confidentiality. The Monitor has also signed declarations on „Non-Disclosure of Confidential Information“ and of „Absence of Conflict of Interest“. In case of any conflict of interest arising at a later date, the IEM shall inform the Head of the Procuring Organization and rescue himself/ herself from that case.
- (5) The Principal shall provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the contractor. The parties offer the Monitor the option to participate in such meetings.
- (6) As soon as the Monitor notices, or believes to have noticed, a violation of this agreement, he shall so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can, in this regard, submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action, or tolerate action.
- (7) The Monitor shall submit a written report to the Head of the Procuring Organization within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- (8) If the Monitor has reported to Head of the Procuring Organization, a substantiated suspicion of an offence under relevant IPC/ PC Act, and Head of the Procuring Organization has not, within the reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
- (9) The word ‘Monitor’ would include both singular and plural.
- (10) In the event of any dispute between the Management and the Contractor, incase, both the parties are agreeable, dispute may be settled through mediation before the panel of IEMs in a time bound manner. If required, the organizations may adopt any mediation rules for this purpose.
- (11) The fees/ expenses on dispute resolution shall be equally shared by both the parties.
- (12) A person signing the IP shall not approach the Courts while representing the matters to IEMs and he/ she will await their decision in the matter.
- (13) In case of Joint Ventures all the partners of the joint venture should sign the Integrity Pact. In case of sub-contracting, the Principal contractor shall take the responsibility of the adoption of IP by the sub –contractor. It is to be ensured that all sub-contractors also sign the IP.

### **Section 9 -Pact Duration**

This Pact begins when both parties have legally signed it. It expires for the contractor 12 months after the last payment under the contract and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings. If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above unless it is discharged/ determined by the Head of the Procuring Organization.

*Signature of the Tenderer*

## **Section 10 -Other provisions**

- (1) This agreement is subject to Indian Law. The place of performance and jurisdiction is the Registered Office of the Principal, i.e., New Delhi.
- (2) Changes and supplements, as well as termination notices, need to be made in writing. Side agreements have not been made.
- (3) If the contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turnout to be invalid, the remainder of this agreement remains valid. In this case, the parties shall strive to come to an agreement with their original intentions.
- (5) Issues like Warranty/ Guarantee etc., shall be outside the purview of IEMs.
- (6) In the event of any contradiction between the Integrity Pact and its Appendix, the Clause in the Integrity Pact shall prevail.

For and on behalf of the Principal  
(Name of the Officer and Designation)  
(Office Seal)

For and on behalf of 'Bidder/ Contractor'  
(Name of the Officer and Designation)  
(Office Seal)

For and on behalf of the Principal  
Place Date

Witness 1: (Name & Address)

Witness 2: (Name & Address)

**LAND BORDER SHARING DECLARATION**

*(To be submitted in the bidder's letter head)*

In-line with Department of Expenditure's(DoE) Public Procurement Division Order vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020

Tender no . .....

Job: .....

I/ we have read the clauses pertaining to Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1, 2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country which shares a land border with India. I/We hereby certify that I / we the bidder .....is / are

a) Not from such a country and eligible to be considered for this tender.

OR

b) From such country, has been registered with the competent authority and eligible to be considered for this tender. (Evidence of valid registration by the competent authority shall be attached)

For and behalf of \_\_\_\_\_ (Name of the bidder)

(Signature, date & seal of authorized representative of the bidder)

*Signature of the Tenderer*

**Manufacturer's Authorization Form (MAF)**

**(Firms Original Letter Head)**

No. \_\_\_\_\_

dated \_\_\_\_\_

To  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dear Sir,

Tender Reference No. \_\_\_\_\_

We, \_\_\_\_\_ who are established and reputable manufactures of \_\_\_\_\_ having factories at \_\_\_\_\_ and \_\_\_\_\_ do hereby authorize M/s. \_\_\_\_\_ (Name and address of Agent/Dealer) to offer their quotation, negotiate and conclude the contract with you against the above invitation for tender offer for our \_\_\_\_\_ model.

We hereby extend our full guarantee and warranty for 5 years as per terms and conditions of the tender and the contract for the equipment and services offered against this invitation for tender offer by the above firm. In case of M/s \_\_\_\_\_ is out of service due to any reason, we will make alternative arrangement for the service and maintenance of our product on same terms and conditions.

M/s \_\_\_\_\_

Yours faithfully,  
(Name)  
For and on behalf of

(Name manufactures)

Note: This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a competent person of the manufacturer.

*Signature of the Tenderer*