FLAG- B

SHORT TENDER NOTICE

E-Tenders under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) are invited from reliable, bonafide & experienced agency with required experience as per Prequalification criteria stipulated in Tender Document for the following work at Haldia Dock Complex.

➢ **Name of work**	:	**Construction of Liquid Cargo Handling Jetty(Outer Terminal-II) near 2nd Oil Jetty on the river Hooghly at Haldia Dock Complex, Kolkata Port Trust (Jetty Structure including Escape Route)**
➢ **E-Tender No**	:	**KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**
➢ **Estimated Cost**	:	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
➢ **Period Of Execution**	:	**24 (Twenty-four) months**
➢ **Earnest Money**	:	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**
➢ **Date and Time for pre-bid meeting & site visit**	:	**Pre-bid Meeting on 11-06-2019 at 12:00 HRS at the office of General Manager (Engineering), HDC, at Jawahar Tower followed by site visit.**
➢ **Last date of submission of e-tender and opening of Cover - I of the tender**	:	**27-06-2019** **Submission Up to 15:00 hrs.** **Opening After 15:30 hrs.** **Bid document will be available on MSTC, Website.** **Bidders will have to participate in bidding process through website www.mstcecommerce.com only.**
➢ **Cost of Tender Document (Non-refundable)**	:	**Rs. 11,800.00 (including 18% GST) (Rupees Eleven Thousand Eight Hundred Only)**
➢ **Contact Person.**	:	**Sr. Dy. Manager-IZ&R, (I&CF), Haldia Dock Complex.**

Details of the Tender & Tender Documents are available in web site of MSTC and have to participate in bidding process through their website www.mstcecommerce.com only. Interested bidders may contact at **pdasgupta.hdc@nic.in**

FLAG-C

NOTICE INVITING TENDER

WORK TITLE: - CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST (JETTY STRUCTURE INCLUDING ESCAPE ROUTE)

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

E-Tenders under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) are invited from resourceful, experienced and bonafide agencies with sound technical and financial capabilities on fulfilling the following Pre-qualification Criteria for the subject work:

PRE-QUALIFICATION CRITERIA FOR BIDDERS: -

1.0 The Average Annual Financial Turnover of the bidding firm during the last three years, ending on **31-03-2018** i.e. for the years **2015-'16, 2016-'17 and 2017-'18** should be at least **Rs. 23,21,11,702.00**.

2.0 The intending bidders must have successfully completed **Construction of a berth / jetty / bridge / marine structure in sea/ river / backwater / marine environment with bored cast in situ pile foundation** during the last 7 (Seven) years ending the last day of month previous to the one in which applications are invited and the experience should be either of the following:

Either (i) **Three completed works** each costing not less than **Rs. 30,94,82,269.00**.
Or (ii) **Two completed works** each costing not less than **Rs. 38,68,52,836.00.**
Or (iii) **One completed work** costing not less than **Rs. 61,89,64,538.00.**

2.1(a) The Bidder for pre-qualification may be a single entity or a group of entities (Joint Venture / consortium), coming together to implement the Project. However, no bidder applying individually or as a member of a Consortium, as the case may be, can be member of another Bidder. The term Bidder used herein would apply to both a single entity and a Joint Venture / consortium.

2.1(b) Guidelines for participation of a single entity who had previously participated in any work of similar nature as one of the member of a Joint venture

When the bidder is a single entity, who had previously participated in any work of similar nature as one of the member of a Joint venture, uses the credential of that particular work to justify his/her technical eligibility criteria for the instant tender, then the value of the completed work shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the technical eligibility criteria in the instant tender.

2.2 Two or more bidders may form a "Joint Venture / consortium" among themselves or by including some other firms having required expertise/ experience and submit the offer in the name of "Joint Venture / consortium". If the offer is made in the name of "Joint Venture/ consortium" the details and composition shall be clearly spelt out in the Technical bid. If a joint venture firm/ consortium is pre-qualified, the responsibility for execution of works and operations and maintenance shall be in accordance with the Joint Venture/consortium agreement and no deviation from the terms of the JV / consortium agreement will be permitted without prior approval of the Engineer. Tenders submitted by a joint venture / consortium of two or more firms, as partners shall comply with the following requirements:

a) Companies/contractors may jointly undertake the contract. Each entity would be jointly and severally responsible for completing the task as per the contract, however declaration of Lead member to be indicated by the bidders in their MOU. **The firms with at least 26% equity holding each be allowed to jointly meet the eligibility criteria.**

b) The tender, and in case of a successful tender, the Form of Agreement, shall be signed so as to be legally binding on all partners.

c) One of the partners shall be nominated as being In-charge (Lead Partner); and this authorization shall be evidenced by submitting a Power of Attorney signed by legally authorised signatories of all the partners;

d) The partner In-charge (Lead Partner) shall be authorised to incur liabilities and receive instructions for and on behalf of any or all of the partners of the joint venture and the entire execution of the contract including payment shall be done exclusively with the partner in charge;

e) All partners of a joint venture shall be jointly and severally liable for execution of the contract in accordance with the contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under (b) above as well as in the Tender Form and the Form of Agreement (in case of a successful tender); and

f) A certified copy of the agreement entered into by the members of the joint venture/consortium shall be submitted with the tender.

g) Value of a completed work done by a Member in an earlier JV Firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the above mentioned technical eligibility criteria in the tender under consideration, if applied as a JV / consortium for this particular work.

TENDER AUTHORITY:-

General Manager (Engineering), Haldia Dock Complex, Jawahar Tower Complex, Haldia Township, Purba Medinipur-721607, Contact No. – 7478005099, E-mail id: aganesan.hdc@nic.in

Due Date	**27-06-2019**	Time	**UPTO 15:00 hrs.**	Date of Opening of Cover-I of the Tender	**27-06-2019**	Time	**15:30 hrs. onwards.**
Bid document will be available on MSTC, Website. Bidders will have to participate in bidding process through website www.mstcecommerce.com only.							
Date and Time for prebid meeting & site visit	**Pre-bid Meeting on 11-06-2019 at 12:00 HRS at the office of General Manager (Engineering), HDC, at Jawahar Tower followed by site visit.**						
Cost of Tender document (Non-refundable)	**Rs. 11,800.00 (including 18% GST) (Rupees Eleven Thousand Eight Hundred Only)**						
Earnest Money Deposit	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**						
Time Of Completion	**24 (Twenty-four) months.**						
Estimated Cost Of Work	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**						

OTHER INSTRUCTIONS:-

E-Tenders are invited on two part basis (i.e. Part-I Techno Commercial part & Part-II Price part) from resourceful, experienced and bonafide bidders with sound technical and financial capabilities for the above mentioned work at Haldia Dock Complex.

Details of the Tender & Tender Documents are available in web site of MSTC and have to participate in bidding process through their website www.mstcecommerce.com only.

E-Tender Document shall neither be issued by post nor sold.

Notification for issuance of any Addendum / Corrigendum to the tender Document will be given only through MSTC website and the bidders are requested to check for the same at the website prior to submission of their offers.

E-Tenderers are not permitted to alter/change/delete/modify any clause of the tender Document down loaded from the website. If any deviation / discrepancy is found after submission of tender, the submitted offer will be summarily rejected.

Bidders shall submit the Bid Document as stipulated in the "Instructions To Bidders" of the e-tender document. Trustees reserve the right to verify the submitted copies of documents / credentials with the original documents.

The successful tenderer will be required to comply with the relevant provisions of BOCW (RECS) Act, 1996, West Bengal BOCW (RECS) Act, 2004 and BOCW Welfare Cess Act, 1996 and the rules framed there under. An amount of cess as per prevalent rate (presently @ 1% of the billed amount) shall be progressively recovered from all the bills of the contractor for onward transmission of the same to the appropriate authority.

E-Tenderers will be received through MSTC up to 15:00 hrs. on the last date of submission and opening of tender specified above.

Part-I of the e-Tender will be opened shortly after 3.30 p.m. on the stipulated date.

Part-II of only technically & commercially qualified bidders will be opened at a later date under due intimation to all concerned.

In case of unscheduled Holiday / Bandh on the date of opening of E-Tender, the same will be opened on the next working day.

It is stated here that submission of offer for the subject **TENDER WILL NOT BE EXTENDED UNDER ANY SITUATION.**

Kolkata Port Trust reserves the right to reject any or all offers or to accept the offer in whole or in part without assigning any reason whatsoever thereof.

A. Ganesan
General Manager (Engineering)

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: KoPT / Haldia Dock Complex/ I&CF Div/7/19-20/ET/16

TENDER DOCUMENT

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX
Office of General Manager (Engineering), Haldia Dock Complex
Jawahar Tower Complex
Haldia Township, Purba Medinipur- 721607
Contact No. - 7478005099
E-mail id: aganesan.hdc@nic.in

E-Tenders under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) are invited from reliable, bonafide & experienced agency with required experience as per Prequalification criteria stipulated in Tender Document for **"Construction of Liquid Cargo Handling Jetty (Outer Terminal-II) near 2nd Oil Jetty on the river Hooghly at Haldia Dock Complex, Kolkata Port Trust (Jetty Structure including Escape Route)"** as per Bill Of Quantities to Haldia Dock Complex. Bid Document may be seen from MSTC website. Corrigenda or clarifications, if any, shall be hosted on the above mentioned website only.
Bidders will have to participate in bidding process through website www.mstcecommerce.com only.

SCHEDULE OF TENDER (SOT)

a TENDER NO.	**I&CF/IZ&R/T/292**
b. MODE OF TENDER	e-Procurement System (Online Part I - Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome KoPT of MSTC Ltd. The intending bidders are required to submit their offer electronically through e-tendering portal. No physical tender is acceptable by Haldia Dock Complex.
c. E-Tender No.	**KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**
d. Date of NIT available to parties to download	**25-05-2019 to 27-06-2019**
e. Pre-Bid Meeting date & Time	**11-06-2019** at **12:00 Hrs. [Pre-bid meeting will be off line and will be held at the office of General Manager (Engineering), HDC at Jawahar Tower.]**
f. Pre –Bid Meeting closing date & Time	**11-06-2019** at **15:00 Hrs**
g. i) Estimated Cost Of Work	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
ii) Earnest Money Deposit	The intending bidders should submit Earnest Money of **Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)** to Haldia Dock Complex along with their offer otherwise their offer will be summarily rejected. The bidders are advised to deposit Earnest Money using the **Axis Bank Payment Gateway only**. No other method of payment of EM shall be accepted. Alternatively, an amount of **INR 10.0 Lakh (Rupees ten lakh) shall be paid using the Axis Bank Payment Gateway only and the balance amount shall be submitted in the form of a Bank Guarantee.**

	The Bidders would be able to access the payment gateway from the Vendor log in page of the MSTC ecommerce site (www.mstcecommerce.com→ e-Procurement →Psu / Govt depts→Kolkata Port Trust) itself under the icon: "**HDC EMD/Tender Fee Payment**". Clicking this icon will take the bidders to the Axis bank gateway. Alternatively the Bidders can also access the gateway from Axis bank easy pay site (https://**easypay**.**axisbank**.co.in→ Others→Haldia Dock Complex) For making payment of EM through the gateway, the bidders will be required to provide the User ID (the ID used by the bidders for submitting e-tender of HDC) and Bid ID (the e-tender number of the tender for which the payment is to be made). The method of use of the gateway is indicated in **Appendix-XX** with the tender. Tenderers should deposit Earnest Money before filling and submission of bids. Details of Earnest money remitted should be entered by the participating vendor/contractor in the space provided in the e-tender as indicated hereunder : a) Name of remitting vendor/contractor : b) E- Tender No. : c) Amount remitted : d) Remittance Bank Details: e) URN No.: f) Date of payment: **Note : The bidders who are not registered with MSTC Ltd and registering for the first time with MSTC Ltd should get registration 72 hours before depositing Earnest Money and Bid Document Fee.**
ii) Bid Document fee	The intending bidders should submit the Bid Document Fee of **Rs. 11,800.00 (including 18% GST) (Rupees Eleven Thousand Eight Hundred Only)** to Haldia Dock Complex along with their offer otherwise their offer will be summarily rejected. The bidders are advised to deposit Bid Document Fee using the **Axis Bank Payment Gateway only**. No other method of payment of Bid Document Fee shall be accepted. The Bidders would be able to access the payment gateway from the Vendor log in page of the MSTC ecommerce site (www.mstcecommerce.com→ e-Procurement →Psu / Govt depts→Kolkata Port Trust) under the icon: "**HDC EMD/Tender Fee Payment**". Clicking this icon will take the bidders to the Axis bank gateway. Alternatively the Bidders can also access the gateway from Axis bank easy pay site (https://**easypay**.**axisbank**.co.in→ Others→ Haldia Dock Complex)

iii) Transaction Fee	For making payment of Bid Document fee through the gateway, the bidders will be required to provide the User ID (the ID used by the bidders for submitting e-tender of HDC) and Bid ID (the e- tender number of the tender for which the payment is to be made). The method of use of the gateway is indicated in **Appendix-XX** with the tender. Tenderers should deposit Bid Document fee before filling and submission of bids. Details of Bid Document fee remitted should be entered by the participating vendor/contractor in the space provided in the e-tender as indicated hereunder : a) Name of remitting vendor/contractor : b) E- Tender No. : c) Amount remitted : d) Remittance Bank Details: e) **URN No**.: f) Date of payment: **Note : The bidders who are not registered with MSTC Ltd and registering for the first time with MSTC Ltd should get registration 72 hours before depositing Earnest Money and Bid Document Fee.** **Rs.17,700.00** (Including all taxes) (refer clause. No. 4 of Annexure -A)
h. (i) Last date of submission of EMD & Bid Document fee at HDC (ii) Last date of submission of Transaction fee through RTGS/NEFT in favour of MSTC Limited,Kolkata.	**27-06-2019** up to 15.00 Hrs. ***Three working days before the last date of closing of online bidding for the e-tender.***
i. Date of Starting of e-Tender for submission of on line Techno-Commercial Bid and price Bid at www.mstcecommerce.com/eprochome/	**15-06-2019**
j. Date of closing of online e-tender for submission of Techno-Commercial Bid & Price Bid.	**27-06-2019 (Up to 3:00 P.M.)**
k. Date & time of opening of Part-I (i.e. Techno-Commercial Bid) Part-II Price Bid: Date of opening of Part II i.e. price bid shall be informed separately	**27-06-2019 (After 3:30 P.M.)**

LIST OF ANNEXURES

Appendix-XX

PROCEDURE OF PAYMENT OF EARNEST MONEY AND BID DOCUMENT FEE THROUGH AXIS BANK GATEWAY

1. The Bidders would be able to access the payment gateway from the Vendor log in page of the MSTC ecommerce site (*www.mstcecommerce.com→ e-Procurement →Psu / Govt depts. →Kolkata Port Trust*) under the icon: "HDC EMD/Tender Fee Payment" . Clicking this icon will take the bidders to the Axis bank gateway.

   Alternatively, the Bidders can also access the gateway from Axis bank easypay website site (https://easypay.axisbank.co.in→ Others → Haldia Dock Complex)

2. The Bidder will be required to mention the Bidder's ID (The ID used by the Bidder for logging in the MSTC Website) and Bid Id (E-tender Number of the Tender against which the Bidders intend to submit Bid) and then Click 'VALIDATE'.

3. A webpage will populate where the Bidder will be required to select: Earnest Money or Bid DocumentFee, then indicate his Mobile Number and the CAPTCHA displayed in the webpage.

4. Depending on the selection, another webpage will come up.

5. In case of selection of Earnest Money, The bidder will be required to select the option of With or Without Bank Guarantee. In case of Bids, where there is no option to pay through BG, the Bidders should select the option 'Without'.

   In case of any tender, where there is an option to pay a part of EM through Bank Guarantee and the Bidder wants to avail that option, the bidder should select 'With".

6. The Bidder will be required to mention their Bank Account Number, IFSC Code of his Bank, and the Name of the Account, insert the CAPTCHA mentioned in the web page and then 'SUBMIT'. In case of Bid DocumentFee payment, Bank Account Number would not be required.

A URN Number will be generated. Bidders may keep note of this URN Number for all future reference.

7. Another webpage will come up and the Bidder will have the option to select payment methods from – (i) Internet Banking and (ii) NEFT/RTGS after agreeing with the terms and conditions by clicking the dialogue box appearing in the webpage.

8. In case of selection of Internet Banking, the bidder will be required to select any Bank of their choice and depending on the selection the bidder will then be guided to the webpage of the respective Bank. After validating the payment in the respective bank, the system will return to the Axis Bank Payment gateway.

9. In case of selection of RTGS/NEFT, the webpage will generate a payment advice.

   The Bank Account Number, IFS Code of the Bank, Name of the payee i.e Haldia Dock Complex and the amount to be paid will be indicated in the said payment advice. The Bidders will also get an SMS and Email detailing the same.

   The Bidder will be required to mention the same correctly in the Bank challan which is required to be filled up for payment by RTGS/NEFT in the bank from where they intend to make the payment.

The Bidders should note that Bank A/C number of HDC mentioned in the Payment advice will change for each and every transaction and hence for each and every payment the entire process from the beginning will have to be followed for generation of a URN Number.

10. For payment of Bid Documentfee, identical process is to be followed.

11. The Bidders will be able to know the status of their payment by using the 'Enquire URN' facility by mentioning the URN Number in the Axis Bank login page. Until such time the payment is credited to HDC's A/C, the system will show the status as 'Pending'.

12. The Bidders should note that until such time the status remains 'Pending', the payment is not made to HDC and mere generation of URN Number will not signify payment of EM or Bid DocumentFee. Hence, if the status remains 'Pending' after some time of submitting the RTGS/NEFT payment request at their Bank, then the bidder should contact their Bank to enquire about the status of RTGS/NEFT request.

13. In case of any problem relating to use of the payment gateway, the bidder should contact the tender inviting authorities whose phone number and email address is mentioned in the e-tender.

Annexure - A

Important instructions for E-procurement

Bidders are requested to read the terms & conditions of this tender before submitting their online tender.

1	Process of E-tender : A) Registration: The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Technical Bid as well as Commercial Bid will be done over the internet. The Vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature). SPECIAL NOTE: THE TECHNICAL BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT www.mstcecommerce.com/eprochome/kopt 1).Vendors are required to register themselves online with www.mstcecommerce.com→ e-Procurement →PSU/Govt depts→ Select KoPT Logo->Register as Vendor -- Filling up details and creating own user id and password→ Submit. 2). Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form. In case of any clarification, please contact HDC/MSTC, (before the scheduled time of the e- tender). Contact person (Haldia Dock Complex): **1. Sri. P. Dasgupta** **Sr. Dy. Manager (IZ&R),I&CF** **Haldia Dock Complex** **Ph. No.** 03224 252844 pdasgupta.hdc@nic.in *Contact person (MSTC Ltd):* 1. Mr. V.K.Jaiswal, Regional Manager (ERO) – vikash@mstcindia.co.in -Mobile No.:9903042449 2. Mr. P.Biswas, Assistant Manager (ERO) – pbiswas@mstcindia.co.in –Mobile No.:9903248755 3. Mr. M.H.Jain, Assistant Manager (ERO) - mhjain@mstcindia.co.in – Mobile No.:9721277969 Google hangout ID - (for text chat)- mstceproc@gmail.com Phone No.: 033-22901004 B) System Requirement: i) Windows 7 or above Operating System ii) IE-7 and above Internet browser. iii) Signing type digital signature iv) Latest updated JRE 8 (x86 Offline) software to be downloaded and installed in the system. To disable "Protected Mode" for DSC to appear in The signer box following settings may be applied. • Tools => Internet Options =>Security => Disable protected Mode If enabled- i.e, Remove the tick from the tick box mentioning "Enable Protected Mode". • Other Settings: Tools => Internet Options => General => Click On Settings under "browsing history/ Delete Browsing History" => Temporary Internet Files => Activate "Every time I Visit the Webpage". To enable ALL active X controls and disable 'use pop up blocker' under Tools→Internet Options→ custom level (Please run IE settings from the page www.mstcecommerce.com once)
2	The Techno-commercial Bid and the Price Bid shall have to be submitted online at www.mstcecommerce.com/eprochome/kopt Tenders will be opened electronically on specified date and time as given in the Tender.
3	All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
4	**Special Note towards Transaction fee:** The vendors shall pay the transaction fee using "Transaction Fee Payment" Link under "My Menu" in the

	vendor login. The vendors have to select the particular tender from the event dropdown box. The vendor shall have the facility of making the payment either through NEFT or Online Payment. On selecting NEFT, the vendor shall generate a challan by filling up a form. The vendor shall remit the transaction fee amount as per the details printed on the challan without making change in the same. On selecting Online Payment, the vendor shall have the provision of making payment using its Credit/ Debit Card/ Net Banking. Once the payment gets credited to MSTC's designated bank account, the transaction fee shall be auto authorized and the vendor shall be receiving a system generated mail. **Transaction fee is non-refundable.** A vendor will not have the access to online e-tender without making the payment towards transaction fee. **NOTE** Bidders are advised to remit the transaction fee well in advance before the closing time of the event so as to give themselves sufficient time to submit the bid.
5	Information about tenders /corrigendum uploaded shall be sent by email only during the process till finalization of tender. Hence the vendors are required to ensure that their corporate email I.D. provided is valid and updated at the time of registration of vendor with MSTC. Vendors are also requested to ensure validity of their DSC (Digital Signature Certificate).
6	E-tender cannot be accessed after the due date and time mentioned in NIT.
7	Bidding in e-tender : a) Vendor(s) need to submit necessary EMD, Tender fees and Transaction fees (If ANY) to be eligible to bid online in the e-tender. Tender fees and Transaction fees are non refundable. No interest will be paid on EMD. EMD of the unsuccessful vendor(s) will be refunded by the tender inviting authority. b) The process involves Electronic Bidding for submission of Technical and Commercial Bid. c) The vendor(s) who have submitted transaction fee can only submit their Technical Bid and Commercial Bid through internet in MSTC website www.mstcecommerce.com → e-procurement →PSU/Govt depts→ Login under KoPT→My menu→ Auction Floor Manager→ live event →Selection of the live event d) The vendor should allow running JAVA application. This exercise has to be done immediately after opening of Bid floor. Then they have to fill up Common terms/Commercial specification and save the same. After that click on the Technical bid. If this application is not run then the vendor will not be able to save/submit his Technical bid. e) After filling the Technical Bid, vendor should click 'save' for recording their Technical bid. Once the same is done, the Commercial Bid link becomes active and the same has to filled up and then vendor should click on "save" to record their Commercial bid. Then once both the Technical bid & Commercial bid has been saved, the vendor can click on the "Final submission" button to register their bid f) Vendors are instructed to use *Attach Doc button* to upload documents. Multiple documents can be uploaded. g) In all cases, vendor should use their own ID and Password along with Digital Signature at the time of submission of their bid. h) During the entire e-tender process, the vendors will remain completely anonymous to one another and also to everybody else. i) The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above. j) All electronic bids submitted during the e-tender process shall be legally binding on the vendor. Any bid will be considered as the valid bid offered by that vendor and acceptance of the same by the Buyer will form a binding contract between Buyer and the Vendor for execution of supply. k) It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system. l) Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof. m) No deviation of the terms and conditions of the tender Documents acceptable. Submission of bid in the e-tender floor by any vendor confirms his acceptance of terms & conditions for the tender.
8	Any order resulting from this tender shall be governed by the terms and conditions mentioned therein.
9	No deviation to the technical and commercial terms & conditions are allowed.
10	The tender inviting authority has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof.
11	Vendors are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome to familiarize them with the system before bidding.

12	Bidding in e-tender & Reverse auction:	
	a.	Bidder(s) need to submit necessary EMD, Tender fees (if any) and Transaction fees to be eligible to bid online in the e-tender. Tender fees and Transaction fees are non refundable. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by HDC. Bank details i.e. name of bank & address, Current a/c no, IFS Code to be mentioned by the tenderer for refund.
	b.	The process involves Electronic Bidding for submission of Techno Commercial Bid and Price Bid - Combined.
	c.	The bidder(s) who have submitted the above fees can only submit their Techno Commercial Bid and Price Bid- Combined through internet in MSTC website www.mstcecommerce.com → e-procurement →Psu/Govt depts→ Login →My menu→ Auction Floor Manager→ live event →Selection of the live event→ Techno Commercial Bid.
	d.	The bidder should allow to run an application namely en Apple by accepting the risk and clicking on run. This exercise has to be done twice immediately after clicking on the Techno-Commercial bid. If this application is not run then the bidder will not be able to save/submit his bid.
	e.	After filling the Techno-Commercial Bid, bidder should click 'save' for recording their Techno-Commercial bid. Once the same is done, the Price Bid link becomes active and the same has to filled up and then bidder should click on "save" to record their price bid. Then once both the Techno-Commercial bid & price bid has been saved, the bidder can click on the "Submit" button to register their bid
		NOTE: - The Techno-Commercial Bid & price bid- Combined cannot be revised once the submit button has been clicked by the bidder.
	a.	In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.
	b.	During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
	c.	The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
	d.	All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply. Such successful tenderer shall be called hereafter SUPPLIER.
	e.	It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.
	f.	Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
	g.	No deviation of the terms and conditions of the tender Documents acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.
	h.	Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.
13	Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.	
14	After submitting online bid, the bidder cannot access the tender, once it has been submitted with digital signature	
15	HDC has the right to cancel this e-tender without assigning any reason thereof.	
16	The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website www.mstcecommerce.com / eprochome / mstc of MSTC Ltd.	
17	The bidders must upload all the Documents required as per terms of NIT. Any other Document uploaded which is not required as per the terms of the NIT shall not be considered.	
18	The bid will be evaluated based on the filled-in technical & commercial formats.	
19	The documents uploaded by bidder(s) will be scrutinized. In case any of the information furnished by the bidder is found to be false during scrutiny, EMD of defaulting bidder(s) will be forfeited. Punitive action including suspension and banning of business can also be taken against defaulting bidders.	
20	Necessary addendum/ corrigendum (if any) of tender would only be hosted in the e-tendering portal of M.S.T.C.	
21	Due date of submission of tender will not be extended under any situation.	

Annexure – B

TENDER DOCUMENT

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX
Office of General Manager (Engineering), Haldia Dock Complex
Jawahar Tower Complex
Haldia Township, Purba Medinipur- 721607
Contact No. - 7478005099
E-mail id: aganesan.hdc@nic.in

Commercial Terms & Conditions

SL. NO.	TERMS	RESPONSE
1	Mere participation in e-tender will not mean that a particular bidder will be automatically considered qualified and their bids will be entertained. Such qualification will be reviewed at the time of evaluation of bids also.	AGREE
2	Price Bids (Part-II) of only those bidders whose Part-I Bids are complete and in order shall be opened on time and date to be intimated later separately.	AGREE
3	Due date of submission of tender will not be extended under any situation.	AGREE
4	EARNEST MONEY : As Per NIT	AGREE
5	SCOPE OF WORK: As per E-Tender Document	AGREE
6	The Terms and Conditions of E-Tender shall be read in conjunction with the General Conditions of Contract, Specifications, Bill of Quantities and other documents forming part of this Contract wherever the Contract so requires.	AGREE
7	The several documents forming the Contract shall be taken, as mutually explanatory to one another and in case of any discrepancies; the Bill of Quantities shall prevail over the Specifications and the Terms and Conditions over the General Conditions of Contract of Ko.P.T, HDC. In case of any dispute, question or difference either during the execution of the Contract or any other time as to any matter or thing connected with or arising out of this Contract, the decision of the Sr. Dy. Manager (I&CF) , Haldia Dock Complex, thereon shall be final and binding upon all parties.	AGREE
8	The Contract will include the Client's Bid Documents with the General Conditions of Contract and the Bidder's Offer as finally accepted by the Client, together with Addenda, if there be any. Trustees' General Conditions of contract is the integral part of the tender / contract.	AGREE
9	The Trustees also reserve the right to obtain revised commercial bid to the extent and in areas required from the technically acceptable bidders before opening of the price bids.	AGREE
10	The Trustees are not bound to accept the lowest or any Tender and reserve the right to accept a tender in full or in part and / or reject a tender in full or in part without assigning any reason thereof.	AGREE
11	The contract shall be governed by all relevant Indian Acts applicable only within the jurisdiction of the High Court at Calcutta.	AGREE
12	Intending bidders must take into account any cost or expense incurred by them in connection with the preparation and submission of their bids or for	AGREE

	any other expenses incurred in connection with such bidding.	
13	Bidders are advised to visit the site of work prior to submission of their bid. Bidder shall get himself thoroughly familiarized with the site conditions, existing road facilities for carrying materials etc. before submission of the e-tender. He may contact Sr. Dy. Manager (I&CF) or his authorized representative at his office at Chiranjibpur, Haldia in this regard. Non compliance of the same will in no way relieve the successful bidder of any of his obligations in performing the work in accordance with this Bid Document within the quoted price.	AGREE
14	The bidder should sign the DECLARATION OF THE BIDDER and upload the same to denote their mode of acceptance and to submit the same along with his offer.	AGREE
15	VALIDITY : The tender shall remain open for acceptance for a period of 4 (Four) months from the date of opening of the techno-commercial bid. If before expiry of this validity period, the Bidder amends his quoted rates or tender, making them unacceptable to the Trustees and / or withdraws his tender, the Earnest Money deposited shall be liable to forfeiture at the option of the Trustees / sanctioning Authority.	AGREE
16	NON- RESPONSIVE BIDDER :- The offer/tender shall be treated as non-responsive, if : a) 4 (Four) months validity from the date of opening of tender is not accepted / agreed to as per tender condition. b) Offer / tender is submitted with any deviation from the tender terms & conditions.	AGREE
17	EARNEST MONEY AND SECURITY DEPOSIT : As per tender Document	AGREE
18	Performance Guarantee : As per Tender Document	AGREE
19	If the contract value aggregates to Rupees one lakh and above, the contractor/supplier may offer a Bank Guarantee in the Trustees' specified Pro-forma from any Kolkata/Haldia Branch of any Scheduled/ Nationalized Bank of India in lieu of Security Deposit.	AGREE
20	In the event of the successful bidder failing to execute the order within the stipulated delivery period without sufficient reasons acceptable to the Trustees, the Security Deposit may be forfeited and the order be cancelled at the option of the Trustees'.	AGREE
21	PRICES: As per BOQ given in the tender document.	AGREE
22	The bidder shall quote his price as per the Bill of Quantities in the Price bid (Part-II).	AGREE
23	The Bidder shall state clearly his quoted rates in figures & words.	AGREE
24	Orders may be placed in full to the lowest bidder.	AGREE
25	Price(s) to be quoted should remain firm over the contract period.	AGREE
26	All taxes & duties are deemed to be included in the quoted rate except GST as applicable.	AGREE
27	EVALUATION CRITERIA: As per relevant clause of Tender document.	AGREE
28	PAYMENT: As per Tender document.	AGREE
29	Location: As per Tender document.	AGREE

30	Time of Completion: As per Tender document.	AGREE
31	Work is to be carried out as per terms & condition of the contract document	AGREE
32	Compensation (Liquidated Damages) against failure to complete the work within the stipulated time as per tender condition.	AGREE
33	Price adjustment clause: As per Tender document.	AGREE
34	Technical capacity: As stipulated in Tender document.	AGREE
35	Financial capacity: As stipulated in Tender document.	AGREE
36	DOCK PERMITS: As stipulated in Tender document.	AGREE
37	JURISDICTION OF COURT : The contract shall be governed by all relevant Indian Acts applicable within the jurisdiction of Kolkata/Haldia.	AGREE
38	PERSONAL PROTECTIVE EQUIPMENT (PPE): Contractor and their workmen including driver & helper must use PPE i.e. safety helmet etc. at the time of work inside the dock premises.	AGREE

Annexure –C

[NIT-1]

SHORT TENDER NOTICE

E-Tenders under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) are invited from reliable, bonafide & experienced agency with required experience as per Prequalification criteria stipulated in Tender Document for the following work at Haldia Dock Complex.

➢ **Name of work**	**:**	**Construction of Liquid Cargo Handling Jetty(Outer Terminal-II) near 2nd Oil Jetty on the river Hooghly at Haldia Dock Complex, Kolkata Port Trust (Jetty Structure including Escape Route)**
➢ **E-Tender No**	**:**	**KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**
➢ **Estimated Cost**	**:**	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
➢ **Period Of Execution**	**:**	**24 (Twenty-four) months**
➢ **Earnest Money**	**:**	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**
➢ **Date and Time for pre-bid meeting & site visit**	**:**	**Pre-bid Meeting on 11-06-2019 at 12:00 HRS at the office of General Manager (Engineering), HDC, at Jawahar Tower followed by site visit.**
➢ **Last date of submission of e-tender and opening of Cover - I of the tender**	**:**	**27-06-2019** **Submission Up to 15:00 hrs.** **Opening After 15:30 hrs.** **Bid document will be available on MSTC, Website.** **Bidders will have to participate in bidding process through website www.mstcecommerce.com only.**
➢ **Cost of Tender Document (Non-refundable)**	**:**	**Rs. 11,800.00 (including 18% GST) (Rupees Eleven Thousand Eight Hundred Only)**
➢ **Contact Person.**	**:**	**Sr. Dy. Manager-IZ&R, (I&CF), Haldia Dock Complex.**

Details of the Tender & Tender Documents are available in web site of MSTC and have to participate in bidding process through their website www.mstcecommerce.com only. Interested bidders may contact at **pdasgupta.hdc@nic.in**

[NIT-2]

NOTICE INVITING TENDER

WORK TITLE: - **CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST (JETTY STRUCTURE INCLUDING ESCAPE ROUTE)**

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

E-Tenders under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) are invited from resourceful, experienced and bonafide agencies with sound technical and financial capabilities on fulfilling the following Pre-qualification Criteria for the subject work;

PRE-QUALIFICATION CRITERIA FOR BIDDERS: -

1.0 The Average Annual Financial Turnover of the bidding firm during the last three years, ending on **31-03-2018** i.e. for the years **2015-'16, 2016-'17 and 2017-'18** should be at least **Rs. 23,21,11,702.00**.

2.0 The intending bidders must have successfully completed **Construction of a berth / jetty / bridge / marine structure in sea/ river / backwater / marine environment with bored cast in situ pile foundation** during the last 7 (Seven) years ending the last day of month previous to the one in which applications are invited and the experience should be either of the following:

Either (i) **Three completed works** each costing not less than **Rs. 30,94,82,269.00**.
Or (ii) **Two completed works** each costing not less than **Rs. 38,68,52,836.00.**
Or (iii) **One completed work** costing not less than **Rs. 61,89,64,538.00.**

2.1(a) The Bidder for pre-qualification may be a single entity or a group of entities (Joint Venture / consortium), coming together to implement the Project. However, no bidder applying individually or as a member of a Consortium, as the case may be, can be member of another Bidder. The term Bidder used herein would apply to both a single entity and a Joint Venture / consortium.

2.1(b) <u>Guidelines for participation of a single entity who had previously participated in any work of similar nature as one of the member of a Joint venture</u>

When the bidder is a single entity, who had previously participated in any work of similar nature as one of the member of a Joint venture, uses the credential of that particular work to justify his/her technical eligibility criteria for the instant tender, then the value of the completed work shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the technical eligibility criteria in the instant tender.

2.2 Two or more bidders may form a "Joint Venture / consortium" among themselves or by including some other firms having required expertise/ experience and submit the offer in the name of "Joint Venture / consortium". If the offer is made in the name of "Joint Venture/ consortium" the details and composition shall be clearly spelt out in the Technical bid. If a joint venture firm/ consortium is pre-qualified, the responsibility for execution of works and operations and maintenance shall be in accordance with the Joint Venture/consortium agreement and no deviation from the terms of the JV / consortium agreement will be permitted without prior approval of the Engineer. Tenders submitted by a joint venture / consortium of two or more firms, as partners shall comply with the following requirements:

a) Companies/contractors may jointly undertake the contract. Each entity would be jointly and severally responsible for completing the task as per the contract, however declaration of Lead member to be indicated by the bidders in their MOU. **The firms with at least 26% equity holding each be allowed to jointly meet the eligibility criteria.**

b) The tender, and in case of a successful tender, the Form of Agreement, shall be signed so as to be legally binding on all partners.

c) One of the partners shall be nominated as being In-charge (Lead Partner); and this authorization shall be evidenced by submitting a Power of Attorney signed by legally authorised signatories of all the partners;

d) The partner In-charge (Lead Partner) shall be authorised to incur liabilities and receive instructions for and on behalf of any or all of the partners of the joint venture and the entire execution of the contract including payment shall be done exclusively with the partner in charge;

e) All partners of a joint venture shall be jointly and severally liable for execution of the contract in accordance with the contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under (b) above as well as in the Tender Form and the Form of Agreement (in case of a successful tender); and

f) A certified copy of the agreement entered into by the members of the joint venture/consortium shall be submitted with the tender.

g) Value of a completed work done by a Member in an earlier JV Firm shall be reckoned only to the extent of the concerned member's share in that JV firm for the purpose of satisfying his/her compliance to the above mentioned technical eligibility criteria in the tender under consideration, if applied as a JV / consortium for this particular work.

TENDER AUTHORITY:-

General Manager (Engineering), Haldia Dock Complex, Jawahar Tower Complex, Haldia Township, Purba Medinipur- 721607, Contact No. – 7478005099, E-mail id: aganesan.hdc@nic.in

Due Date	**27-06-2019**	Time	**UPTO 15:00 hrs.**	Date of Opening of Cover-I of the Tender	**27-06-2019**	Time	**15:30 hrs. onwards.**
Bid document will be available on MSTC, Website. Bidders will have to participate in bidding process through website www.mstcecommerce.com only.							
Date and Time for prebid meeting & site visit	**Pre-bid Meeting on 11-06-2019 at 12:00 HRS at the office of General Manager (Engineering), HDC, at Jawahar Tower followed by site visit.**						
Cost of Tender document (Non-refundable)	**Rs. 11,800.00 (including 18% GST) (Rupees Eleven Thousand Eight Hundred Only)**						
Earnest Money Deposit	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**						
Time Of Completion	**24 (Twenty-four) months.**						
Estimated Cost Of Work	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**						

OTHER INSTRUCTIONS:-

E-Tenders are invited on two part basis (i.e. Part-I Techno Commercial part & Part-II Price part) from resourceful, experienced and bonafide bidders with sound technical and financial capabilities for the above mentioned work at Haldia Dock Complex.

Details of the Tender & Tender Documents are available in web site of MSTC and have to participate in bidding process through their website www.mstcecommerce.com only.

E-Tender Document shall neither be issued by post nor sold.

Notification for issuance of any Addendum / Corrigendum to the tender Document will be given only through MSTC website and the bidders are requested to check for the same at the website prior to submission of their offers.

[NIT-4]

E-Tenderers are not permitted to alter/change/delete/modify any clause of the tender Document down loaded from the website. If any deviation / discrepancy is found after submission of tender, the submitted offer will be summarily rejected.

Bidders shall submit the Bid Document as stipulated in the "Instructions To Bidders" of the e-tender document. Trustees reserve the right to verify the submitted copies of documents / credentials with the original documents.

The successful tenderer will be required to comply with the relevant provisions of BOCW (RECS) Act, 1996, West Bengal BOCW (RECS) Act, 2004 and BOCW Welfare Cess Act, 1996 and the rules framed there under. An amount of cess as per prevalent rate (presently @ 1% of the billed amount) shall be progressively recovered from all the bills of the contractor for onward transmission of the same to the appropriate authority.

E-Tenderers will be received through MSTC up to 15:00 hrs. on the last date of submission and opening of tender specified above.

Part-I of the e-Tender will be opened shortly after 3.30 p.m. on the stipulated date.

Part-II of only technically & commercially qualified bidders will be opened at a later date under due intimation to all concerned.

In case of unscheduled Holiday / Bandh on the date of opening of E-Tender, the same will be opened on the next working day.

It is stated here that submission of offer for the subject **TENDER WILL NOT BE EXTENDED UNDER ANY SITUATION.**

Kolkata Port Trust reserves the right to reject any or all offers or to accept the offer in whole or in part without assigning any reason whatsoever thereof.

A. Ganesan
General Manager (Engineering)

Annexure -D

DOCUMENTS

FOR

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: **KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**

VOLUME-I

CONTENTS

TENDER PARTICULARS

ESTIMATED COST	**:**	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
EARNEST MONEY	**:**	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**
TIME OF COMPLETION	**:**	**24 (Twenty-four) months.**
LAST DATE OF SUBMISSION OF E-TENDER AND OPENING OF COVER-I OF THE TENDER	**:**	**11-06-2019** **Submission Up to 15:00 hrs.** **Opening After 15:30 hrs.** **Bid document will be available on MSTC, Website.** **Bidders will have to participate in bidding process through website www.mstcecommerce.com only.**

INSTRUCTIONS TO BIDDER

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: **KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**

INDEX

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

1.0 GENERAL

The work as described in the tender shall be executed in Haldia and in accordance with the attached General Conditions of Contract, Special Conditions of Contract, Particular Specifications, Drawings & detailed Bill of Quantities. Location Plan of the place of work might be inspected at the office of the Sr. Dy. Manager IZ&R, (I&CF) on any working day before quoting for the tender.

2.0 EARNEST MONEY AND BID DOCUMENT FEE

2.1 EARNEST MONEY

The intending bidders should submit Earnest Money of INR **87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)** to Haldia Dock Complex along with their offer otherwise their offer will be summarily rejected.

The bidders are advised to deposit Earnest Money using the **Axis Bank Payment Gateway only**. No other method of payment of EM shall be accepted.

The Bidders would be able to access the payment gateway from the Vendor log in page of the MSTC ecommerce site (www.mstcecommerce.com→ e-Procurement →Psu / Govt depts→Kolkata Port Trust) itself under the icon:

"**HDC EMD/Tender Fee Payment**". Clicking this icon will take the bidders to the Axis bank gateway. Alternatively the Bidders can also access the gateway from Axis bank easy pay site (https://**easypay**.**axisbank**.co.in→ Others→Haldia Dock Complex)
For making payment of EM through the gateway, the bidders will be required to provide the User ID (the ID used by the bidders for submitting e-tender of HDC) and Bid ID (the e- tender number of the tender for which the payment is to be made).

The method of use of the gateway is indicated in **Appendix-XX** with the tender.

Tenderers should deposit Earnest Money before filling and submission of bids.

Alternatively, an amount of **INR 10.0 Lakh (Rupees ten lakh) shall be paid using the Axis Bank Payment Gateway only and the balance amount may be submitted in the form of a Bank Guarantee** issued by any Indian nationalized/ scheduled bank, having branch at Kolkata. In the event of issuing Bank Guarantee by any branch outside Kolkata, any Kolkata Branch of such Bank shall confirm the same and stand by for all the commitments under the Bank Guarantee. In all cases, any dispute regarding such Bank Guarantee will be adjudicated under the jurisdiction of The Calcutta High Court. Specimen BG Format (EMD) is given below as Annexure-H. The Bank Guarantee shall remain valid for a period of 180 days from the scheduled date of opening of Part-I of the bid with a further claim period of one month otherwise their offer will be summarily rejected.

For issuance of EM BG, the details of Beneficiary Bank A/C will be as follows:-
i) Beneficiary Name : Kolkata Port Trust, Haldia Dock Complex
ii) Account Number : 1604050000064
iii) Account Type : Current
iv) Bank Name : United Bank of India
v) Branch Name : Haldia Dock Complex Branch
vi) IFS Code : UTBI0HDCF75

The aforesaid Bank A/C may be considered as the beneficiary bank, to enable confirmation of issuance of the Bank Guarantee directly to the beneficiary bank. In such case, the ORIGINAL bank Guarantee shall have to be deposited under acknowledgement or sent by post/courier to the office of Sr. Dy. Manager (IZ&R), I&CF Division at Operational Administrative Building, P.O.- Chiranjibpur, Haldia, Purba Medinipur-721 604. Unless the ORIGINAL Bank Guarantee, complete in all respect as per the tender condition is received within the scheduled date and time (Last Date and time of submission of Tender), the bid may be treated as non responsive.

The Tender Inviting Authority will not be responsible for postal delay. A scanned copy of the bank Guarantee shall also be uploaded with the tender.

Vendors / contractors participating in an e-tender are advised to deposit earnest money and cost of tender paper directly into the above mentioned bank account by RTGS/NEFT. Concerned vendors/contractors must ensure that the remitting bank positively enters their name and Tender no. in the 'Sender to Receiver' column at the time of making payment of earnest money by RTGS/NEFT.

Details of Earnest money remitted should be entered by the participating vendor/contractor in the space provided in the e-tender as indicated hereunder :

a) Name of remitting vendor/contractor :
b) E- Tender No. :
c) Amount remitted :
d) Remittance Bank Details:

e) **URN No**.:
f) Date of payment:
Note : The bidders who are not registered with MSTC Ltd and registering for the first time with MSTC Ltd should get registration 72 hours before depositing Earnest Money and Bid Document Fee.

2.2 BID DOCUMENT FEE

The intending bidders should submit Bid Document Fee of **Rs. 11,800.00 (including 18% GST) (Rupees Eleven Thousand Eight Hundred Only)**to Haldia Dock Complex along with their offer otherwise their offer will be summarily rejected.

The bidders are advised to deposit Bid Document Fese using the **Axis Bank Payment Gateway only**. No other method of payment of Bid Document Fee shall be accepted.

The Bidders would be able to access the payment gateway from the Vendor log in page of the MSTC ecommerce site www.mstcecommerce.com→ e-Procurement →Psu / Govt depts→Kolkata Port Trust) under the icon: "HDC **EMD/Tender Fee Payment**". Clicking this icon will take the bidders to the Axis bank gateway. Alternatively the Bidders can also access the gateway from Axis bank easy pay site (https://**easypay**.**axisbank**.co.in→ Others→ Haldia Dock Complex)

For making payment of Bid Document fee through the gateway, the bidders will be required to provide the User ID (the ID used by the bidders for submitting e-tender of HDC) and Bid ID (the e- tender number of the tender for which the payment is to be made).

The method of use of the gateway is indicted in **Appendix-XX** with the tender.

Tenderers should deposit Bid Document fee before filling and submission of bids.

Details of Bid Document fee remitted should be entered by the participating vendor/contractor in the space provided in the e-tender as indicated hereunder:

a) Name of remitting vendor/contractor :

b) E- Tender No. :

c) Amount remitted :
d) Remittance Bank Details:
e) URN No.:
f) Date of payment:

Note: The bidders who are not registered with MSTC Ltd and registering for the first time with MSTC Ltd should get registration 72 hours before depositing Earnest Money and Bid Document Fee.

3.0 MODE OF SUBMISSION OF BID :

3.1 All bidders must submit their offers through e- tendering in accordance with the terms and conditions set out in the bid documents and no deviation will be accepted.

3.2 Techno commercial part i.e. Cover-I shall contain the following which are to be uploaded: -

a) That the Bidding Firm has Not been debarred / de-listed by any Govt / Quasi Govt. / Public Sector undertaking in India.

b) The proprietor/partner(s)/authorized signatory of the bidding firm (in the case of proprietorship firm /partnership firm /limited company, as the case may be) is/are not associated with any other firm bidding for the same work.

c) In Volume-I, the un-priced "Abstract Form Of Tender" & "Form Of Tender" (without price quoted) shall not only be signed and stamped by the Bidder, but must also be duly witnessed.

d) A list of works which are in hand at the time of submitting the offer as per the enclosed proforma titled 'Concurrent Commitments of The Bidder' vide 'Annexure-II' in Volume-I of the tender document.

e) A Declaration as per 'Annexure – I' (in Volume-I of the tender document) that no conditions / deviations have been added in COVER- II, i.e., in the price part of the Bid.

f) Scan copy of the following documents to be uploaded:-

i) PAN card.
ii) GST registration certificate
iii) Valid Trade Licence.
iv) Valid Professional Tax Clearance Certificate / Up to date tax payment challan.
v) Proof of possessing valid Employees' Provident Fund (EPF) Account.
vi) Proof of being registered with Employees' State Insurance Corporation (ESIC).

g) Details of the firm as per Schedule-O (in Volume-I) of the tender document.

h) Credentials in the form of copies of Letters of Award of Works along with corresponding Completion Certificates from owners to justify that the intending bidder satisfies the earlier mentioned pre-qualification criteria.

i) Certified copies of audited balance sheet and Profit and Loss account / Trading account for the last 3 (three) financial years **(2015-2016, 2016 -2017 & 2017-18).** In case the audited accounts of 2017-18 is not yet ready, a certificate from the statutory auditor of the firm indicating the turnover of the firm during 2017-18 may be submitted.

j) Addendum/Corrigendum / Notice / Extension Notice issued and drawings (if any) duly signed by the Bidder under office seal.

The bidder will have to produce the original documents or any additional documents, if asked for, to satisfy the Authorities.

3.3 Part-II will contain the Volume-II of the e-tender document with Price Bid as per BOQ and Form of e-Tender to be uploaded duly signed, sealed & filled up by the bidder.

3.4 All the bidders should submit the e-tender in accordance with the Mode of submission of Bid as aforesaid.

4.0 OPENING OF BIDS:

4.1 Only Part-I containing Techno commercial part as stated above will be opened on the date and time as fixed in the e-tender document on line.

4.2 Part-II of only those bidders who have deposited requisite Earnest Money and tender paper cost and also qualify techno commercial stipulation of the e-tender shall be opened.

5.0 SECURITY DEPOSIT:-

5.1 For the successful Bidder, the Security Deposit shall be recovered from the Earnest Money deposit in accordance with clause 3.4 (f) and (g) of the General Conditions of Contract.

5.2 As an alternative to the deduction of Security Deposit from progressive bills, the Contractor, if he so desires, can submit to the Engineer, a Performance Bond as per Cl. 3.6 of General Conditions of Contract in the form of an irrevocable bank guarantee from Kolkata / Haldia Branch of any Nationalised Bank or Scheduled Bank of India in the proforma attached to the General Conditions of Contract and for a sum computed according to Cl. 3.4(g) of the General Conditions of Contract. The Bank Guarantee for the Performance Bond shall remain valid till 30 (thirty) days after completion of maintenance period specified in the tender or any extension thereto as would be informed by the Engineer. On acceptance of Performance Bond, the Earnest Money deposit will be refunded to the successful bidder.

5.3 Refund of S.D. and forfeiture S.D. shall be guided by Cl. 3.5 (i) & (ii) of the G.C.C.

6.0 REFUND OF EARNEST MONEY:-

The Earnest Money received, will be refunded or released as the case may be to the unsuccessful Bidders without any interest after opening of Price bid (Volume – II) of the e-Tender document.

7.0 VALIDITY OF OFFER:-

The e-tender shall remain valid for a period of 4 (four) months from the date of opening the techno-commercial bid. If before expiry of this validity period, the Bidder amends his quoted rates or tender, making them unacceptable to the Trustees and / or withdraws his e-tender, the Earnest Money deposited shall be liable to forfeiture at the option of the Trustees/ Sanctioning Authority/Engineer.

8.0 DETAILED SCRUTINY OF E-TENDERERS:

8.1 During the course of examination of Part-I of the bid, the bidders, if asked for, shall furnish any or additional document(s) for the purpose of evaluation of his / their bids. The price bids i.e. Part-II of those bidders who meet the qualifying criteria of NIT shall be opened.

8.2 During techno-Commercial Evaluation, i.e. evaluation of Part-I of tender, an offer shall be considered non-responsive in case, the offer :-

(i) is not accompanied by requisite earnest money,
(ii) is not accompanied by requisite tender paper cost,
(iii) validity of the offer is less than tender stipulation,
(iv) It does not meet the Qualification Criteria as stipulated in the NIT.
(v) The bidder submits conditional offer / impose own terms and conditions / does not accept tender conditions completely.
(vi) Documents not submitted as per Clause 3.2 of Instructions to Bidders.

In addition to above, a bidder may be disqualified if –

a) The bidder provides misleading or false information in the statements and documents submitted.

b) Record of unsatisfactory performance during the last seven years, such as abandoning of work or rescinding of contract for which the reasons are attributable to the non-performance of the contractor or inordinate delays in completion or financial bankruptcy etc.

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

9.0 For Micro & Small Enterprises (MSEs) registered with NSIC:-

9.1 Micro & Small Enterprises (MSEs) shall submit the following documents for availing themselves of waiver of EMD and cost of tender documents.

9.2 Micro and Small Enterprise registered with the authorities as mentioned in the Govt. of India gazette Notification dated 26.03.2012 shall be exempted from payment of Cost of Tender Document and depositing Earnest Money for which copies of valid MSE's certificate along with the certificate of the authority as mentioned in the Govt. gazette with list of items registered must be submitted with tender.

10.0 <u>EVALUATION CRITERIA:-</u>

10.1 During evaluation of Part-II i.e. Price Part, provided that the bidder submits his offer following e-tender stipulations & specifications, **the overall lowest offer received** shall be considered for acceptance by the Trustees.

10.2 The MSE's registered with NSIC/ DIC shall not be eligible to get any benefit other than exemption from payment of EMD & cost of tender Document as per New Public Procurement Policy as notified by the Govt. of India, Ministry of Micro Small & Medium Enterprises (MSME) in the Gazette of India vide no. 503, dated 26.03.2012 as splitting of the work can not be done, it being a composite work.

11.0 ACCEPTANCE OF TENDER:-

11.1 Kolkata Port Trust reserves the right to accept / reject any / all offer(s) without assigning any reason thereof and also reserve the right to accept the tender in part or as a whole

11.2 Any attempt to exercise undue influence in the matter of acceptance of Tender is strictly prohibited and any Tenderer who resorts to this will render his tender liable to rejection.

11.3 The successful Tenderer will be notified in writing of the acceptance of his tender. The "Tenderer" then becomes the "Contractor" and he shall forthwith take steps to execute the Contract Agreement within six weeks of issue of Letter Of acceptance and fulfill all his obligations as required by the Contract.

11.4 Work experience, as a sub-contractor or supply contractor shall not be considered as the requisite qualification.

12.0 MISCELLANEOUS:

(i) Bidder shall submit his offer for complete scope of work, strictly in accordance with the tender documents. Any deviation from the tender documents and / or any incomplete tender shall not be considered.

(ii) The bidder shall not impose his own terms & conditions in his offer or quote his rates based on his own terms and conditions, such E-Tenderers are liable to rejection at the option of the Trustees without further reference to the bidder.

(iii) All materials shall have to be procured by the successful Bidder and shall be of the best and approved quality conforming to relevant specifications. The successful Bidder shall also arrange for the supply of all labour, tools and plants as stipulated in the Special Conditions of Contract, required for efficient execution of the work.

(iv) All measuring units are in Metric System and rates and sums in the tender are in Indian Currency. The language used throughout shall be in English.

(v) The Tender Documents with all the enclosures, appendices, Abstract Form of Tender and Form of Tender shall be required to be complete, duly filled in and signed and uploaded.

(vi) The Bidder shall give a declaration about the names of their relations employed in Kolkata Port Trust. It is not the intention to debar the Contractors from working if their relatives are working in Ko.P.T, but such a declaration is necessary in the interest of Trustees against any possible lapses.

****

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: **KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**

SPECIAL CONDITIONS OF CONTRACT

INDEX

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

1.0 GENERAL:

These provisions though given in a separate section are part of the tender documents which must be read as a whole, the various sections being complementary to one another and are to be taken as mutually explanatory. These provisions shall be read in conjunction with the other parts of the tender documents viz. General Conditions of Contract, Notice Inviting E-Tenderers, Instructions to Bidder, Technical Specifications, Drawings, Bill of Quantities and other documents forming part of the Contract. In case of any discrepancy or ambiguity in the documents, the order of precedence of the documents as stated below will apply. In particular, these provisions will over ride those in the General Conditions provided there is discrepancy between them.

2.0 CORRELATION AND ORDER OF PRECEDENCE OF TENDER DOCUMENTS:

If the stipulations in the various tender documents be found to be at variance in any respect, one will override others (but only to the extent these are at variance) in the order of precedence as given in the list below, i.e. any particular item in the list will take precedence over all those placed lower down in the list.

- Order letter.
- Bill of Quantities.
- Drawings.
- Technical Specifications of work.
- Special Conditions of Contract.
- General Conditions of Contract.

In case of any dispute, question or difference either during the execution of the work or any other time as to any matter or thing connected with or arising out of this Contract, the decision of the Sr. Dy. Manager IZ&R, (I&CF) Haldia Dock Complex, thereon shall be final and binding upon all parties.

3.0 SCOPE OF WORK:

The work to be performed under the present contract shall broadly be, but not be limited to the following :

OFF-SHORE STRUCTURES:-

i) Construction of vertical bored cast-in-situ concrete piles of the specified diameters for the substructure to the lines, levels for foundation of Approach Trestle, Service Platform, Breasting & Mooring Dolphins, Walkways and Escape route.

ii) Construction of cast-in-situ /precast reinforced concrete superstructure above the piles including Interconnecting Beams, Columns, Deck Slabs etc. for Service Platform, Approach Trestle, Breasting & Mooring Dolphins, Walkways and Escape route.

iii) Supply and installation of Fenders on Breasting Dolphins including fabrication and installation of structural fender supporting frames and necessary accessories.

iv) Supply, installation and commissioning of remote controlled quick release mooring hooks of the specified type and capacity on dolphins including control panels.

Executing all works incidental to the foregoing including necessary modifications as required, furnishing all materials, labour services of divers, plants and equipment temporary facilities, underwater work where necessary etc. for the same.

All the items of works as detailed above shall have to be carried out as per specification and as detailed in the "Bill of Quantities".

The scope of work also includes all other ancillary and appurtenant works as set forth in the attached Bill of Quantities in accordance with specifications for materials and workmanship as per this tender, relevant BIS codes, specifications as detailed in M.O.R.T.H Specifications and PWD, West Bengal's Schedule of Rates for Road & Bridge Works and Building Works (Latest editions).

3.1 WORKING METHODOLOGY:

Construction of piles, Chipping of pile top, Placing of pile muff, precast beams and concreting of column above piles are described as follows.
Liner is to driven up to mean high water level (+) 5.01 m CD. Bracing to be provided in the liner at pile cut-off level.
The pile concreting upto pile cut-off level and overflow concrete of 200 mm above the pile cut-off level to be manually observed from the top of liner and also from theoretical calculation of concrete poured.
Precast pile muff shall be transported during high tide, placing and in-situ concrete of pile muff above P.C.L shall be done at low tide.
Placing of intermediate beam shall also be done during low tide. Shuttering for column - beam junction/column in-situ concrete shall be done between low and high tide and concreting can be done subsequently between low and high tide.
The liner cost from pile cut-off level to mean high water level shall be borne by the contractor.

4.0 LOCATION:

The location of the proposed Jetty is on the river Hooghly in the waterfront between the lead-in jetty and second oil jetty at the North side of the Lock entrance for the Haldia Dock Complex at Latitude 22^0 01' 39.1" N and Longitude 88^0 05' 29.8" E. There is a water frontage of about 565 m between the eastern end of the lead-in jetty and outermost western mooring dolphin of the second oil jetty.

The existing bed level near the Berthing line is around (-) 8.0 m with respect to chart datum. The area in front of the berth may be dredged later to the required draft. The tenderer shall note that the dredging in front of the berth does not form a part of this contract. However, he has to coordinate part of his work with the dredging works.

5.0 ACCESS TO THE SITE:

(a) By Road:
All-weather hard top road approachable from N.H. 41 and State Highway exist right up to the area of work.

(b) By Rail:
S. E. Railway Branch Line connects Haldia with the Panskura Railway Station.

6.0 INSPECTION OF SITE:

The Bidder shall inspect the site of work and thoroughly familiarise himself with the nature of work, site conditions, and access to the site and location before submission of the tender. He should contact the Sr. Dy. Manager IZ&R, (I&CF), Haldia dock Complex at his office at Chiranjibpur, Haldia for collecting information about the site before submission of the tender. No excuse will be entertained afterwards on the above ground. In case any part of the site cannot be handed over to the successful Bidder in time, no compensation for loss of labour or any other cause nor any claim will be entertained by the Trustees. Suitable extension of time shall, however, be granted to the successful Bidder on that ground if applied for.

7.0 SITE FEATURES & OPERATIONS:

The off-shore work is to be carried out on the river in the estuarine region of the River Hooghly where strong tidal currents prevail and there is substantial tidal fluctuation in water level.

The work shall have to be executed by the successful bidder without hampering normal operational activities in the area. The working hours may have to be adjusted as the situation demands. No claim for idle labour on this account shall be entertained.

During execution of the work, proper care should be taken to provide adequate protection to the existing structures, cables (electrical / telephone / computer etc), fresh water and fire pipelines etc. and other installations against any damage at the contractor's risk and expense. Careful manual excavation will have to be carried out in places where service lines have been laid to avoid any damage.

Any damage caused to the existing pavement / structures/facilities/service lines or defect arising during construction shall have to be made good / rectified forthwith as directed to the satisfaction of the Engineer. Care should be taken during transportation of materials and execution of work so as not to impede the smooth traffic flow and normal operations in adjoining areas.
The work is of urgent nature and the completion time should be strictly adhered to and the contractor shall be required to mobilize sufficient manpower & machinery for achieving the same.

Further, if so required by the Engineer in the interests of normal working of the port, it is found necessary to shift / suspend some construction activity for some duration, this shall be done in compliance with the instructions of the Engineer, without any additional cost.

The tenderers shall have to assess the impact of hindrance to the different activities of the work which may likely to occur during execution of the job due to various factors including those of shipping and other operational activities in the areas and also as stated above. They shall have to plan the work in such a way so that all the activities of the job can be continued after taking care of the above hindrances effectively round the clock even on Sundays and holidays in order to complete the job within scheduled time frame as mentioned below. The tenderers shall consider the above points while quoting their rates.

a) Hydrological:

Tides in the Hooghly estuary are semidiurnal with a periodicity of 12 hrs.24 min. Tides exhibit seasonal variation in monsoon and summer seasons. Tidal ranges are about 5 Mtr at springs and 2.2 Mtr. at neaps at Haldia with a time lag of about 1 hour with reference to tides at Sagar on the seaward face. Maximum currents of the order of 3-3.5 Mtr/Sec. occur in the deep channels in spring tides/Freshets. The currents vary with channel morphology, tides and upland discharge.

The tide levels of river Hoogly at Haldia are as follows:

Highest High Water (HHW)	**:** (+) 7.26 m CD
Mean High Water Spring (MHWS)	**:** (+) 5.70 m CD
Mean High Water (MHW)	**:** (+) 5.01 m CD
Mean High Water Neaps (MHWN)	**:** (+) 4.26 m CD
Local Mean Water Level (LMWL)	**:** (+) 3.23 m CD
Mean Low Water Neaps (MLWN)	**:** (+) 2.10 m CD
Mean Low Water (MLW)	**:** (+) 1.34 m CD
Mean Low Water Springs (MLWS)	**:** (+) 0.80 m CD
Lowest Low Water (LLW)	**:** (-) 0.07 m CD

For further detailed information on tides, the 'TIDE TABLES' FOR THE HOOGHLY RIVER', available from the Director of Marine Department. K.O.P.T. may be consulted to note the tidal variations.

b) Rainfall:

This region is mainly exposed to southwest monsoon from June to September and an average monthly rainfall of over 250mm is experienced (July and August are the wettest months having monthly rainfall as high as 400mm). During northwest monsoon from November to February, monthly average rainfall of less than 50mm is experienced. The average annual rainfall is around 1500mm and the average number of rainy days in a year with rainfall of 25mm or more is about 20.

c) Temperature:

At Haldia, there is a seasonal variation in the temperature. April and May are hotter month, whereas December and January are colder months. The highest temperature so far recorded is 44.9^0 C during the month of May in 1975 and the lowest temperature is 6.9^0 C recorded during the month of December 1975. Design range of effective temperature is ± 25^0 C

d) Visibility:

It is learnt that visibility at Haldia is better compared to that at Kolkata, as the area is free from industrial smoke. At times due to heavy rainfall poor visibility is reported during the southwest monsoon. On an average, fog is reported on 5-7 days in each month from November to February during mornings.

e) Relative Humidity:

Maximum Relative Humidity of 90% occurs in August. In March, it is about 75%. The average relative humidity during the year normally stays within the range 55% – 90%.

f) Wind and Cyclone:

From November to January, the pre-dominant wind directions are between NE and N. between March and September, SW winds are pre-dominant. In other months, wind directions are naturally transitional. Wind speeds normally do not exceed 15 KM/hr during October to January. During March to May the wind speed normally does not exceed 80 km/hr. The highest wind speed recorded during severe Cyclone in September 1972 was 204 km/hr.

g) Sub Soil Data:

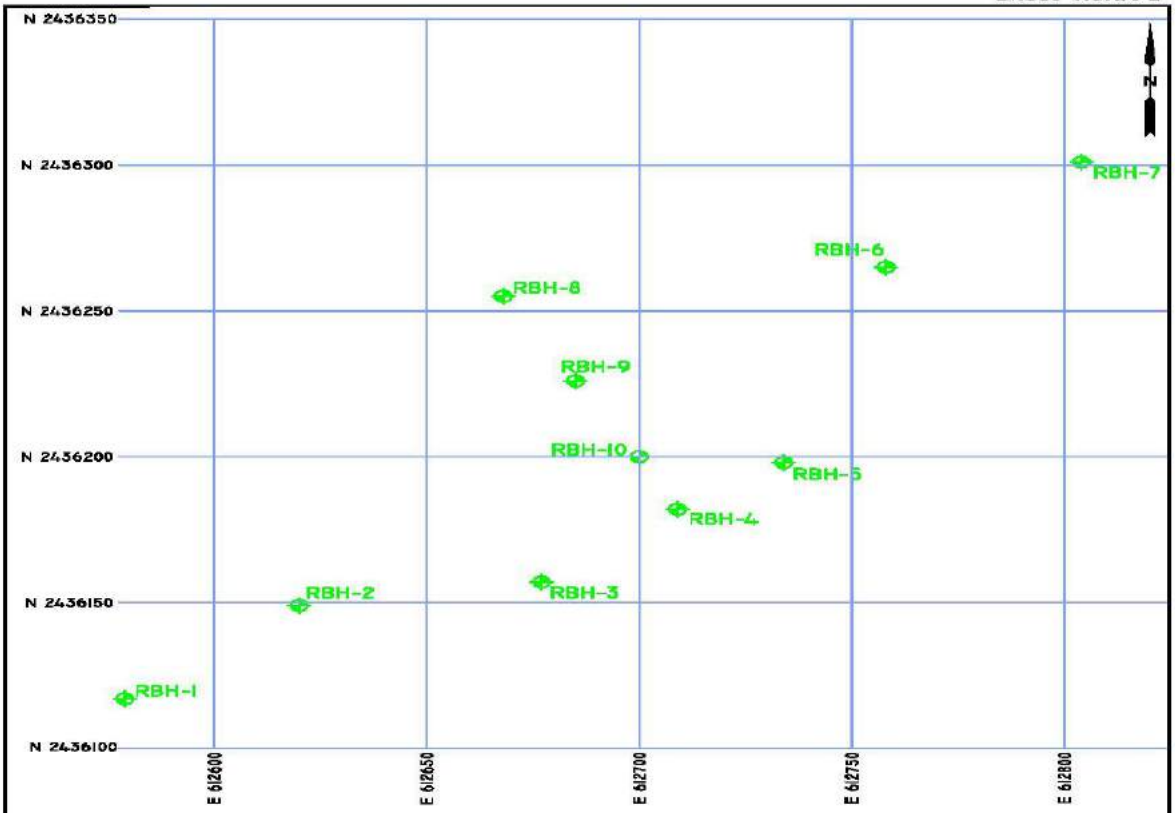
Sub-soil investigations were carried out in year 2017 and the location of bore holes in the vicinity of the berth are shown below. Bore logs investigations data are given below.

The information on the subsoil is given only for the information of the contractor. **The tenderers are advised to study the soil investigation reports and borehole data available at the office of the Sr. Dy. Manager (IZ&R), I&CF Division, Haldia Dock Complex, Kolkata Port Trust, with prior permission.**

The sub-soil formation in the river adjacent to the Project site has been investigated by sinking ten bore holes upto a depth of 40m below the existing bed level. The location of the boreholes is shown in the following figure:

[SC-5]

Sheet No.:A-1



Details of Bore Holes				
Sl.	BH No.	Northing	Easting	R.L.
1	RBH-1	2436117.0	612579.0	(-)6.8
2	RBH-2	2436149.0	612620.0	(-)7.2
3	RBH-3	2436157.0	612677.0	(-)6.8
4	RBH-4	2436182.0	612709.0	(-)7.5
5	RBH-5	2436198.0	612734.0	(-)8.0
6	RBH-6	2436265.0	612758.0	(-)6.2
7	RBH-7	2436301.0	612804.0	(-)5.9
8	RBH-8	2436255.0	612668.0	(-)4.3
9	RBH-9	2436226.0	612685.0	(-)5.4
10	RBH-10	2436200.0	612700.0	(-)7.5

Notes :-

1. All dimensions are in metre,unless otherwise mentioned.
2. Co-ordinate of Bore Holes are supplied by the client.
3. Reduced Level of bore holes are carried from the temporary bench mark supplied by the client.

Bore Hole Location Plan on River Hooghly in between 2nd Oil Jetty and lead-in-Jetty in connection with construction of outer Terminal - II inside Haldia Dock Complex, Haldia

CONSTELL CONSULTANTS PVT. LTD. KOLKATA	Job No.: CCPL/16121064	Scale: 1:1500	Figure No.: A/1

[SC-6]

The field investigation data and the results of laboratory test conducted on samples collected from the bore holes indicate the presence of different layers. The details of layers viz. layer no., description of layer and the thickness of each layer as encountered in the bore holes are furnished below.

Layer No.	Description	Layer Thickness (m)				
		RBH-1	RBH-2	RBH-3	RBH-4	RBH-5
—	Bed materials consisting of sandy silty clay / sandy clayey silt / silty sand etc.	–	1.50	3.00	–	–
I	Very soft / soft / firm silty clay with traces of semi-decomposed / decomposed wood	6.00	4.50	3.00	4.00	4.00
II	Firm / stiff silty clay with varying percentage of sand	6.00	5.00	5.00	6.00	4.50
III	Medium dense / dense silty fine sand	13.50	14.50	15.50	15.50	16.50
IV	Stiff / very stiff silty clay with occasional laminations of silt	7.00	6.00	4.50	5.50	4.00
V	Medium dense / dense clayey sandy silt / silty fine sand	8.05	8.60	9.42	9.08	11.50

Layer No.	Description	Layer Thickness (m)				
		RBH-6	RBH-7	RBH-8	RBH-9	RBH-10
—	Bed materials consisting of sandy silty clay / sandy clayey silt / silty sand etc.	1.50	4.00	4.00	2.00	1.00
I	Very soft / soft / firm silty clay with traces of semi-decomposed / decomposed wood	3.00	6.50	5.00	5.00	4.00
II	Firm / stiff silty clay with varying percentage of sand	4.50	16.50	4.00	4.00	4.00
III	Medium dense / dense silty fine sand	16.50	4.50	15.50	15.50	16.50
IV	Stiff / very stiff silty clay with occasional laminations of silt	4.00	-	4.50	5.20	4.00
V	Medium dense / dense clayey sandy silt / silty fine sand	10.75	8.90	7.10	8.40	10.80

Note: The description of layers is very much generalized. For detail description refer respective bore hole logs.

8.0 PARTICULARS OF EXISTING WORKS:

Such information as maybe given in the specification as to the existing features and works other than those now under construction as part of the present Haldia Dock Complex given without warranty of accuracy and neither the Trustees nor the Engineer will be liable for any discrepancies therein.

9.0 DRAWINGS:

Tender drawings are for providing an indication of the nature and extent of the work and are tentative. The actual work will have to be executed without any reservations at accepted rates as per final detailed drawings, which would be made available by the Engineer at an appropriate time.

The Engineer can modify the drawings at any time during the contract period for successful completion of the work. Working drawings as and when necessary, shall be provided by the Contractor and got approved by the Engineer.

10.0 SETTING OUT WORKS AND INITIAL MEASUREMENTS:

The Engineer shall provide the initial references and a benchmark for the setting out of the work. It will be the Contractor's responsibility to set out the works accurately and get them checked by the Engineer.

The Contractor shall provide at his own expense all necessary instruments, staff and labourers for the checking of the survey.

The Contractor shall be responsible for the true setting out of the Works, and for the correctness of all dimensions, levels, lines, positions and alignment. Any error in any of the dimensions, levels, lines, positions and alignment found in any part of the Works shall be rectified by the Contractor at his own cost. Checking by the Engineer at any stage shall not absolve the Contractor from any responsibility for proper setting out and construction of the Works to correct levels, lines, positions and alignment.

Before commencement of the work, the Contractor shall take initial measurements and spot levels at intervals as ordered by the Engineer and after verification by the Engineer, these records shall be signed by the Contractor and serve as the initial record for earthwork measurements. The Contractor shall give the Engineer or his representative at least 24 hours prior notice in writing of the time when any part of the setting out of the works will be ready for checking.

11.0 TIME OF COMPLETION:

The work is urgent in nature and must be commenced immediately on receipt of the work order and to be completed in all respects within **24 (Twenty-four) months** including preliminary time from the date of placement of work order.

12.0 MAINTENANCE PERIOD:

The Contractor shall maintain the works allotted to him as per Clause 9.0 of the General Conditions of Contract for a period of **1 (One) year** from the date of completion as certified by the Engineer or his representative in Form G.C-1.

13.0 PERFORMANCE GUARANTEE:

As an alternative to the deduction of Security Deposit from progressive bills, the Contractor, if he so desires, can submit to the Engineer, a Performance Bond as per Cl. 3.6 of General Conditions of Contract in the form of an irrevocable guarantee from Kolkata / Haldia Branch of any Nationalised Bank or Scheduled Bank of India in the proforma attached to the General Conditions of Contract and for a sum computed according to Cl. 3.4(g) of the General Conditions of Contract.

The Bank Guarantee for the Performance Bond shall remain valid till 30 (thirty) days after completion of maintenance period specified in the tender or any extension thereto as would be informed by the Engineer. On acceptance of Performance Bond, the Earnest Money deposit will be refunded to the successful bidder.

The submission of the Performance Guarantee shall be at the expense of the contractor in all respects.

In case Bank Guarantee is issued for a branch outside Haldia/ Kolkata, the same should be counter-guaranteed and payable by the Branch of the same bank situated at Haldia/ Kolkata.

Performance Guarantee will be discharged and released to the Contractor after the elapse of thirty days after the issue of certificate of final completion in terms of General Conditions of Contract. Provided always that if the Contractor has still to execute any works as provided in the GCC, and/or if some dues are recoverable from the Contractor, the Employer reserves the right to withhold discharge of the performance guarantee until thirty days after the completion of all these.

14.0 TEMPORARY OR ENABLING WORK:

The Contractor shall submit to the Engineer for his approval not less than 28 days before commencement or erection of any part of Temporary Works, drawings and detailed proposals for the method of construction of temporary works such as office, store, and temporary platforms, pre-casting yard, workshop etc. which he intends to construct for the execution of the contract and no such work shall be constructed before obtaining the written approval of the Engineer. The Contractor shall also submit his calculations relating to the design of temporary works, strength etc., if required by the Engineer and shall carry out the modifications that the Engineer may require of such temporary works at Contractor's own cost. As with the permanent works, the Contractor shall take all precautions while carrying out the temporary works and shall abide by regulations of all statutory authorities. Notwithstanding approval by the Engineer, the Contractor shall be solely responsible for the safety and proper execution of the temporary work and all related permanent work. The Contractor at his own cost shall repair any damage occurring to part or whole of the permanent work due to any failure of the temporary works. These provisions will apply to all enabling works also. The contractor shall obtain permission for any Temporary Works and would ensure that during execution of works the statutory requirements of the concerned authorities such as Kolkata Port Trust, Police, Customs, etc. would be complied with.

15.0 CONTRACTOR'S SITE OFFICE, STORE SHEDS ETC:

On an application from the Contractor, land near to the site of work will be allotted by the Trustees for the construction of Site Office, Store etc. For such allotment a rent of Rs.10.00 per annum or part thereof will be recovered from Contractor's bill. The Contractor shall hand over vacant possession of the land free from all encumbrances within two months from actual date of completion of work (as stated in G.C.-I). In case the contractor does not remove the site offices, store etc. within two months from the actual date of completion, the contractor will have to pay compensation equivalent to **three times** the applicable licence fee for the plot of land allotted to him temporarily for site offices, store etc. as per Schedule of Rent of Ko.PT's land and buildings at Haldia and to be recovered from his final bill / Security Deposit. The Contractor shall build office, sheds etc. on the land allotted to him as approved by the Engineer or his representative and shall maintain a clean hygienic condition throughout the period of their use.

The Contractor shall maintain a Site Order Book at his site office and all orders and instructions issued to him from time to time by the Engineer or his representative will be recorded in the Site Order Book. The Contractor shall promptly sign each entry as a token of having received such orders.

The Contractor shall maintain a Site Order Book at his site office and all orders and instructions issued to him from time to time by the Engineer or his representative will be recorded in the Site Order Book. The Contractor shall promptly sign each entry as a token of having received such orders.

16.0 KEEPING THE SITE AND WORKING AREA CLEAR:

The Contractor shall at all times keep the site and working areas free from all surplus materials, rubbish and offensive matter all of which shall be disposed off in a manner to be approved by the Engineer's Representative. As the works will be carried out mainly inside of operational buildings of HDC, the Contractor has to makenecessary arrangement to clear the rubbishes etc. from the buildings, at the end of day's work at his own cost & risk.

17.0 SUPPLY OF MATERIALS BY THE CONTRACTOR:

It will be the responsibility of the contractor to make timely procurement of all materials for both temporary and permanent works required in accordance with the Bill of Quantities or for any extra/additional work required as per the directions of the Engineer. The contractor shall procure Cement, Aggregates, Reinforcement Steel, Bricks etc. only from manufacturers approved by the Engineer.
The contractor will be allowed to take away surplus materials on completion of the work, subject to Engineer's verification of contractor's records of entry and consumption of materials in the works.

18.0 TESTING OF MATERIALS & EQUIPMENT:

The contractor shall provide at his own cost all necessary equipment and all necessary facilities for such testing which by the nature of work will have to be done at site.

Equipment will be in the nature of sufficient number of slump cones, standard metal moulds for concrete test cubes / beams, sets of standard IS sieves, weighing balance, graduated measuring cylinders, etc.

These are only indicative and it may be noted that equipment are to be provided and testing carried out as per direction of Engineer without any reservation and at the cost and expense of the contractor.

Any other testing of materials or workmanship desired by the Engineer shall be carried out by the contractor at his cost from National Test House or any other Government registered laboratory or Institutional Laboratory as approved by the Engineer. The testing charges and all other incidental charges like packaging and transporting the test samples etc. shall have to be borne by the contractor and must be included in the rates.

19.0 PROGRAMME OF WORK AND PROGRESS REPORT:

The contractor shall suitably schedule various activities required for completion of the work and shall submit detailed programme of work in writing in the form of a Bar / PERT Chart before commencement of the work.

If desired by the Engineer, the contractor, during execution of the work, shall submit on the first day of each month the progress report of the work in a manner as directed, showing therein corrective measures to be taken to make up the backlog, if there be any.

20.0 PROGRESS PHOTOGRAPHS & VIDEO RECORDS :

The contractor shall supply to the Engineer suitable negative and four prints of progress photographs, suitably inscribed, of an approximate size 165 mm x 115 mm of such portions of the work in progress as well as of completed work as the Engineer may direct. Progress photographs shall be required every month, unless otherwise directed by the Engineer. The negatives of the photographs shall become the property of the Board of Trustees and no prints from the negatives may be supplied to any person or persons without the authorisation of the Engineer. Approximately 60 copies of photographs will be chosen by HDC from a minimum of 140 nos. original photographs.

The contractor shall also supply to the Engineer edited colour progress video films with sound and narration in English of various phases of such portion of the work in progress and completed work as the Engineer may direct so as to have a coherent record of the construction from start to completion. The video films will be recorded on digital video discs or compact discs which shall become the property of the Board of Trustees and no copies of the above films shall be supplied to any person or persons without the permission of the Engineer. Duration of the video film records after editing shall be minimum 30 minutes.

Cost of such photography/ video filming and ancillary works shall be borne by the contractor and no extra payment will be allowed.

21.0 SAFETY:

The contractor shall adhere to safe construction practice, guard against hazardous and unsafe working conditions and follow all safety precautions for prevention of injury or accidents and safeguarding life and property. The contractor shall comply with relevant provisions of Dock Workers (Safety, Health and Welfare) Act – 1986 and Dock Workers (Safety, Health and Welfare) Regulation – 1990 and Safety

Officer of the Trustees or Safety Inspectors shall be afforded all facilities for inspection of the works, tools, plant, machineries, equipments etc. wherever so required. The contractor shall further comply with any instruction issued by the Engineer, Trustees' Safety Officer, Safety Inspector in regards to safety which may relate to temporary, enabling or permanent works, working of tools, plants, machineries, equipments, means of access or any other aspect.

The contractor shall provide all necessary first aid measures, rescue and life saving equipment to be available in proper condition.

The contractor shall provide PPE's (Personal Protective Equipments) such as, helmet, safety shoe etc. to all workers and shall also provide job specific PPE's e.g. safety belts for working at heights; protective face and eye shield, goggles, hand gloves for welding / gas cutting works; protective foot wear and gloves for hot works; facemasks, gloves and overalls for painting works, mixing and handling materials etc , as directed by the Engineer.

All safety rules shall be strictly followed while working on live electrical systems or installations as stipulated in the relevant safety codes.

During work on the river and at the waterfront, the areas of work must be clearly marked with red flags and prominent red lamps (at night) to prevent any danger to workmen engaged at site or to ships berthing at the Jetties.

During work at night, the Contractor shall deploy halogen lamps/ other electrical lamps at the required spots to ensure there is adequate illumination for hazard-free work.

Before allowing workers in sewers, manholes, any duct or covered channel etc, the manhole covers shall have to be kept open and ventilated at least one hour in advance and necessary safety torches / lamps should be inserted first before allowing entry to the worker. Suitable hand gloves and other safety gear will be provided to the worker during handling / removing of slushes / sludge etc. without any extra cost.

The contractor shall adopt all the above safety measures at his own cost.

The successful bidder shall also ensure that –

(i) No damage is caused to plants and vegetations unless the same is required for execution of the project proper.

(ii) The work shall not pollute any source of water / land / air surrounding the work site so as to affect adversely the quality or appearance thereof or cause injury or death to animal and plant life.

(iii) His office & labour hutment etc. shall be maintained in a clean and hygienic condition throughout the period of their use and different effluents of the labour hutment shall have to be disposed off suitably.

22.0 INSURANCE OF WORKS :

The Contractor shall insure in the joint names of the Employer and the Contractor against all loss or damage from whatever cause the whole of the works for which the Contractor is responsible under the terms of the contract and in such manner that the Employer and Contractor are covered for the period from the commencement of the works until the date stipulated in the Certificate of Completion for the whole of the works and are also covered during the period of maintenance for loss or damage arising from a cause occurring prior to the commencement of the period of maintenance for loss or damage occasioned by the Contractor in the course of any operations carried out by him.

22.1 THIRD PARTY INSURANCE

Before commencing the execution of the works the Contractor, but without limiting his obligations and responsibilities under Clause 4.16 of GCC, shall insure against his liability for any material or physical damage, loss or injury which may occur to any property, including that of the Employer, or to any person, including any employee of the Employer, by or arising out of the execution of the works or in the carrying out of the Contract.

22.2 MINIMUM AMOUNT OF THIRD PARTY INSURANCE

Such insurance shall be effected with an insurer and in terms approved by the Employer, which approval shall not be unreasonably withheld and for at least Rs 15,00,000/- per insurance with number of occurrences unlimited. The Contractor shall, whenever required, produce to the Engineer or the Engineer's Representative the policy or policies of insurance and the receipts for payment of the current premium.

Without limiting his responsibilities under clause no 4.16 and 4.13 of the "General Conditions of Contract ", the contractor shall insure in the joint name of the Employer and the contractor against all loses.

22.3 PROVISION TO INDEMNIFY EMPLOYER

The terms shall include a provision whereby, in the event of any claim in respect of which the contractor would be entitled to receive indemnity under the policy being brought or made against the Employer, the insurer will indemnify the Employer against such claims and any costs, charges and expenses in respect thereof.

22.4 ACCIDENTS OR INJURY TO WORKMEN

The Employer shall not be liable for any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the Contractor or any sub-contractor. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

22.5 INSURANCE AGAINST ACCIDENT ETC. TO WORKMEN

The Contractor shall insure against such liability with an insurer approved by the Employer, which approval shall not be unreasonably withheld, and shall continue such insurance during the whole of the time that any person is employed by him on the works and shall, when required, produce to the Engineer or the Engineer's Representative such policy of insurance and the receipts for payment of the current premium. Provided always that, in respect of any person employed by any sub-contractor, the Contractor's obligation to insure as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that the Employer is indemnified under the policy, but the Contractor shall required such sub-contractor to produce to the Engineer or the Engineer's Representative, when required, such policy of insurance and the receipt for the payment of the current premium.

22.6 NOTIFICATION TO INSURERS

It shall be the duty of the Contractor to notify the insurers under any of the by the terms of such insurance are required to be notified and the Contractor shall indemnify and keep indemnified the Employer against all losses, claims, demands, proceedings, costs, charges and expenses whatsoever arising out of or resulting from any default by the Contractor in complying with the requirements of this sub-clause whether as a result of the avoidance of such insurance or otherwise.

22.7 ALL INSURANCES AT CONTRACTOR'S COST

The insurance referred to in clauses 22.0 to 22.6 hereof shall be entirely at the cost and expenses of the Contractor.

22.8 REMEDY ON CONTRACTOR'S FAILURE TO INSURE

If the Contractor shall fail to effect and keep in force the insurance referred to in clauses 22.1 to 22.6 hereof, the work shall not be commenced.

23.0 POWER SUPPLY:

If available and if required, suitable power supply may be arranged by the Trustees at the nearest existing supply point of the site of work on receipt of request letter from the Contractor to that effect. All necessary arrangements for the distribution at site will have to be made by the Contractor at his own cost as approved by the Trustees' Plant and Equipment Division.

Charges for consumption of power shall be periodically recovered from the Contractor's Bill at the rates of WBSEDCL as prevalent/ amended from time to time for Haldia region along with departmental overhead of 19.25% including installation and hire charges for meters. The Trustees do not guarantee uninterrupted power supply from the above sources and Contractor shall not be compensated for any delay in providing / irregularity of power supply. The Contractor shall have to arrange for the supply of power at his own cost during such periods.

24.0 WATER:

The Contractor will arrange for supply of water both for drinking and for construction purposes. However, on written request from the Contractor, if possible, water for drinking and for construction purposes may be made available from the exiting water line of the Trustees at a point near the site of work. The contractor will have to arrange for laying pipelines, as necessary, as per approval of the Engineer or his representative, for storing and distributing the same to the work point at his own cost.

For supply of water by Trustees to the Contractor, an amount equivalent to **1% (one percent)** of the gross bill value shall be progressively recovered from the running bill including final bill as applicable.

25.0 METHOD OF MEASUREMENT:

Unless otherwise specified in the Particular Specifications and Bill of Quantities, the work shall be measured according to the current P.W.D.'s (Building & Road) Schedule of Rates, Govt. of West Bengal. For details of measurement not covered by the above, S.P.-27 (latest edition) of B.I.S. shall be referred to.

26.0 PAYMENT

26.1 ON ACCOUNT PAYMENT:

On account payment to the Contractor shall be arranged as per following terms & conditions and in accordance with Clause 6.4 of the General Conditions of Contract.

(a) Monthly statements:

At the end of each month, the Contractor shall submit to the Engineer six copies of statements (each duly signed by the Contractor's representative) in format as approved by the Engineer from time to time, to be prepared and printed at the cost of the Contractor, showing the amounts to which the contractor considers himself to be entitled up to the end of the month in respect of
(i) The value of the Permanent Works executed.
(ii) Any other sum to which the contractor may be entitled under Contract.

(b) Monthly Payments:

On receipt of the monthly statement / bill supported by detailed measurement in prescribed format in six copies, the Engineer shall verify the same and if necessary, will advise the Contractor to amend the said monthly statement / bill and resubmit the same. After receiving such amended bill, the Engineer shall certify the amount

which he considers due and payable in respect there of after adjustment of all advances, if any, as per terms of Contract, charges against electricity, water supplied from KoPT sources etc. as applicable and will send it to General Manager (Finance), Haldia Dock Complex for payment to the Contractor.

Payments to the Contractor for works done and measured in terms of the provisions of clause shall normally be made at monthly intervals provided the value of works done since the previous payment is not less than 3% of the Sanctioned Tender Value (except 1st R/A bill & final bill, which may be of any amount). No interest shall be payable on unpaid amounts due to the Contractor.

Payment will be made by way of Account Transfer to the contractor's designated bank account through RTGS/NEFT. For this purpose, the contractor will have to indicate (i) name of bank (ii) branch name (iii) branch code and (iv) designated account number in the "Abstract Form Of Tender ". In case payment is made directly through bank, the contractor may be required to submit a pre-receipt as per instruction of HDC.

26.2 FINAL PAYMENT:

The contractor's final bill shall be passed for payment within three months after the issue of Taking over certificate by the Engineer provided the contractor has fully complied with the requirements under the contract. If the amount payable under any running bill is not sufficient to cover deductions to be made under the contract, the balance outstanding shall be paid by the contractor in cash within fifteen working days from the date of receipt of the written notice issued in this regard by the Engineer. The employer will not pay any interest on account of any delay in the payment to the Contractor under any point of time and Contractor can not prefer any claim on this account.

27.0 WATCHING OF MATERIALS:

The successful Bidder will have to arrange for proper security of all materials and tools brought by him. Although the working area is under the jurisdiction of C.I.S.F., the Contractor shall be fully responsible for any theft or damage of the materials. He may be allowed to post his Watchmen round –the-clock at the work-site with valid permit and prior intimation to CISF. No extra amount will, however, be paid separately for watching. The Contractor should quote his rates keeping this in view.

28.0 PLANT & EQUIPMENT:

The successful bidder shall supply all necessary tools, plants and equipments with fuel and operator required for successful execution of the work at his own cost.

29.0 VARIATION IN CONTRACT PRICE :

If the prices of materials and/or wages of labour required for execution of the work vary, the amount payable to the Contractor for the works shall be adjusted for such variation as per provisions detailed below :

1. The amount of the Contract shall accordingly be varied, subject to the condition that such adjustment for variation in prices shall be available only for the work done during stipulated period of the Contract.

2. For the portion of the work executed during the period for which the contract is validly extended under the provisions of Clause 8.1 of the General Conditions of Contract without any action under Clause 8.3, price adjustment will be made based on the relevant indices applicable for the last quarter/part of quarter of the original stipulated completion period of work.

3. The base Date for working out such variation shall be the last date on which tenders were stipulated to be received including any extension of time.

4. The cost of work on which variation shall be calculated shall be 85% of the cost of works as per bills, running or final. The cost of any extra/additional works other than scheduled BOQ items shall not be considered for this purpose.

5. The components of materials, labour, fuel etc. to be considered for the calculation of variation are pre-determined as below :

Item of Works of	**Percentage of Cost To Be Considered As**		
Section- A	MATERIAL COMPONENT	LABOUR COMPONENT	FUEL COMPONENT
Item Nos 1,3,4,14,15	0%	90%	10%
Item Nos 2,5,6,7,8,9,10,11,12,13	65%	25%	10%
Section- B	MATERIAL COMPONENT	LABOUR COMPONENT	FUEL COMPONENT
Item Nos 1,3,4	0%	90%	10%
Item Nos 2,5,6,7,8,9,10,11,12,13,14,15,16,17	65%	25%	10%
Section- C	MATERIAL COMPONENT	LABOUR COMPONENT	FUEL COMPONENT
Item No 1,3,4,16	0%	90%	10%
Item No 2,5,6,7,8,9,10,11,12,13,14,15	65%	25%	10%

Item of Works of	**Percentage of Cost To Be Considered As**		
Section- D	MATERIAL COMPONENT	LABOUR COMPONENT	FUEL COMPONENT
Item Nos 1,3,4,5	0%	90%	10%
Item Nos 2,6,7,8,9,10,11,12,13,14,15,16,17	65%	25%	10%
Section- E	MATERIAL COMPONENT	LABOUR COMPONENT	FUEL COMPONENT
Item No 1,3,4	0%	90%	10%
Item Nos 2,5,6,7,8,9,10,11,12	65%	25%	10%
Section- F	MATERIAL COMPONENT	LABOUR COMPONENT	FUEL COMPONENT
Item No 1,3,4	0%	90%	10%
Item Nos 2,5,6,7,8,9,10,11,12	65%	25%	10%

Any charge against supply of water and other materials supplied by the Employer would be deducted from the component of Materials so arrived, for application of the Price Adjustment under this account.

Formula for calculation of variation of prices:

A. Variation of Price of Materials :

The variation will be worked out as per formula given :
Vm = P x (MI-MO)/MO
Where Vm= Variation in material cost to be paid or adjusted;
P= Component of material worked out as per relevant provisions of 1 to 5 above;

MI = All India wholesale Price Index for all commodities as published by RBI as applicable in the quarter previous to the quarter for which escalation is calculated, excepting the first quarter in which, the indices for the months of the quarter itself would be considered.

MO = All India wholesale Price Index for all commodities as published by RBI as applicable on the last day fixed for the submission of tender.

B. Variation of Wages of Labour :

The Variation will be worked out as per formula given ;
VI = Q x (LI-LO)/LO

Where Vm = Variation in wages to be paid or adjusted ;

Q= Component of labour, worked out as per relevant provisions of 1 to 5 above;
LI = Minimum wages in Rupees of an unskilled adult male mazdoor as confirmed by the Labour Enforcement Officer (Central), Kharagpur in West Bengal vide Notification as issued from time to time for the area of work, applicable on the first day of the quarter for which escalation is calculated.

LO = Minimum wages in Rupees of an unskilled adult male mazdoor as confirmed by the Labour Enforcement Officer (Central), Kharagpur in West Bengal vide Notification as issued from time to time for the area of work as applicable on the last day fixed for the submission of tender.

C. Variation of prices of Fuel:

The variation will be worked out as per formula given :
Vf = R x (Fl – FO)/FO

Where Vf = Variation in Fuel Price to be paid or adjusted ;

R = Component of Fuel worked out as per relevant provisions of 1 to 5 above ;

Fl = Average index value of the whole sale price of group (fuel power light and lubricant) as published by RBI, applicable during the quarter for which escalation is calculated.

FO = Average index value of the whole sale price of group (fuel power light and lubricant) as published by RBI as applicable on the last day fixed for the submission of tender.

Principles to be followed for calculation of the Variation of prices:

a. Variation in prices of Materials and Fuel:

The adjustment for variation in prices of Materials and Fuel shall be worked out at quarterly intervals. The first adjustment for such variation shall be made at the end of three months, after (excluding) the month in which the tender is accepted and thereafter at three months interval up-to the time of completion of the work. The last period of payment may be less than three months depending upon the actual date of completion.

The indices of a quarter wherever specified would mean arithmetical average of the indices of the three months to be considered as per provisions above.

b. Variation in wages :

The variation of wages shall be paid at the same quarterly interval of variation due to increase/decrease in cost of materials and Fuel. If the variation takes place during any such quarterly interval the variation shall be payable for work done in all quarter subsequent to the quarter in which revision of wages takes place.

The minimum wage of an unskilled Male Mazdoor mentioned in above, shall mean the rate of minimum wages of unskilled Male Mazdoor notified by the Labour Enforcement Officer (Central), Kharagpur in West Bengal vide Notification as issued from time to time for the area of work relevant for the Haldia area.

Irrespective for variation in minimum wages of any category of labour, for the purpose of this clause, the variation in the rates for an unskilled adult Male Mazdoor alone shall form the basis for working out the escalation compensation payable on the labour component.

In the event of the price of materials, POL and/or wages of labour required for execution of the work decrease/s there shall be downward adjustment of the cost of work so that such price of materials, POL and / or wages of labour shall be deductible from the cost of Work under this Contract and in this regard the formula herein before stated under this Clause shall mutatis mutandis apply provided that the Engineer shall otherwise be entitled to lay down the principles on which the provision of this sub clause shall be implemented from time to time and the decision of the Engineer in this behalf shall be final and binding.

30A. CONTRACT LABOUR LAWS:

The Contractor must comply with the provisions of Contract labour (Regulation & Abolition) Act 1970 and Contract Labour (Regulation & Abolition) Central Rules 1971 and the rules framed there under with all modifications/amendments being enforced from time to time.

The Contractor shall indicate maximum number of workmen to be engaged on any day for execution of the work in the appropriate place in the ABSTRACT FORM OF TENDER & he shall have to obtain a regular /permanent license as per sec12(1) of the Contract Labour Act.

Further , whenever a contract work has commenced or completed , the contractor has to intimate the same to the Assistant Labour Commissioner(Central) /labour Enforcement Officer (Central) in Form IV-A , within 15 days of such commencement or completion.

The contractor has to obtain a certificate of registration under "Building & Other Construction Workers (Regulation Of Employment & Conditions Of Service) Act-1996 and Central Rule 1998 and his rate shall include a cess payable @ 1 % of the cost of construction as applicable under "Building & Other Construction Workers Welfare Cess Act -1996 & Welfare Cess Rules 1998.

The contractor has to arrange for displaying the name of the Regional Labour Commissioner (Central) , Asst. Labour Commissioner (Central) & Labour Enforcement Officer (Central) at his worksite(s).

The contractor shall inform the Principal Employer the date, time & venue of disbursement to be made by him to his workers.

The successful bidder shall also be required to put up a notice at the site of work mentioning the date, time & venue of disbursement to be made by him to his workers and he or his authorized representative shall have to be present during period of disbursement.

30 B. COMPLIANCE WITH EPF & M P ACT:

The successful contractor will have to comply with provision of EPF & MP Act –1952 (along with amendments, if any), issued from time to time.

If asked for by the Employer, the contractor will be required to submit photocopy of all payment challans and produce the original for verification to the representative of the principal employer, i.e. Sr. Dy. Manager IZ&R, (I&CF)

30 C. COMPLIANCE WITH ESI ACT:

If applicable , the successful bidder will have to comply with provisions of "Employers State Insurance Act –1948", along with amendments (if any) issued from time to time. He shall obtain ESI registration and shall deduct employees' contribution as applicable percentage of the wages of each of the employees' and shall deposit the same together with employer's contribution as applicable percentage of such total wages payable to the employees or at such rates as fixed by the competent authority from time to time.

In case, where an employee is not covered under ESIC Scheme (or contribution not paid for him regularly) and meet an accident during and arising out of his employment, the contractor being the immediate employer, shall be liable to pay him suitable compensation.

The contractor will be required to submit Photo copies of all payment challans and produce the original for verification to the representative of the principal employer, i.e. Sr. Dy. Manager IZ&R, (I&CF).

30 D. INDEMNIFICATIONS:

The successful bidder shall be deemed to indemnify and keep indemnified the Trustees from and against all actions, claims, demands and liabilities whatsoever under and in respect of the breach of any of the provisions of any law, rules or regulations having the force of law, including but not limited to –

a) The Minimum Wages Act, 1948.
b) The Dock Workers (Regulation Of Employment) Act, 1948
c) The Building And Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996
d) The Dock Workers' Safety, Health & Welfare Act , 1986
e) The Payment of Wages Act, 1936.
f) The Workmen's Compensation Act, 1923.
g) The Employees Provident Fund Act, 1952.
h) The Contract Labour (Regulation and Abolition) Act, 1970; Rules 1971.
i) The Payment of Bonus Act, 1965.
j) The Payment of Gratuity Act, 1972.
k) The Equal Remuneration Act, 1976.
l) The Employees State Insurance Act, 1948 & Employees State Insurance (Amendment) Act ,1989
m) Child Labour (Prohibition and Regulation) Act, 1986.
n) The Maternity Benefits Act 1961
o) Interstate Migrant Workmen (Regulation Of Employment & Conditions Of Service) Act, 1979.
p) Motor Vehicle Act, latest revision.

31.0 CUSTOMS AND SECURITY REQUIREMENTS:

The Haldia Dock area is a custom bonded area and as such the Contractor shall comply with all regulations of the Port and Customs authorities extent and those that may be imposed from time to time in respect of the transit of all Contractor's plant, vehicles, materials and staff in the area.

The contractor shall fence the area that may be allotted to him inside the "Bonded area" of the Port for stores and other requirements with closely boarded C.G.I. sheets fixed to a suitable framework, to the full satisfaction of the Port and Security authorities.

The Contractor shall abide by all the regulations and rules of Kolkata Port Trust applicable to the Haldia Dock Complex, as extant or as may be amended.

32.0 PERMIT:

Entry Permits may be necessary for the workmen and for the movement of transport vehicles for this work. In the interest of work, necessary entry Permits will be issued on chargeable basis by the Trustee's for the workmen, vehicles /lorries/trucks etc. for entering into the Dock area for execution of work / testing of materials at the departmental laboratory, against application as per prescribed proforma by the contractor, after the same is examined and approved by the Engineer. The entry permit will be issued as per requirement following latest Permit Scheme of Haldia Dock Complex. All existing rules, including any amendments thereto, in future, will have to be complied with by the contractor.

33.0 FORCE MAJEURE:

In the event of either party rendered unable by Force Majeure to perform any obligation required to be performed by them under the Contract, relevant obligation of the party affected by such Force Majeure shall upon notification to the other party be suspended for the period which Force Majeure events lasts. The cost and loss sustained by the either party shall be borne by the respective parties.

The term "Force Majeure" as employed shall mean the events as below :

(i) riot (unless solely restricted to or perpetuated by employees of the Contractor or his subcontractors / suppliers or occurring outside India) so far as it is uninsurable;

(ii) war, hostilities (whether war be declared or not), invasion, directed to or by India or act of foreign enemies, directed to India;

(iii) rebellion, revolutions, insurrection, or military or usurped power, or civil war in India;

(iv) Fire , flood , cyclone , hurricane and acts of God.

Time of performance shall be extended by the period of delay, which is directly caused by the Force Majeure. Upon the occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid shall notify the other party in writing immediately but not later than forty eight hours of the alleged beginning and ending thereof, giving full particulars and satisfactory evidence in support of his claim.

Time of performance of the relative obligation suspended by the Force Majeure shall stand extended by the period for which such event lasts and affects the relative obligation directly. Such extension of time shall be without prejudice to the provision that time is essence of the Contract and any other terms and conditions related to time of completion as may provided elsewhere in the Contract.

If the work is affected by Force Majeure lasting for more than 60 days at a stretch, the parties to the Contract shall settle the issue mutually.

34.0 SETTLEMENT OF DISPUTES :

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with or arising out of the contract or the execution of the works, the same shall be dealt as per relevant provisions of the General Conditions of Contract and THE ARBITRATION AND CONCILIATION (AMENDMENT) ACT, 2015 and any statutory amendment thereof.

35.0 TAXES:

The quoted rates should include all other taxes, duties etc. excluding GST. GST, as applicable, shall be paid extra against proper invoice submitted by the contractor.

The contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable KoPT to get due credit against GST paid.

In case of any failure on the above account, GST amount even if paid by KOPT shall be recoverable from the contractor.

36.0 THIRD PARTY INSPECTION:

Inspection and testing of Fenders and other materials as decided by the engineer according to applicable standards / specifications shall be carried out at the manufacturer's workshop and/or laboratories of the TPIA and/or at other laboratories approved by the Engineer by statutory inspection Authorities i.e Third Party Inspecting Agency **(TPIA)** approved by the Engineer and by the Engineer's representative. The Third Party Inspecting Agency (**TPIA**) will be appointed by HDC and payment to the TPIA will also be made by HDC. **The bidder shall include all other inspection related costs including testing charges and expenses in his rates and the contractor shall not be paid any additional amount in this regard.**

Notwithstanding the inspection and passing of materials by the approved TPIA/Engineer's representative, any material found at the time of delivery to be defective in quality and not conforming to the relevant specifications due to any reason whatsoever, shall be liable to rejection and the supplier shall replace the same at his own cost and arrangement at the earliest.

37.0 PROVISIONS FOR SITE STAFF OF ENGINEER:-

After the issue of Engineer's notice to commence, the contractor shall as soon as possible make available of the following facilities for the staff of the Engineer at the Site of Work, all in accordance with the approval of the Engineer or his Representative and the Contract Price shall be deemed to be inclusive of the provision for all these facilities.

(a) Office Facilities :- Throughout the period of Contract, office accommodation at site for two rooms with electricity and water supply and adequate ventilation for the sole use of Engineer's Representative and his staff. The room shall be provided and maintained with suitable furniture, peon facility as directed by the Engineer. An independent toilet facility shall have to be provided solely for the use of the client.

(b) Equipment Facilities: - Provide and maintain all necessary equipments in working condition for use of Engineer's staff such as survey, testing of materials and any other instruments, equipment and apparatus as they may require for carrying out the contractual obligations.

(c) Transport facilities :- The contractor Shall make available, maintain and operate one good 4 wheeler vehicle (Jeep/Maruti/Ambassador etc.) having a minimum sitting capacity for 4 persons with driver, fuel, etc for the use of the Engineer or his representative for survey, testing, inspection, measurement etc related to the work on working days from 8:00 A.M to 10:00 P.M during currency of contract. The vehicle shall not be more than 5(five) years old. Any failure in supply / sudden withdrawal / stoppage will attract deduction from bills @ HDC's similar operating transport contract. In case of exigency and work during night hours, the car shall be made available for the entire night. The supply of vehicle shall start on 15th day from the date of work order and shall finish on the date of completion of work including extension of date of completion, if any.

38.0 DOCK PERMIT :

Dock permits which may be necessary for any purpose related to the work shall be issued against payment at the prevailing rates of HDC along with GST.

TENDER DOCUMENTS

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

TECHNICAL SPECIFICATIONS FOR MATERIALS AND WORKMANSHIP

[A] CIVIL WORKS

INDEX

SECTION I – MATERIALS

1.0 GENERAL: -

- All materials to be used in the permanent works shall be of the best quality of the kind and to the approval of the Engineer. They shall comply with the Specifications laid out in the BIS codes (referred to as IS) as revised or modified up to the date one month prior to the Tender Date unless otherwise specifically mentioned in the Tender Documents.
- Samples of materials to be supplied and used by the Contractor in the works shall be subject to the prior approval of the Engineer. For this purpose, the contractor shall furnish in advance, representative samples in quantities and in the manner as directed by the Engineer for his approval.
- Materials brought to the site, which in the opinion of the Engineer do not conform to the approved sample, shall, and if so directed by him, be removed by the contractor within 24 hours at his own cost from the site and replaced by materials of approved quality at no extra cost.
- The contractor shall produce manufacturer's test certificates for the materials procured by him. The Engineer may carry out or order any test on any of the materials as he may decide. The contractor shall, at his cost and expense, supply requisite materials for this purpose and render such assistance to the Engineer as he may require. The cost of testing will be borne by the Contractor. Further, if and as required by the Engineer, the contractor shall get the materials tested from approved laboratories at his expense and produce the test certificates for the inspection of the Engineer.
- If the Engineer is of the opinion that the materials are not suitable for use on the works; he may reject the consignment, notwithstanding the Manufacturer's certificates. The Engineer's decision regarding the suitability of materials brought to site for use in the works shall be final and binding on the contractor, who shall remove the rejected materials from site and replace them with materials of required quality.
- In spite of approval of the Engineer of any material brought to the site, he may subsequently reject the same if in his opinion the materials have since deteriorated due to long or defective storage or for any reason whatsoever and is thereby considered unfit for use in the permanent works. Any material thus rejected shall be immediately removed from the site at contractor's cost and expense.
- All materials bought to the site shall be properly stored and preserved to ensure their quality and fitness during the course of their use in work. If the storage arrangements are not to the Engineer's satisfaction, he may direct the contractor for arranging proper storage to which the contractor shall have to comply. The materials shall be stored in adequate quantities well in advance to meet the construction schedule and shall be guarded in the manner directed by the Engineer and to his satisfaction.
- All materials used in the works shall be of the best kind and to the approval of the Engineer's Representative. The materials supplied and the workmanship shall satisfy the relevant clauses as given below and in the Bill of Quantities of the tender.

2.0 CONFORMANCE TO INDIAN STANDARDS

Except where otherwise specified all materials shall conform to the latest editions of the relevant Indian Standards published by the Bureau of Indian Standards. For manufactured or proprietary items, the manufacturers' specifications as approved by the Engineer shall be applicable.

3.0 SAMPLES

In addition to the requirements of sampling and testing of materials as specified in the Indian Standards and in these specifications, samples of the following materials shall be taken and submitted by the Contractor to the Engineer for approval in advance of the commencement of Works. The cost of all sampling and testing shall be deemed to have been included in the rates and prices in the contract.

i) Cement
ii) Aggregates
iii) Reinforcement Bars
iv) Concrete

v) Rock
vi) Admixture
vii) Water
viii) Mild steel

4.0 MATERIAL STORAGE

All materials brought to the Site for use in the Works shall be properly stored and preserved as per IS:4082 to ensure their quality and fitness during the course of their use in Works. Cement and Steel shall not be allowed to be stored in the open areas. If the storage arrangements are not to the Engineer's satisfaction he may direct the Contractor for arranging proper storage facilities, failing which the Engineer will reserve the right to reject such materials as he deems it necessary. All materials shall be stored in adequate quantities well in advance to meet the Construction Schedule.

5.0 AGGREGATES

5.1 General

The aggregates (coarse/fine) used for concrete work shall conform to IS: 383. The aggregates shall not contain any harmful material such as iron pyrites, coal, mica, shale, or similar laminated materials, clay, alkali, soft fragments, sea shells organic impurities in such quantity which affect strength or durability of concrete. Aggregates reactive with alkalies of cement are strictly prohibited. The maximum quantity of deleterious materials in the aggregates shall be determined in accordance with IS:2386 (Part II) and shall not exceed the limits given in the Table 1, IS:383, unless otherwise directed by the Engineer.

5.2 Storage of Aggregates

Aggregates shall be stored at site in suitable bins or on clean hard durable surface well drained and maintained free from all contaminations. Different aggregates shall be stored in separate compartments or heaps without intermingling.

5.3 Coarse Aggregates

The size, shape, quality, specific gravity, grading, soundness, crushing strength, abrasion resistance of coarse aggregate for all concreting works shall comply in all respects with IS 383.

5.4 Fine Aggregate

Fine aggregate for all concrete works shall be sharp and clean dry river sand free from all debris organic matter clay or other foreign material which affect the durability of concrete, and shall be subject to the Engineer's approval. Suitable allowance shall be made for bulking when measuring sand as directed by the Engineer or his Representative. Sand shall be screened and washed properly to the Engineer's satisfaction.

The size of fine aggregate shall be such that most of it passes through 4.75 mm IS sieve and not more than 10% passes through 150 micron IS sieve. It shall, when tested as per IS: 2386, conform to Zone-II for concrete works or Zone-III for road/ hardstand filling works as per Table-III, IS:383. Fineness Modulus of sand used in the work shall not be less than 2.0.

6.0 CEMENT

6.1 Quality, Make & Testing

a) Unless specifically mentioned otherwise the cement to be used in the Works shall be Ordinary Portland Cement Grade **53/43/33** conforming to **IS: 12269/IS:8172/IS:269** or Portland Slag cement confirming to **IS:455** or Portland Pozzolona Cement conforming to **IS:1489. The brand/ manufacturer of the cement shall be subjected to prior approval of the Engineer.**

The Contractor shall get approval for at least 3 brands/ manufacturers in advance so as to have an alternative brand/ manufacturer in hand in case of disruption of supply from other brand/ manufacturer.

b) Once the quality and brand/ manufacturer of cement to be used in the works is approved after necessary testing of the samples of each brand/ manufacturer, the Contractor shall obtain further supplies of cement from the same brand/ manufacturer. The Contractor shall furnish manufacturer's test certificate along with challan for each batch of cement to be supplied for construction purpose.

c) For each delivery of cement to the Site the Contractor shall forward to the Engineer a certificate to the effect that such cement was tested and analysed at the Factory and the results of such tests and analysis satisfactorily meet the specifications stipulated in the relevant Indian Standards. The supplier should also furnish the date of manufacture of the lot from which the consignment has been drawn by the Contractor. In addition, the Engineer shall be authorized to draw samples of cement from the site and reject any consignment which do not pass necessary tests and/or specifications.

d) During the progress of work, the following quality assurance method shall be adhered to:

   i) Contractor shall submit the **test certificate** of each **batch** of cement received at site for construction purpose.

   ii) The Contractor shall conduct physical and chemical tests on samples from each batch of cement drawn jointly with the representative of Engineer as per relevant IS Code at the laboratory approved by the Engineer. The costs of all such tests shall be borne by the Contractor.

6.2 Delivery and Storage of Cement

Cement shall be transported handled and stored on the Site in such a manner as to avoid contamination or deterioration. Each consignment shall be stored separately so that it may be readily identified and inspected and cement shall be used in the sequence in which it is delivered at Site.

From the time that a consignment of cement is brought on the Site and tested and approved by the Engineer and until such time as cement is used in the Works, the Contractor shall be responsible for keeping the same in sound and acceptable condition.

If cement is to be stored in bulk containers these shall be subject to the prior approval of the Engineer and shall be large enough to contain such quantities as may be required with sufficient reserve to allow for the likely frequency of supply.

Cement stored in bulk containers shall be, in the opinion of the Engineer, adequately protected against rain, humidity, dewfall and dust, and all charging and discharging points shall be properly sealed. Aeration equipment for the bulk containers, if available, shall incorporate dehumidifiers.

If packaged cement is stored in bulk containers it shall be charged into the containers through a 5 mm mesh screen which is welded or bolted to and covers the entire feed area of the charging hopper.

Cement other than that stored in bulk shall be kept in the bags or containers in which it was delivered until use and shall be stored in a Dry Store large enough to contain such quantities as may be required with sufficient reserve to allow for the likely frequency of supply. Cement in bags or containers shall be unloaded under cover. This store shall be dry, well-ventilated, perfectly weatherproof and waterproof and shall be so situated as not to be liable to flooding and shall have a floor raised not less than 60 cm from the ground in order to protect the cement from moisture. An air space shall be left between the floor and the bottom layer of the bags. Cement bags shall be stored well away from outer walls of the store and not more than 12 bags shall be stacked in any tier. Each consignment shall be stacked separately therein to permit easy access for inspection and

a record shall be kept so that each consignment may be identified by a serial number and date of delivery and used in the sequence in which it was delivered at site.

Cement shall be adequately protected at all times from rain and spray. Cement which has set or partially set and become lumpy shall not be used in the Works.

Notwithstanding the above provision, any cement which the Engineer considers has become stale or unsuitable through absorption of moisture from the atmosphere or for other reasons shall be rejected and removed from the Site at the Contractor's expense. Any cement in containers damaged so as to allow the contents to spill or to be affected by atmospheric moisture prior to opening at the time of concrete mixing shall be rejected and removed from the Site at the Contractor's expense.

6.3 Rejection of Cement

Any consignment or part of a consignment of cement which has deteriorated in any way or which does not otherwise comply with the specifications shall not be used in the Works and shall be removed from the Site by the Contractor at no extra cost to the Employer.

6.4 Identification and Records for Cement

Cement shall be stored in such a way as to permit easy identification of the different consignments stored. Records must be maintained by the Contractor showing the date-wise receipts with consignment numbers, amounts used, and the balance.

6.5 Removal of Cement for use

Removal of cement from storage sheds for use in the works shall be on "First in, First out" basis.

6.6 MATERIAL TESTING LABORATORY

The Contractor shall maintain at site a material testing Laboratory with equipment and staff for testing of cement, aggregates, concrete etc. The Contractor shall furnish full details of all equipment and apparatus for such testing along with the tender.

7.0 WATER

a) Water used for mixing concrete, curing, cooling or washing of aggregate shall be clean and free from injurious amounts of oils, acids, alkalis, salt, sugar, organic material or any other substance that may be deleterious to concrete or steel. Potable water is generally considered satisfactory for mixing concrete.
b) pH value shall not be less than 6 nor more than 7.5.
c) River water shall not be permitted.

8.0 ADMIXTURES IN CONCRETE

Admixtures may be used in concrete at contractors cost only with the approval of the Engineer and shall conform to IS:9103 and IS:2645. The Contractor shall produce test certificates from recognized laboratories before use of admixtures. The proportion of admixture to be used in concrete shall be determined by tests as directed by the Engineer.

9.0 REINFORCEMENT STEEL

9.1 Reinforcement Steel

Steel reinforcement bars for concrete shall be round bars complying with Grade 1 Mild Steel as per IS:432 and high yield strength deformed bars conforming with IS:1786. **The Contractor shall get approval of at least 3 brands/ manufacturers of reinforcement/ structural steel in advance so as to have alternative in hand in case of disruption of supply from the other brand/ manufacturer.**

9.2 Test Certificates and Tests

Test certificates must be produced by the Contractor for all steel procured by him. However, the Engineer may order specimens from each consignment to all tests, (particularly tensile, bend, re-bend tests with results) required under Indian Standards, which tests shall be carried out by the Contractor at his own cost. Notwithstanding certificates produced by the Contractor, the Engineer may reject the consignments, test results of which do not conform to the specifications, and the Contractor shall forthwith remove such material from one site.

All test pieces for such tests shall only be selected by the Engineer or his representative, and shall be removed from the parent stock/material only in the presence of the Engineer or his representative.

9.3 Mild Steel Binding Wire

The mild steel binding wire shall be of 1.63 mm. or 1.22 mm. (16 or 18 gauge) diameter and shall conform to IS 280 (latest revision) and shall be as approved by the Engineer.

9.4 Stamping or Marking

The steel shall be marked or stamped with a private mark for the purpose of identification as may be directed by the Engineer.

10.0 STRUCTURAL STEEL (GENERAL USE)

10.1 All structural steel shall be mild steel confirming to IS:2062. The finished materials shall be free from cracks, surface flows laminations, rough and imperfect edges and any other defects. Steel shall be free from rust, scaling and pitting.

10.2 All structural steel tubes shall confirm to IS:1161.

10.3 All fixtures permanently embedded in concrete structure shall comply with relevant IS codes for stainless steel of marine grade.

10.4 Hexagon head bolts, screws and nuts of product grade-C (Part I) shall conform to IS:1363.

10.5 All electrodes required for metal are welding shall be covered electrodes and comply with the requirement of IS:816 and IS:814 unless otherwise specified.

10.6 In addition to any mechanical tests required under previous clauses herein above, the Engineer may require the contractor to carry out independent tests of the material. The cost of such testing shall be borne by the contractor.

11.0 CAST IRON

Cast iron shall generally comply with IS:210 'Gray Iron Castings'. Trench covers and gratings, if specified shall comply with the requirement of IS:1726 and shall be of heavy duty type unless otherwise indicated.

11.1 CAST STEEL

All steel castings shall be in accordance with IS: 1030-Steel Castings for General Engineering Purposes. The steel unless otherwise specified conform to Grade-I of this Code and shall satisfy all tests as specified in IS: 1030.

11.2 STAINLESS STEEL

All stainless steel materials shall conform to AISI:316 grade quality and fasteners shall be manufactured to IS:1367 (Part 14).

12.0 FASTENERS

Bolts and nuts of all types shall conform to IS: 1367.

Black bolts and nuts shall conform to IS:1363.

High strength Structural Bolts and Nuts shall conform to IS:3757 and IS: 1367 (Part-III) of Property Class 8.8 (Low Carbon Steel with additives).

Plain washers shall conform to IS: 2016 and taper washers for I beams shall conform to IS: 5374.

Countersunk head screws shall be in accordance with IS: 1365 and shall conform to product Grade-A as specified in the revision IS: 1367- Part II (Second Revision).

13.0 ELECTRODES

Electrodes for metal arc welding shall conform to the requirements of IS: 816 and IS:814 and shall be of best heavy coated type and of approved make.

14.0 FENDERS

Dual Cone fender DCN 1100H (R1.3) has to be provided. The fender shall be supplied with frontal frame and all necessary accessories such as fixing system, suspension chain, turn buckle, tension chain, shear chain, fixing bolts. Washers, Anchor plugs, Nuts, etc.

The fenders and accessories shall be designed, manufactured, supplied, installed and commissioned satisfying the following design criteria:-

For Berthing dolphins		
Energy absorption for each	:	Not less than 74.9 T-M
Horz. reaction force for each	:	Not more than 130.6 T.
Max. deflection	:	72% for single fender

The fenders shall be of approved and proven quality and the contractor shall supply documentary evidence of the performance characteristics of the proposed fenders which shall conform to the characteristics given above.

The quality of rubber shall be of a superior grade. Fixing bolt, washer and the Anchor plug shall be of stainless steel and other accessories such as suspension chain, Tension chain, shear chain, fixing system etc. shall be of galvanised rolled steel as per the manufacturer's specification to protect against corrosion.

The contractor shall indicate the type of fender he proposes to provide along with the characteristics, literature and relevant details.

15.0. QUICK RELEASE MOORING HOOKS AND CAPSTANS (REMOTE CONTROLLED)

15.1 The mooring system shall comprise remote controlled mooring hooks fitted with electrically operated capstan as detailed below :

a) Mooring Dolphins
- Hooks assembly of 3 hooks with S.W.L. per hook of not less than 80 T with flame proof electrical control for remote as well as local push button operation and with facility for local manual release.
- Integral mounting base for total load of 240 T

b) Berthing Dolphins

- Hooks assembly of 2 hooks with S.W.L. per hook of not less than 80 T with flame proof electrical control for remote as well as local push button operation, and with facility for local manual release.
- Integral mounting base for total load of 160 T

15.2 The capstans fitted with all mooring hooks will have the following specifications :

Nominal pull of capstan	2 Tonne
Line pull	20 metre/minute
Capacity of Motor	7.5 KW

Electric Control Panel and accessories and cables for remote operation of hooks shall be as per the QRMH manufacturers specifications.

Both power and control cables are to be supplied, laid and connected up from the point of QRMH and control room. Cables shall be laid on FRP cable trays suitably fixed on hand rails. All fittings and fixtures shall be of stainless steel. The hook release control panel is to be erected in the control room of the control building and connected up. The control cables from the hooks are to be terminated at this control box. The power cables for capstans are to be terminated in the switch room of substation. Provision for control cables have been made for 8 core and 12 core cables. If different, the tenderer is to indicate the type of cables, detailed drawings, schematic and catalogue of all equipment and to be made available.

15.3 Capstans

The capstan motor and controls shall be flame proof type with flame proof terminal box and glands and suitably weatherproofed. The motor will be controlled with a foot switch suitably interconnected to the flameproof control box which shall be provided with breaker, overload and single phase prevention release. The tenderer shall indicate the rating of the motor, and the value of the back-up fuse rating required. The motor shall be provided with in-built space heater.

15.4 Quick release hooks

The hooks shall be released with an electrically operated solenoid and a back indication to the control box that the hooks have been released. The hooks shall also be provided with a local manual release trip lever. All electrical Equipment shall be flameproof type, and also weatherproofed.

The assembly shall be provided with necessary shock absorbing mechanism and also a means of returning the hook to normally working locked position, once the hook is released.

The assembly shall be complete with mounting bolts and template with necessary drawings to provide the inserts in the foundation.

Detailed catalogue/ drawings shall be submitted along with the tender.

After award of work, erection drawings, wiring drawings and necessary test certificate shall be made available. After completion of work, documentation shall be made available. Documentation shall cover GA drawings, foundation drawings, wiring and schematic drawings.

Satisfactory working of the system shall be guaranteed for a period of 12 months from date of handing over.

16.0 High Density Polyethylene Pipes

HDPE pipes where specified shall conform to IS: 4984.

17.0 OTHER MATERIALS :

All materials not herein fully specified and which may be offered for use in the Works shall be of first class quality and of such kind as is generally used in first class work. The Engineer shall have the right to determine whether all or any of the materials offered or delivered for use in the Works are suitable for the purpose and his decision shall be final and binding on the Contractor.

18.0 EQUIVALENT MATERIALS :

The materials specified with brand/proprietary name shall only be used and the Contractors shall take procurement action well in advance so that the specified materials are available in time. However, if the specified material is not available as confirmed by the supplier or his agent to complete relevant work within the stipulated time, alternative material to the approval of the Engineer would be allowed with price adjustment as applicable. Engineer's decision shall be final and binding in this regard.

SECTION II – WORKMANSHIP

The following specifications shall cover the general workmanship requirements for earthwork in excavation and filling, concreting and formwork etc. These specifications will supplement other specifications provided in the sections for Particular Applications.

1.0 CONCRETE

The following specifications cover the general workmanship requirement for concrete and concreting.

1.1 Standards

All concreting work shall be done in accordance to the provisions of IS: 456, and other allied standards mentioned in IS:456, unless otherwise specified or directed by the Engineer.

1.2 Work to be Provided for by the Contractor

The work to be provided for by the Contractor under this specification, unless otherwise specified shall include but not be limited to the following :

a) Furnish all labour, supervision, services including facilities as may be required under statutory labour regulations, materials, forms, templates, supports, scaffolds, approaches, aids, construction equipment, tools and plants, transportations, etc. required for the Works.

b) Except where it is excluded from the Scope of Contract, Contractor shall prepare progressively and submit for approval detailed drawings and Bar Bending Schedules for reinforcement bars showing the positions and details of spacers, supports, chairs, hangers etc.

c) Design and prepare working drawings of formwork, scaffolds, supports, etc. and submit for approval.

d) Submit for approval detailed drawings of supports, templates, hangers, etc. required for installation of various embedments like inserts, anchor bolts, pipe sleeves, frames, joint seals, openings etc.

e) Submit for approval detailed schemes of all operations required for executing the work, e.g. Material handling, Concrete mixing. Placement of concrete, Compaction, curing, services, Approaches etc.

f) Design and submit for approval, concrete mix designs required to be adopted on the job.

g) Furnish samples and submit for approval results of tests of various properties of the following : (Cost of Samples and testing to be borne by the Contractor)

   i) The various ingredients of concrete
   ii) Concrete
   iii) Embedments
   iv) Joint seals

h) For supply of certain materials normally manufactured by specialist firms, the Contractor may have to produce, if directed by the Engineer, a guarantee in approved proforma for satisfactory performance for a reasonable period as may be specified, binding both the manufacturers and the Contractor, jointly and separately.

1.3 No Concreting without Approval

The Contractor shall inform the Engineer, sufficiently in advance, whenever any section of the Work is ready for concreting. He shall accord all necessary help and assistance to the Engineer Representative for all checking required. No section of the Works shall be concreted without the approval of the Engineer.

1.4 Design Mix Concrete

Where Designed Concrete mix is specified, the Contractor shall calculate the proportions of the ingredients as per IS:10262 and IS 456 and carry out several trial mix batches to determine the final

proportions by weight of cement, aggregate and water necessary to produce the concrete having the desired characteristics. The Contractor shall submit to the Engineer the following data for his approval:

1. The proportion of cement, coarse aggregate, fine aggregate and water so determined.
2. The sieve analysis of aggregates, which he proposes to use in the works.
3. Full details of preliminary tests on each class of concrete, and on the ingredients of each class of concrete.
4. For each trial mix, the mix strength - determined as the average of 10 test specimens - shall exceed the specified target strength specified below.
5. All calculations relevant to the design of each grade of concrete mix.

The proportions may also be determined by experiments at an approved laboratory so as to give the greatest possible strength and density for the mix. The density of concrete shall not be less than 2.40 t/cum.

The proportions adopted shall be subject to the approval of the Engineer and they must be determined for each different type of aggregate the Contractor proposes to use and whenever the Contractor proposes to change to a different type of aggregates during the course of the work. Proportions of a particular grade of concrete, once established by mix design and exhaustive trial mixes, shall not be altered on any account without the express approval of the Engineer.

The concrete mix shall be designed for values of target mean strength not lower than those indicated in Table below.

Grade of Concrete	Target mean strength(N/sq.mm.) after 28 days
M 40	**52**

1.5 Minimum Cement Content and Maximum Water Cement Ratio

The concrete mix shall comply with the minimum cement content and maximum water cement ratio as given in the Table below.

Grade of Concrete	Minimum Cement Content (Kg/Cu.M.)	Maximum Water Cement Ratio
M 40	**430**	**0.45**

The minimum cement content specified above are from considerations of durability of the structure and do not necessarily represent the contents of cement to be actually used for the design of the mix.

1.6 Proportioning of Concrete

Proportioning shall mean the determination of proportion of various ingredients to be used to produce concrete of required strength, workability, durability and other desired properties.

Preliminary mix design shall be established well ahead of the start of the Concreting working work. The Engineer shall verify the strength of the concrete mix before sanctioning its use. Any such verification and/or sanction by the Engineer shall not absolve the Contractor of his responsibility to achieve the prescribed strength and other requirements of the mix.

If, during the execution of the work, cube tests show less than the desired strength, the Engineer shall order fresh trial mixes to be made by the Contractor and these shall be at the Contractor's cost. No claim shall be entertained for such changes in concrete mix.

Variations in cement consumptions shall be taken into consideration for material reconciliation.

1.7 Density of Concrete

For each grade of concrete, suitable proportions of sand and sizes of coarse aggregate shall be selected to obtain the maximum density as practicable. This is to be determined by mathematical means, laboratory tests, field trials and changes in gradation of aggregate.

1.8 Water-Cement Ratio of Concrete

Water-cement ratio of a mix which is specified and approved by Engineer shall be maintained. The water content of the aggregates shall be determined frequently during the progress of the Work, and the amount of mixing water entered at the mixer adjusted as directed by the Engineer so as to maintain the specified water-cement ratio. Maximum water-cement ratio of the concrete shall be governed by figures given in IS: 456 latest revision.

1.9 Consistency

The concrete shall have a consistency such that the workability of the fresh concrete is suitable for the conditions of handling and placing, so that after compaction it surrounds all reinforcements and completely fills the formwork.

1.10 Slump

The slump as determined according to IS: 1199 shall be within the following limits:

Degree of workability	Slump in mm.		Type of Construction
	Min.	Max.	
Medium	40	80	Reinforced Foundations, walls and footings.
Medium	25	75	Plain footings, substructure walls, etc.
Medium	50	100	Reinforced beams, columns, walls, etc.
High	150	180	Bored Piles.

Batching

In proportioning concrete, the quality of both cement and aggregate should be determined by weight. Where the weight of cement is determined on the basis of weight of cement per bag, a reasonable number of bags should be weighed separately from the aggregates. Water should be either measured by volume in calibrated tanks, or weighed. Any solid admixture that may be added, may be measured by weight; liquid and paste admixtures by volume or weight.

All measuring equipment should be maintained in a clean, serviceable condition, and their accuracy periodically checked. Batching plant when used shall conform to IS:4925 and shall be accurately calibrated.

Except where it can be shown to the satisfaction of the Engineer that supply of properly graded aggregate of uniform quality can be maintained over the period of the work, the grading of aggregate should be controlled by obtaining the coarse aggregate in different sizes, blending them in the right proportions when required, the different sizes being stocked in separate stock piles.

The grading of coarse and fine aggregate should be checked frequently as specified by the Engineer to ensure that the specified grading is maintained.

The Water-cement ratio for any particular mix shall be maintained constant at its specified and approved value. Depending upon weather conditions, the moisture content in fine and coarse aggregate shall be determined (in accordance with IS: 2386) at intervals specified by the Engineer and the amount of water added shall be adjusted to compensate for any variations in the moisture content of the aggregates. Suitable adjustments in the weight of aggregates shall be made to allow for variation in weight due to variation in moisture content. For nominal mixes only, the amount of surface water may be estimated from the values given in IS: 456 in the absence of exact data.

No substitutions in materials used on the work or alterations in the established proportions, except as permitted in the above paragraph shall be made without additional tests to show that the quality and strength of concrete are satisfactory.

1.11 Exposure

Exposure condition for concrete in this work shall be considered as "severe".

1.12 Sampling and Testing for Strength

Sampling, testing and acceptance of concrete shall be in accordance with IS:456.

1.13 Mixing

The concrete shall be mixed in approved type of automatic weigh batching plant of suitable capacity (to IS: 4925) or tilting or non-tilting type stationary mixers (to IS: 1791) or truck mixers of approved make and design. Mixing shall be continued until there is a uniform distribution of the materials and the mass is uniform in colour and consistency. If there is segregation after unloading from the mixer, the concrete shall be remixed. Workability of the concrete shall be controlled and checked at frequent intervals by testing as per IS:1199. **Calibration of the Batching Plant shall have to be done prior to commencement of the work, and subsequently, not less than two times during production of concrete. The frequency of calibrations to be carried out during the work shall be decided by the Engineer.**

The mixing time shall be about 2 minutes or as decided by the Engineer.

All records and charts for mixing operations shall be prepared as directed by the Engineer and shall be submitted to him.

1.14 Remixing of Concrete

Concrete or mortar which has commenced to set shall not be remixed with additional cement or water and in no circumstances shall such concrete or mortar be used in the Works.

1.15 Transporting Concrete

Concrete shall be transported as rapidly as possible from the place of mixing to the place of final deposit. Concrete shall be transported by methods which prevent adulteration, segregation or loss of cement content and which ensure that the concrete is of the required workability at the point and time of placing.

1.16 Preparation of Concreting

Before concreting commences forms shall be carefully examined for any damage due to accident or repeated use. Any such damage is to be thoroughly repaired to the satisfaction of the Engineer.

The surfaces of the forms in contact with concrete shall be thoroughly cleaned. The insides of the forms shall be treated with a coating of an approved substance (oil for instance) to obviate adhesion, and where further necessary to prevent absorption from the concrete, the forms shall be thoroughly wetted shortly before concreting is commenced.

For concreting work on the ground, the ground shall first be excavated. The excavated ground shall be compacted thoroughly by mechanical means. A binding layer of 75 mm thick M-15 concrete shall be provided over the compacted ground, to the approval of the Engineer.

1.17 Depositing Concrete

a) Concreting for Piles : Specifications for concreting for piles are as given in the specifications for piles.

b) For other works : As soon as possible the concrete shall be deposited directly in the forms. Concrete shall not be allowed to fall through a height greater than 2 m.

1.18 Vibrating Concrete

Concrete used in the Works except for the concrete laid in piles shall be vibrated by means of approved form/immersion type vibrators.

Immersion Vibrators designed to operate with vibratory element submerged in concrete and having a frequency of at least 8000 cycles per minute (when submerged in concrete) shall be used. The number of vibrators used shall be sufficient to consolidate the concrete properly within ten minutes after it is deposited in the forms. Vibration shall be stopped immediately after the concrete has been compacted thoroughly and ceases to decrease in volume.

The use of mechanical vibrators complying with IS: 2505, IS: 4656 for compacting concrete is recommended. Wherever vibration has to be applied externally, the design of the formwork and the disposition of vibrators shall receive special consideration to ensure efficient compaction and to avoid surface blemishes. Care shall be taken to avoid segregation and excessive vibration.

1.19 Surface Treatment

All concrete surfaces shall be free from blemishes and shall be reasonably smooth and true. Any fins occurring at form work joints shall be removed and air holes filled with mortar after obtaining approval from the Engineer.

1.20 Curing

Concrete shall be protected during hardening from the direct sun rays and drying winds.

Immediately, after pouring concrete all exposed surfaces shall be protected by screens of thick matting or other suitable material which are to be kept wet throughout for a minimum period of seven days after depositing concrete.

1.21 Work in Extreme Weather Condition

During extreme weather conditions the concreting shall be done as per procedure set out in IS: 7861.

1.22 Commencement of Concreting

No concreting shall be commenced in any portion of the Works until the programme and preparation have been approved and permission given by the Engineer that the concreting in such portion of the Works may commence.

1.23 Intervals During Concreting

The schedule for depositing of concrete is to be so arranged that no face of concrete shall be left more than 20 minutes before concrete is deposited against it. Pauses for meals, changes of shifts etc. and the distribution of the concrete among the positions where work may be proceeding simultaneously must therefore be carefully organized to ensure that the above –mentioned interval is not exceeded.

1.24 Construction Joints

In-situ concreting shall be carried out continuously up to vertical construction joints, the position and arrangement of which shall be predetermined by the Engineer, other specifications of IRC 21-1987 shall be followed.

1.25 Concrete not to be Disturbed

Care shall be taken not to disturb the concrete by direct or indirect loading, striking of shutters or otherwise, until it has hardened sufficiently. In this regard Engineer's decision shall be final and binding.

1.26 Records of Concreting

An accurate and up-to-date record showing dates, times, weather and temperature conditions when various positions of the works were concrete will be kept by the Engineer and shall be counter-signed by the Contractor or his representative. If the Contractor fails to sign the Engineer's record it shall be regarded as correct and binding on the Contractor.

2.0 FORMWORK

2.1 General

The Contractor shall prepare, before commencement of actual work, designs and working drawings for formwork and centering and get them approved by the Engineer. The form work shall conform to the shape, grade, lines levels and dimension as shown on the drawings.

Materials used for the formwork inclusive of the supports and centering shall be capable of withstanding the working load and remain undistorted throughout the period it is left in service. All supports and scaffolds should be manufactured from structural or tubular steel except when specifically permitted otherwise by the Engineer.

The centering shall be true to vertical, rigid and thoroughly braced both horizontally and diagonally. Rakers are to be used where forms are to support inclined members. The forms shall be sufficiently strong to carry without undue deformation, the dead weight of the concrete as a liquid as well as the working load. In case the Contractor wishes to adopt any other4 design criteria, he has to convince the Engineer about its acceptability before adopting it. Where the concrete is vibrated, the formwork shall be strong enough to withstand the effect of vibration without appreciable deflection, bulging, distortion

or loosening of its components. The joints in the formwork shall be sufficiently tight to prevent any leakage of slurry or mortar.

To achieve the desired rigidity, the bolts, spacer blocks, tie wires and clamps as approved by the Engineer shall be used but they must in no way impair the strength of concrete or cause stains or marks on the finished surface. Where there are chances of these fixtures being embedded, only mild steel or concrete of adequate strength shall be used. Bolts passing completely through liquid retaining walls/slabs for the purpose of securing and aligning the formwork shall not be used.

The formwork shall be such as to ensure a smooth uniform surface free from honeycombs, air bubbles, bulges, fins and other blemishes. Any blemish or defect found on the surface of the concrete must be brought to the notice of the Engineer immediately and rectified free of charge as directed by him.

For exposed interior and exterior concrete surfaces of beams, columns and wall, plywood or other approved from shall be thoroughly cleaned and tied together with approved corrosion-resistant devices. Rigid care shall be exercised in ensuring that all column forms are plumb and true and thoroughly cross braced to keep them so. All floor and beam centering shall be crowned not less than 8 mm in all directions for every 5 metres span. Unless specifically described on the drawings or elsewhere to the contrary, beveled forms 25 mm by 25 mm shall be fixed in the formwork at all corners to provide chamfering of the finished concrete and be secured sufficiently at lift joints to prevent bulges and offsets.

Temporary opening for cleaning, inspection and for pouring concrete shall be provided at the base of vertical forms and at other places, where they are necessary and as may be directed by the Engineer. The temporary openings shall be so formed that they can be conveniently closed when required, during pouring operations without leaving any mark on the concrete.

All parts of the forms shall be thoroughly cleaned of old concrete, wood shavings, saw dust, dirt and dust sticking to them before they are fixed in position. All rubbish, loose concrete, chippings, shavings, saw dust, etc. shall be scrupulously removed from the interior of the forms before concrete is poured Compressed air jet and/or water jet along with wire brushes, brooms, etc. shall be used for cleaning. The inside surface of the formwork shall be taken that oil or other compound does not come in contact with reinforcing steel or construction joint surfaces. The formwork will be inspected just prior to placement of concrete and re-done wherever necessary.

2.2 Formwork: Design

The formwork shall be so designed and erected that the forms for slabs and the sides of beams, columns and walls are independent of the soffits of beams and can be removed without any strain to the concrete already placed or affecting the remaining formwork. Removing any props or re-propping shall not be done except with the specific approval of the Engineer. If formwork for column is open and built up in section, as placing of concrete progress wedges, spacer bolts, clamps or other suitable means shall be provided to allow accurate adjustment and alignment of the formwork and to allow it to be removed gradually without jarring the concrete.

2.3 Inspection of Forms

Casting of concrete shall start only after the formwork has been inspected and approved by the engineer. The concreting shall start as early as possible within 3 (three) days after the approval of the formwork and the same shall be kept under constant vigilance against any interference. In case of delay being three days, a fresh approval from the Engineer shall be obtained.

2.4 Removal of Forms

Before removing any formwork the Contractor must notify the Engineer in advance to enable him to inspect the concrete if he so desires.

The Contractor shall record on the drawing or in any other approved manner, the date on which concrete is placed in each part of the work and the date of which formwork is removed there from and have this record checked and countersigned by the Engineer regularly. The Contractor shall be responsible for the safe removal of the formwork and any work showing signs of damage through premature removal of formwork or loading shall be rejected and entirely constructed by him without any

extra cost to the Employer. The Engineer may however instruct to postpone the removal of formwork if he considers it necessary.

2.5 Tolerance

The formwork shall be so made as to produce a finished concrete, true to shape, lines, levels, plumb and dimensions as shown on the drawings subject to the following tolerances unless otherwise specified in this Specification or drawings or directed by the Engineer:

a) Sectional dimension + 5 mm, - nil

b) Plumb 1 in 1000 of height
+ 3 mm before any deflection has taken place.

The tolerance given above are specified for local aberrations in finished concrete surface and should not be taken as tolerance for the entire structure taken as a whole or for the setting and alignment of formwork, which should be as accurate as possible to the entire satisfaction of the Engineer. Any error, within the above tolerance limits or any other as may be specially set up by the Engineer, if noticed in any lift of the structure after stripping of forms, shall be corrected in the subsequent work to bring back the surface of the structure to its true alignment.

3.0 REINFORCEMENT

3.1 Storage

All reinforcing bars shall be stored on the site on timber or concrete supports suitably spaced and of sufficient height to keep the steel clear of the ground.

3.2 Bar Bending Schedules

All bar bending schedules will be prepared by the Contractor as per IS:2502.

The Contractor shall be responsible for the correctness of the numbers, lengths and bending details of reinforcing bars shown on the schedules must in all cases be verified by the Engineer-in-Charge. The bar bending schedules shall be submitted to the Engineer-in-Charge by the Contractor sufficiently in advance for approval.

3.3 Placing

The number, size, form and position of all the reinforcement shall, unless otherwise directed or authorized by the Engineer-in-Charge be strictly in accordance with the drawings, except that bars may be displaced locally as approved by the Engineer-in-Charge to clear bolts, pockets and the like which may not necessarily be shown on the reinforcement drawings. Nothing is otherwise to be allowed to interfere with the disposition of the reinforcing bars, and the Contractor is to make a particular point of seeking that they are placed correctly in every respect.

The longitudinal bars in piles, columns, ties etc., are to be straight, and fixed in correct relation to each other and to the sides of the moulds.

3.4 Reinforcement: Maintaining in Position

The steel reinforcement shall be so connected as to form a rigid cage. To prevent displacement before or during concreting the bars shall be secured one to the other with approved wire. Ends shall point inwards, to preserve the full specified amount of cover. Soft steel 18 gauge binding wire conforming to IS: 280 shall be used throughout the work. Where necessary steel spacers of approved diameter and spacing are to be provided between layers of reinforcement as shown on the drawings or as instructed by the Engineer-in-Charge.

Dense concrete (not mortar) spacer blocks shall, unless otherwise directed, be used between the reinforcement and the bottom and sides of the forms to ensure correct cover of concrete over the bars. The shapes and size and procedure for concreting the spacer blocks shall be to the approval of the Engineer-in-Charge and they shall be of a mix not leaner than the concrete in which they are to be embedded. After their removal from the moulds in which they are cast they shall be cured for 10 days in water.

The cost of providing tying wire, and concrete spacer blocks shall be deemed to be covered in the rates for reinforcing steel.

Care is to be taken to prevent any displacement or bending of the members of the reinforcement when adjusted and temporarily fixed in position before the commencement of concreting. In cases where bars project they are to be adequately protected against displacement both during concreting and subsequently.

3.5 Bending Reinforcement

Reinforcement bars shall be bent by machine or other approved means producing a gradual and even motion. All bars shall be bent cold.

Bars incorrectly bent shall be used only if the means used for straightening and re-bending have been approved by the Engineer-in-Charge.

No reinforcing bar shall be bent when in position in the work without the Engineer-in-Charge's approval whether or not it is partly embedded in hard concrete.

Bars shall comply with the dimensions given in the bar bending schedule. Links, hoops & stirrups are generally to be bent round pins of the same diameter as the bars they enclose, but the minimum diameter of the pin shall be twice the diameter of the link etc. The internal radius of bends and hooks of main reinforcing bars shall be not less than twice the size of the bar unless specified otherwise.

3.6 Reinforcement to be Clean

All reinforcing steel shall be free from rust, loose scale, oil, grease or other deleterious material.

3.7 Approval of Reinforcement

The Contractor must obtain the approval of the Engineer-in-Charge as to the reinforcement when placed, before any concrete is deposited in the shutters.

4.0 MOORING RINGS

Mooring rings shall be fixed at the locations shown by the Engineer-in-charge.

5.0 HIGH DENSITY POLYETHYLENE PIPES

High density polyethylene pipes to IS: 4984 of the diameters and the lengths shall be fixed at the locations shown by the Engineering-in-charge.

6.0 MISCELLANEOUS STEEL FIXTURES AND EMBEDMENTS

The work under this item involves fixing of miscellaneous steel at locations indicated in the drawing or as directed by the Engineer, Inserts, embedments or other items shall be fixed to proper lines, levels and orientation to the Engineer's satisfaction.

Payment will be made on the basis of weight of materials fixed or embedded. The rate shall include the cost of all such materials, galvanizing or painting as required, means of fixing, making and filling of pockets, all filling concrete, and all related work.

7.0 PAINTING

All dust, rust and other foreign matter shall be removed from the surface of to be painted and the material thoroughly cleaned to the Engineer's satisfaction. Where blast cleaning is specified it shall be done to Swedish standard Sa 2-1/2 and painting done within specified times.

In general the manufacturer's instruction shall be followed in application of paints.

The number of coats to be applies shall be as specified under the various items of work. The primer or first coat shall be applied to the Engineer's satisfaction and only after his approval shall subsequent coats of paints applied.

8.0 PILE FOUNDATION

This work shall consist of construction of RCC bored cast-in-situ piles for the liquid Cargo handling Jetty at different locations in accordance with the details shown on the drawings and to the requirements of the specifications.

The number of piles mentioned in the schedule of quantities in this contract is based on required capacities of bored cast in situ pile of and the basic length of pile and its dimensions are shown in the drawings. The final length shall be decided by the Engineer on the basis of the actual boring data observed on site for individual piles.

9.0 SPECIFICATIONS

The execution of pile foundation shall conform to IS: 2911 (Sec-I / Part-2) with latest amendments.

The specifications for safe allowable load, test load, total settlement, total deformations, net settlements, would be as per IS: 2911 (Sec-I / Part-2) provisions.

10.0 CONTRACTOR TO PROVIDE DETAILS

The drawings and specifications are enumerated for the general guidance of the Contractor. Complete details of proprietary or other system of piling proposed to be adopted for the work along with details of equipment proposed to be deployed with detailed and step by step methodology shall be submitted in four copies along with Tender.

11.0 FOUNDING OF PILES

The founding levels of piles have been tentatively shown on the drawings. However depending on the results of geo-technical investigations and actual conditions met at site during pile boring operations, the Engineer will decide the exact founding levels, which shall be final and binding on the Contractor.

12.0 BORING

The ground level shall be taken at the location of each pile before commencement of boring operations.

Boring may be done by either rotary or percussion equipment or grabbing equipment using reverse or direct mud circulation method. In case of unstable soils, the boring tools used should be such that suction efforts are minimised. Stabilisation of the sides of the borehole, shall be done by the use of bentonite slurry or casing. The size of cutting tool/ trenching equipment Conform to the dimensions of the pile and is to be approved by the Engineer.

During boring, it shall always be ensured that the bottom of the lower-most liner shall be driven enough in advance of the boring tool to prevent the entry of soil into the casing, thus preventing the formation of cavities

and settlements in the adjoining ground. The joints of the casing shall be made as tight as possible to minimize inflow of water or leakage of slurry during concreting.

Removal of obstruction if any met with during pile driving or boring shall also be done by the Contractor. No extra payment will be made for this work.

The spoils arising out or boring shall be disposed off as directed by the Engineer within the quoted rates.

13.0 DRILLING MUD (BENTONITE)

The level of drilling mud shall always be maintained above the level of sea high water. Care shall be taken that during boring and removal of the spoil the hole shall remain almost full with the fluid which should preferably be kept in motion. The density and composition of the bentonite fluid shall be such as will suit the ground conditions and maintain the fine materials from the borings in suspension and shall conform to IS:2911 (Part I/Sec-2).

14.0 CLEANING OF BOREHOLE BOTTOM

The bottom of the hole shall be cleaned very carefully before concreting work is taken up. The cleaning of the hole shall be ensured by careful operation either by flushing with the fresh drilling mud through the bottom of the hole or by airlifting process. To lift the spoil at founding level before concreting, borehole shall be agitated by jetting with fresh drilling mud with relatively higher pressure than that used during boring or air through tremie pipe. While boring by use of drilling mud, the specific gravity of the mud suspension in the vicinity of the bottom of borehole shall be monitored. Consistency of the drilling mud suspension shall be controlled throughout the boring as well as concreting operation in order to keep the hole stabilized as well as to avoid suspension of the mud.

Concreting shall **on no account** be taken up if the specific gravity of bottom slurry is more than 1.2.

15.0 PILE CONCRETING

The pile shall be RCC bored cast in situ type with design mix concrete of specified grade. Under-water concreting shall be done as per IS 456 (latest revision). **10 % extra cement over cement content required as per design mix/minimum requirement shall be provided for pile concreting.**

Concreting of pile shaft shall start as soon as possible after the procedure for cleaning the borehole bottom specified herein above have been completed and approval of Engineer-in-Charge obtained. Concrete shall be placed by means of a tremie pipe. Should a borehole be left un-concreted for more than two hours, it shall be cleaned thoroughly as directed by the Engineer-in-Charge before placing concrete. A vermiculite plug should be introduced in the tremie before pouring concrete.

For the first pour a plug shall be introduced at the junction of funnel and tremie pipe and concrete filled in the funnel. This plug is then removed and funnel lifted by about 150 mm to allow the concrete to fall and flush out the bottom.

During concreting, the concrete levels in the pile shaft shall be checked every two metres intervals in order to note the difference, if any, between the theoretical quantity that should have been placed and actual quantity that has gone in. This is to locate the position of over cut during boring, and/or under-filling of concrete.

16.0 Tremie Concrete in Piles

The following procedures shall be used for tremie concrete in piles :

a) The concreting of a pile shall be completed in one continuous operation.

b) The hopper and tremie shall be closed system embedded in the placed concrete, through which water can not pass.

c) The hopper shall be large enough to hold a complete batch of concrete mix or content of the concrete bucket, if any. The diameter of the tremie pipe shall not be less than 200 mm.

d) The first charge of concrete shall be placed with a sliding plug pushed down the tube ahead of it or with a steel plate of adequate charge to prevent mixing of concrete and water. However, the plug shall not be left in the concrete as a lump.

e) The tremie pipe shall always penetrate well into the concrete with adequate margin of safety against withdrawal of the pipe.

f) All tremie pipes should be scrupulously cleaned after use.

Normally, concreting of the piles shall be uninterrupted till completion of pile. In the exceptional case of interruption of concreting which shall not be more than 1 hour under any circumstances, the tremie shall not be taken out of the concrete. Instead it shall be raised and lowered slowly, from time to time to prevent the concrete around the tremie from setting. Concreting should be resumed by introducing a little richer concrete with a higher slump for easy displacement of the partly set concrete.

If the concreting cannot be resumed before final setting up of concrete already placed, the pile so cast may be rejected or accepted with modifications at the sole discretion of the Engineer-in-Charge.

In case of withdrawal of tremie out of the concrete, either accidentally or to remove a choke in the tremie, the tremie may be reintroduced in the following manner to prevent impregnation of laitance or scum lying on the top of the concrete already deposited in the bore.

The tremie shall be gently lowered on to the old concrete with very little penetration initially. A vermiculite plug shall be introduced in the tremie. Fresh Concrete of slump between 150 mm and 175 mm shall be filled in the tremie which will push the plug forward and will emerge out of the tremie displacing laitance/scum. The tremie will be pushed further in steps making fresh concrete sweep away laitance/scum in its way. When tremie is buried by about 60 to 100 cm. concreting may be resumed.

When concrete is placed by tremie method, concrete shall be cast to a minimum of 200.0 mm above the cut-off level to permit removal of all laitance and weak concrete before capping and to ensure good concrete of the specified grade at the cut-off level for proper embedment into the superstructure elements.

In exceptional cases, if the concreting operation is interrupted for some reason, and the borehole is left un-concreted for a period exceeding four hours, the Engineer may reject the pile and instruct the contractor to re-bore and construct a substitute pile at an alternate location decided by the Engineer. The cost of such additional pile, if required, shall be borne entirely by the Contractor.

In the circumstances where cut-off level is below ground water level, the need to maintain a pressure on the concrete equal to or greater than water pressure shall be observed and accordingly length of extra concrete above cut-off level shall be determined and allowed in works.

17.0 SEQUENCE OF PILING

During installation of piles, the sequence of construction shall be as directed by the Engineer.

When the piles are to be provided near the existing service lines and structures etc. care shall be taken to avoid damage to existing structures.

18.0 DEFECTIVE PILES

In case, defective piles are formed, they shall be removed or left in place as directed by the Engineer depending on how they affect the performance of the adjacent piles or the group as a whole. Additional piles shall be provided without any cost whatsoever to the employer and in this regard Engineer's decision shall be binding on the Contractor.

Any deviation from the designed location, alignment or load capacity of any pile shall be noted and adequate measures shall be taken well before the concreting of the pile cap if the deviations are beyond the permissible limits.

After concreting the actual quantity of concrete shall be compared with the average obtained from field observations made in the case of a few piles initially cast. If the actual quantity is found to be considerably less, special investigations shall be conducted and appropriate measures taken.

19.0 TOLERANCE

Piles shall be installed as accurately as possible as per the designs and drawings. For the vertical piles, a deviation of 0.5 percent from the vertical line shall not be exceeded, subject, however, the piles shall not deviate more than 75 mm or one-tenth of diameter whichever is more from their designed positions at the cut-off level. In case of single pile in a pile cap, positional tolerance shall not be more than 50 mm.

In case of piles deviating beyond these limits, and to such an extent that the resulting eccentricity cannot be taken care of by a redesign of the pile cap or pile ties, the piles shall be replaced or supplemented by one or more additional piles by the contractor at his own cost along with any additional cost for pile cap being over size. The decision taken in this regard by the Engineer-in-Charge shall be final and binding on the Contractor. Further

the redesign of the pile sub-structure and superstructure associated with the supplemental or additional piles(s) shall be carried out by the Contractor.

20.0 CHIPPING OF PILEHEAD

Manual chipping shall be permitted after three days of pile casting. Pneumatic chipping shall not be started before 7 days.

21.0 PROVIDING M.S. LINERS

This item is for supply and fixing permanent M.S. Liners for the piles from cut off level up to the required depth of (-) 20 m CD or refusal level whichever is earlier. In case the soil strata is found to be not good in the founding level of the liner, extra depth may be provided as per site condition as may be decided by the Engineer.

The Contractor shall fabricate the liners from M.S. Sheets to suit the diameter of the pile as directed. The required length of the M.S. Liners will be made up by welding each unit at site by the Contractor. M.S. sheets required for manufacture of the liners shall be supplied by the Contractor.

The length of the liner above the cut-off level shall be cut to facilitate chipping the top portion of the pile and for interlacing its reinforcement bars into the capping slab.

The payable depth of the liner shall be measured from the cut-off level to the depth up to which the liner is actually provided, though the liner has been provided right from the level of the working platform from practical considerations.

22.0 REINFORCEMENT FOR PILES

The reinforcement cage shall be fabricated as per drawings and lowered carefully into position in side the cleaned trenches. It shall be ensured that the orientation of cage is as indicated in the drawings. Proper cover for reinforcement, as shown in the drawings shall be provided.

In positioning of reinforcement, longitudinal tolerance of cage head at the top of the guide wall measured along trench wall measured along the trench shall be 75 mm. and vertical tolerance at case head in relation to top of guide wall shall be 50 mm.

23.0 RECORDING OF DATA

During installation of piles, a complete site record shall be made by the contractor, as per IS: 2911 along with any other data as directed by the Engineer. The record shall be submitted to the Engineer in triplicate on completion of installation of each pile. An indicative record sheet is shown below:

Indicative Table of Records to be kept		**Bored Cast *in situ* pile installation data**
1)	Work Order no.	
2)	Pile reference number and location	
3)	Pile type	
4)	Nominal cross-sectional dimensions	
5)	Original Ground Level / River bed level	
6)	Stipulated Pile Cut-Off Level	
7)	Boring Start Date & Time	
8)	Boring Completion Date & Time	
9)	Time taken for penetration of every 15 cm during last 1 m depth before founding level.	
10)	Pile Bottom Level (Founding Level)	
11)	Bottom Level of MS Liner	
12)	Top Level of Liner	
13)	Depth from Ground/ River bed level at pile position to Pile Bottom Level (Founding Level)	
14)	Steel Reinforcement details	
15)	Level of top of reinforcement cage as constructed	
16)	Method of cleaning bottom of hole at founding level before concreting	
17)	Date & time of Commencement of Concreting	
18)	Date & time of Completion of Concreting	

19)	Concrete Mix	
20)	Theoretical Concrete Quantity	
21)	Theoretical Cement Consumption (in 50 Kg bags)	
22)	Actual Cement Consumption at end of concreting (in 50 Kg bags)	
23)	Pile Head Level as constructed	
24)	Soil samples taken during pile formation	
25)	All information regarding obstruction delays and other interruptions to the sequence of work	

24.0 CONCRETE STRENGTH TEST

Concrete strength test for piling concrete mix shall be carried out at regular intervals during concreting of each pile or as directed by the Engineer. Sampling, testing and interpretation of results shall be done as per relevant I.S. Codes. The cost of these tests shall be borne by the Contractor.

25.0 Payment for Bored Piles

Payment for boring of circular Bored piles will be made in linear metres and will be reckoned from existing Ground level (either above or under water) up to the specified level shown in drawings or as directed by Engineer.

Rate of Boring shall include supplying all equipments for excavation, all other operations and all materials including drilling mud and its circulation and replacement, all cleaning of trench during boring and before concreting, all testing and all related work of any description.

Payment for concreting shall be made on the volume in Cu.m. of concrete considering specified dimensions of circular bored piles and panel piles as shown in drawings from the cut off level to the founding levels as mentioned herein above. However, concreting above cut off level as required as per specifications, drawings or good engineering practice will have to be provided by contractor at his own cost.

The rates of concreting for piles shall be deemed to be inclusive of such excess consumption and shall include all equipment, materials, leads, lifts, testing of materials and all related works of any description.

Reinforcement used, however, shall be paid for separately. The reinforcements will be paid for on the basis of weights of bars used calculated using the lengths as per the bar bending schedule and the unit weights as per Indian Standards. The rates shall over the cost of reinforcements, cleaning, decoiling, cutting, bending to specified shapes, placing in positions as indicated in the drawings, supplying and binding with binding wire 1 mm dia black annealed wire, or welding as required including all equipment consumables etc. and all other related work complete.

No extra payment will be made for interlacing the reinforcements of the piles into the superstructure elements. The actual quantity of cement consumed will be recorded jointly for material accounting.

Payment for liners if required shall be made on the basis of weight of liner calculated on the basis of unit weight of plates as per Indian Standard specifications, theoretical diameter and the actual length of liner plate provided

measured from the cut off level to the depth to which the liner has been provided. The rate for the item shall cover the cost of all materials, cost of fabrication of liner by welding or any other means including all consumables, fixing of liner in position and to the depth as decided by the Engineer, cutting of the liner cut of level, wastages in the liner plate, and all other work of any description involved in the provision of liner plate.

26.0 Load Tests and Acceptance Criteria

26.1 Static Load Test

In order to determine the load carrying capacity of the piles, static load test shall be carried out by the Contractor as per IS: 2911 (Part IV)-1985 on isolated piles selected by the Engineer-in-Charge. Piles to be tested should be cast-in-place at lest 28 days before loading, unless otherwise directed by the Engineer-in-Charge.

The pile head shall be chipped off carefully till sound concrete is met. The projecting dowels should be bent suitably and the top finished smooth and level. A bearing plate shall preferably by placed on the head of the pile for the jacks to rest.

The test load shall be applied in a series of increments by means of a hydraulic jack, with pressure gauge, reacting against a suitable load frame obtaining reaction from anchor piles or other suitable anchors. The reaction to be made available for the test should be 25 percent more than final test load to be applied.

Elastic shortening and settlement shall be recorded with dial gauges of 0.01 mm sensitivity preferably with three gauges.

Before any load test is made, the proposed arrangement of the test set up shall have to be approved by the Engineer-in-Charge. All responsibilities for conducting the test safely and properly shall lie with the contractor.

The axial load test on piles shall be done to confirm that the soil strata into which the piles are funded have the required bearing capacity.
The test loads to be applied on the loading platform supported on the pile shall be as follows :

- For 1400 mm dia piles : 340.0 MT
- For 1200 mm dia piles : 300.0 MT
- For 1000 mm dia piles : 255.0 MT

The test loads shall be applied in increments of about 20 per cent of the pile load value. Reading of elastic shortening and, if any, the settlement of pile in rock and rebounds shall be referred to a constant elevation bench marks and shall be recorded to 0.01 mm for each increment or decrement of load. Each state of loading shall remain in place for a maximum of 2 hours. The final test load shall remain in place for 24 hours and settlements, if any, should be observed every hour during this period. The test load on pile may be removed in one stage by releasing the jack steadily after completion of the test and rebound observations made for 2 hours. The loads and readings obtained shall be duly verified and countersigned by the Engineer-in-Charge.

26.2 Dynamic Load Test

In order to determine the load carrying capacity of the piles, High Strain Dynamic Load Test shall be carried out by the Contractor as per ASTM D4945 of 1989 on isolated piles selected by the Engineer-in-Charge. Bearing capacity of piles shall be assessed by applying a dynamic load to the pile head while recording acceleration and strain on the pile head. Piles to be tested should be cast-in-place at least 28 days before loading, unless otherwise directed by the Engineer-in-Charge.

The pile head shall be chipped off carefully till sound concrete is met. Before any load test is made, the proposed arrangement of the test set up shall have to be approved by the Engineer-in-Charge. All responsibilities for conducting the test safely and properly shall lie with the contractor.

26.3 Lateral Load Test (Provisional)

The test may be carried out by introducing a hydraulic jack with gauge between two piles which are closed by and to be selected by the Engineer or the reaction may be suitably obtained otherwise. If it is conducted by jack located between two piles, the full load imposed by the jack should be taken as the lateral resistance of the pile for load application at the jack level. The test shall be conducted as far as possible at the cut-off level of the piles. In determining the lateral resistance of the piles, the actual

point of application of the lateral load at the mooring lines level should be taken into consideration and the lateral resistance obtained from jack loads shall be suitably amended accordingly.

The loading should be applied in increments of 20 percent of the design load. The next increment shall be applied after the rate of displacement is about 0.02 mm per hour of 2 hours, which ever is earlier.

The safe lateral load on the pile shall be taken as the least of the following subject to amending the test values theoretically for actual point of load application.

a) Fifty per cent of the final load at which the total displacement increases to 12 mm
b) Final load at which the total displacement corresponds to 5 mm, and
c) Load corresponding to any other specified displacement due to performance requirements.

Recording of data and presentation

All pile test data i.e. load, displacement and time shall be recorded in a suitable form along with the information about the pile as approved by the Engineer.

The data shall also be presented by curves drawn between load displacements and displacement time and safe load shall be indicated on the graphs.

27.0 MEASUREMENT FOR PAYMENT

Payment for load tests shall be on the basis of numbers of pile tested as per specifications, with the provision that tests which do not show satisfactory results shall not be paid for.

28.0 VARIATION TO THE ANTICIPATED DEPTH

Any additional length of pile over the approximate length shown in the drawings or mentioned elsewhere shall be carried out at the rate quoted against the items of work for piles.

The Contractor shall carry out the work at the accepted rate without variation in case of any increase of decrease in the number of piles.

29.0 SPECIFICATION FOR PRECAST CONCRETE WORKS

The work consists of providing controlled cement concrete for precast concrete units of required sizes and dimensions. The work included formwork, mixing, laying, curing, conveying and placing to the correct profiles.

30.0 PRE-CASTING BEDS

All pre-cast units shall be cast on horizontal rigid beds of such design and character as the Engineer-in-Charge may approve.

All units shall be suitably marked with a reference number of the date of casting, which information shall be clearly visible when units are stacked.

30.1 FORMWORK FOR PRE-CAST CONCRETE UNITS

Formwork for pre-cast concrete units shall be of robust steel construction the design of formwork for blocks shall be submitted to the Engineer-in-Charge for his approval before they are fabricated. The formwork shall be capable of being dismantled without jarring or damage to the units.

30.2 PRE-CASTING RECORDS

Complete records are to be maintained by the Contractor of all precast works. Every units shall have a reference number, date of casting, date of removal of formwork, date of placing and location, all of which shall be recorded together with test results in a suitable Register.

30.3 CASTING TOLERANCE

Precast units shall be cast to within a tolerance of 5 mm on any dimension.

30.4 LIFTING, HANDLING AND PLACING OF PRE-CAST UNITS

Lifting and placing (and removal, if any) of precast units shall be undertaken without causing shock vibration or undue stress to or in the units. The units shall not be lifted, transported or used in the works until they are sufficiently matured. The crushing strength of test cubes which are to be kept with the precast units will be used to assess the maturity of the units.

The methods proposed for lifting, transporting and setting precast units should not overstress or damage the units in any way. In the event of overstress or damage due to whatever cause, the unit or units concerned will be liable for rejection and if so rejected shall be immediately broken up and removed from the site. The contractor shall replace such rejected units at his own cost. The contractor shall furnish detailed method for lifting and placing the units in final position for the approval of Engineer.

31.0 LADDERS

Steel Ladders shall be fabricated and **fixed with hot dip including G.I coating 80 micron** of size (2.80m x 0.44m) using 75 x 20 mm .M.S Flat (2Nos. 2.80m) and 25mm dia M.S bar 44cm long at 30cm centre as cross bars and to be welded with 2 nos. M.S flat (75 x 20mm) to a length of 35cm with 7cm length 25mm dia M.S bar (cross wire) to hold the ladder, drilling holes at M.S flat for holding M.S bar and welded and painting the steel ladder with one coat of red oxide primer and two coats of anti-corrosive black paint and fixing the ladder in the sea side wharf as per standard specifications and as directed by the EIC. The cost inclusive of all materials and fabrication charges, labour for fixing in position etc. complete complying with AISS and as directed by the EIC.

.

ANNEXURE - I

(To be submitted on Company's Letter Head along With Cover-I Offer)

General Manager (Engineering)
HALDIA DOCK COMPLEX

SUB :- E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

Dear Sir,

We do hereby confirm that our offer is strictly in accordance with the terms and conditions of the Tender Document without any deviation / condition.

We further confirm that COVER-II of the bid does not contain any condition / deviation.

_____
Signature of the Bidder with Office Seal.

Date:

Place:

ANNEXURE - II

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX

CONCURRENT COMMITMENT(S) OF THE BIDDER (i.e Works In The Hand Of The Bidder At The Time Of Submission Of Tender Offer)

(To be submitted with Cover-I of Offer)
Bidders must fill in the under noted columns.

Sl. No.	Full particulars of works to be executed concurrently by the bidder. (i) Name of work. (ii) Client. (iii) W.O. No. & Date.	Sanctioned Tender Value. (in Rs.)	Completion time as stated in tender.	Name and address to whom reference can be made.
1	(i)			
	(ii)			
	(iii)			
2	(i)			
	(ii)			
	(iii)			
3	(i)			
	(ii)			
	(iii)			
4	(i)			
	(ii)			
	(iii)			

ANNEXURE - III

Format For Power Of Attorney For Lead Member Of Consortium

(To be executed before Notary Public on a Non-Judicial Stamp Paper of at least Rs 10)

POWER OF ATTORNEY

Whereas Haldia Dock Complex, Kolkata Port Trust("the Authority") has invited tenders from interested parties for "……..." (Tender No. ……).

Whereas, ……., ……., ……. And …… (collectively the " Consortium") being members of the Consortium are interested in bidding for the Tender in accordance with the terms and conditions of the Tender Document and other connected documents in respect of the said tender, and

Whereas, it is necessary under the Tender Document for the members of the Consortium to designate one of them as the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's bid for the Tender and its execution.

NOW THEREFORE KNOW ALL MEN BY THESE PRESENTS

We, M/s. …… having our registered office at ……., M/s…… having our registered office at ……., M/s. ……. Having our registered office at ……., and M/s. …… having our registered office at ……., [the respective names and addresses of the registered office] (hereinafter collectively referred to as the "Principals") do hereby designate, nominate, constitute, appoint and authorize M/s. ……. Having its registered office at ……., being one of the members of the Consortium, as the Lead Member and true and lawful attorney of the Consortium (hereinafter referred to as the "Attorney"). We hereby irrevocably authorize the Attorney to conduct all business for and on behalf of the Consortium and any one of us during the bidding process and, in the event the Consortium is awarded the Contract, during the execution of the contract, and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the pre-qualification of the Consortium and submission of its bid(s) for the tender, including but not limited to signing and submission of all applications, bids and other documents and writings, participate in Pre Bid and other conferences/meetings, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of bid(s) of the Consortium and generally to represent the Consortium in all its dealings with the Authority, and/or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium's bid(s) for the tender and/or upon award thereof till the Agreement is entered into with the Authority.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us / Consortium.

IN WITNESS HEREOF WE HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS …… DAY OF ……..20**

For …….

.....

(Name & Title)

For .....

.....

(Name & Title)

For .....

.....

(Name & Title)

Witnesses:

1.

2.

.....

(To be executed by all the members of the Consortium)

(To be submitted with Cover-I of Offer)

SCHEDULE 'O' SHEET – 1

The Bidders are also requested to furnish the following particulars:-

A) In case of Limited Company -

1) Name of Company :

2) Address of its present registered office. :

3) Date of its incorporation :

4) Full name and address of each of its Directors – any special particulars as to Directors if desire to be stated. :

5) Name, address and other necessary particulars of Managing Agents, if any appointed by the Company. :

6) Copies of Memorandum, Articles of Association (with the latest amendments, if any). :

7) Copies of audited balance sheets of the Company for the last two years. :

B) In case of a firm -

1) Name and address of the firm. :

2) When business started :

3) If registered a certified copy of certificate of registration. :

4) A certified copy of the Deed of Partnership :

5) Full name and address of each of the partners and the interest of each partner in the partnership – any special particulars as to partners if desired to be stated. :

6) Whether the firm pays income tax over Rs.10, 000/- per year :

(To be submitted with Cover-I of Offer)

SCHEDULE 'O' SHEET – 2.

C) In case of an Individual:

1) Full name and address of the Bidder any special particulars of the Bidder if desired to be stated. :

2) Name of the father of the Bidder. :

3) Whether the Bidder carries on business in his own name or any other name. :

4) When business was started and by whom. :

5) Whether any other person is interested in the business directly or indirectly, if so, name and address etc. of such persons and the nature of such interest. :

6) Whether the Bidder pays Income Tax over Rs.10, 000/- per year. :

Dated:

(Full signature of Bidder)

(TO BE SUBMITTED WITH COVER- I OFFER)

ABSTRACT FORM OF TENDER (UNPRICED)

I / We hereby tender for the under mentioned work for its execution within the specified time and in accordance, in all respects with the specifications, design, drawing and instructions in writing and with such materials as are provided for, by and in all other respects in accordance with such conditions so far as practicable.

(TO BE FILLED IN BY THE BIDDER)

(a) Name of Work.	:	**CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."**
(b) Estimated Cost.	:	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
(c) Earnest Money	:	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**
(d) Security Deposit (including Earnest money)	:	**As per provisions in the tender.**
(e) Time allowed for completion of the work	:	**24 (Twenty-four) months**
(f) Permanent I/T A/C No.	:	
(g) Maximum number of workmen to be engaged on any day.	:	

(h) Bank Details

Name of Bank: Branch:

Branch Code: Account Number:

IFS Code:-

TOTAL AMOUNT QUOTED BY ME / US IS : **NOT TO BE QUOTED IN COVER- I OFFER**

(Signature of the Bidder)

Witness: Address:

(Name in block letters)

Address:-

Occupation:-

(TO BE SUBMITTED WITH COVER- I OFFER)

THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA

FORM OF TENDER (UNPRICED)

General Manager (Engineering)
HALDIA DOCK COMPLEX

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

THE TOTAL AMOUNT OF TENDER Rs. NOT TO BE QUOTED IN COVER I OFFER

(Repeat in words) NOT TO BE QUOTED IN COVER I OFFER

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

I / We have deposited with the Trustees' General Manager (Finance), HDC, vide Receipt No. _____ of _____ as Earnest Money.

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

_____

Dated: (Signature of Bidder with Seal)

WITNESS :

Name of the Bidder :

Signature :

Name : Address :

(In Block letters)

Address :

Occupation :

TO BE FILLED- UP BY THE BIDDER

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST (JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

1	Declarations a) The bidding firm has not been debarred / delisted by any Govt / Quasi Govt. / Public sector undertaking in India. b) The proprietor / partner(s)/ authorised signatory of the bidding firm is/are not associated with other firm bidding for the same work.	Declaration submitted	Yes / No
	Rs 11800.00 as application money towards cost of tender documents.	Deposited	Yes / No
2	Earnest Money	Deposited	Yes / No
3	Declaration as per Annex-I that no conditions / deviations have been added in Volume-II in the tender offer.	Submitted on company's letter head.	Yes / No
4	PAN Card	Submitted	Yes / No
5	GST registration certificate	Submitted	Yes / No
6	Valid Trade License.	Valid up to	
		Submitted	Yes / No
7	Professional Tax Clearance Certificate. / Upto date tax payment challan.	Valid up to	
		Submitted	Yes / No
8	Valid Employees' Provident Fund Account	Submitted	Yes / No
		Photo copy of latest payment challan of EPF submitted	Yes / No
9	ESI registration	Submitted	Yes / No
		Photo copy of latest payment challan of ESI submitted	Yes / No
10	Details of firm as per schedule-O	Format fill-up	Yes / No
11	Concurrent Commitments of the Bidder	Format fill-up	Yes / No
12	Credential within seven years	i) Amount	
		ii) Amount	
		iii) Amount	
		Credentials as per pre-qualification criteria.	Yes / No
		Letter of award works and completion certificate from owners are enclosed.	Yes / No
13	Certified copies of audited balance sheet	i) Turnover amount and year	
		ii) Turnover amount and year	
		iii) Turnover amount and year	
		Certified by the statutory auditor	Yes / No
14	GCC Booklet and drawing duly signed under office seal	Submitted with signature	Yes /No

Signature of the bidder with seal

Annexure –E

DOCUMENTS

FOR

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: **KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**

VOLUME-II

Issued to:

Date of Issue:

Signature and Designation of Issuing Officer:

On behalf of Bidder:

Sr. Dy. Manager-IZ&R, (I&CF)
Haldia Dock Complex
Operational Building, Chiranjibpur
P.O. HALDIA – 721604
Purba Medinipur
Telefax No.: (03224) 252110

DOCUMENTS

FOR

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: **KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**

Volume-II

TENDER PARTICULARS

ESTIMATED COST	**:**	**Rs 77,37,05,672.06 (Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
EARNEST MONEY	**:**	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**
TIME OF COMPLETION	**:**	**24 (Twenty-four) months**
DATE AND TIME FOR PRE-BID MEETING & SITE VISIT	**:**	**Pre-bid Meeting on 11-06-2019 at 12:00 HRS at the office of General Manager (Engg), H.D.C at Jawahar Tower, Haldia.**
LAST DATE OF SUBMISSION OF E-TENDER AND OPENING OF COVER-I OF THE TENDER	**:**	**27-06-2019** **Submission Up to 15:00 hrs.** **Bid Document will be available on MSTC, Website.** **Bidders will have to participate in bidding process through website www.mstcecommerce.com only**

PREAMBLE TO THE BILL OF QUANTITIES

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

E -TENDER NO: KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16

1.1 The Bill of Quantities must be read with the General Conditions of Contract, the Special Conditions of Contract and the Particular Specifications of Work and the Bidder is deemed to have examined the above documents and to have thoroughly familiarise himself with the total scope of work and its mode of execution.

1.2 The quantities given in the Bill of Quantities are approximate only and are given to provide a common basis for tendering. Payment will be made according to the quantities of each item of work actually carried out at the accepted rates as per Order Letter. The measurements of each item of work shall be measured jointly by the Engineer or his Representative.

1.3 This being a percentage rate tender, the Bidder shall quote his rates as percentage above / below / at par with the estimated amount put to tender **on line** based on his own analysis.

1.4 Rates and Sums to be for Works Complete.

1.5 Notwithstanding any limits which may be implied by the wording of the individual items and/or the explanations in this Preamble, it is to be clearly understood by the Bidder that the rates and sums which he enters in the Bill of Quantities are to be for the work finished complete in every respect and the contractor will be deemed to have taken full account of all requirements and obligations, whether expressed or implied, covered by all parts of this Contract and to have priced the items herein accordingly. The rates and sums must therefore include for all incidental and contingent expenses and risks of every kind necessary to construct, complete and maintain the whole of the works in accordance with the contract.

No claim will be considered for further payment in respect of any work or method of execution which may be described in the Contract or is inherent in the construction of the work and detailed in the Drawings on account of (a) items having been omitted from the bill of Quantities or (b) any preamble or (c) no mention of such work or method of execution having been made in the Preamble.

1.6 The quantities for work and materials stated in the Bill of Quantities are not to be considered as limiting or extending the amount of work to be done or materials to be supplied by the Bidder.

1.7 The rates quoted by the Bidder shall remain valid for variations up to plus or minus 25% of the sum named in the Work Order excluding all fixed sums and provisional sums. The Contractor shall be bound to carry out the work at the accepted rates (whenever available) and shall not be entitled to any claim or compensation whatsoever up to the said limit of variations.

1.8 If there is any inconsistency between the Bill of Quantities, drawings or specifications, the description in the Bill of Quantities shall prevail.

1.9 The cost of preliminaries of works if any unless otherwise separately mentioned in Bill of Quantities shall be deemed to be included in the rates quoted by the bidder.

The Tender Price thus established would be taken for comparative evaluation of E-Tenderers.

****

BILL OF QUANTITIES

E-TENDER FOR "CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)."

Tender No.: I&CF/IZ&R/T/292

E -TENDER NO: **KoPT/Haldia Dock Complex/I&CF Div/7/19-20/ET/16**

SECTION-A (SERVICE PLATFORM)

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
1	**Setting up the piling gantry** and connected equipment over each pile location, including cost of shifting, cost of all materials for piling gantry, labour, setting up the rig to alignment and correct dimensions as shown in the drawing and as directed by the EIC.					
	Service Platform(1200mm dia)	31	Nos	160992.00	Nos.	4990752.00
2	**Providing and fabricating M.S.liners (8mm thick)** of required length with M.S. shoes of 1.0 m height using 12mm thick M.S. plates for 1200mm dia bored vertical pile measured from cut off level of pile to the terminating level including supplying, cutting, rolling, bending, handling and welding cost, labours, materials, accessories, etc., complete as per drawings and specification as directed by Engineer Incharge. Note:- 1.The stiffener shall be measured under this item. The liner shall be terminated at a depth as specified in the technical specifications of tender document.	179	MT	78714.03	MT	14089811.37
3	**Boring through all types of soils**, boulders, hard strata and rocks etc.. for 1200mm Dia vertical bored piles from the sea bed to the founding level (-)47 m CD of the piles, including bailing, chiselling, shifting of materials etc…complete as per directed by the Engineer Incharge	1240	Rm	4866.65	Rm	6034646.00
4	**Chiseling/Breaking** using suitable tools and equipments the top of pile concrete up to the receipt of dense concrete and dressing the pile head suitably so as to receive the form work for deck work , including breaking to the required level exposing the pile reinforcement to sufficient length as per approved drawing for embedding into the deck slab etc. including removal of concrete debris from the site,complete for the following dia of piles as directed by the EIC.					
	Service Platform(1200mm dia)	30	Nos	6246.27	Nos.	187388.10

[BOQ-2]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
5	Providing and laying **cast-in-situ tremie concrete mix M40 as per standards for 1200mm Nominal dia** vertical bored cast-in-situ reinforced cement concrete piles measured from cut off level of the pile upto founding level excluding cost of reinforcements and M.S liners but including mixing, laying and compacting , consolidating complete as per approved drawings, standard specifications and as directed by the Engineer Incharge.	1763	M^3	9431.38	M^3	16627522.94
6	Providing and laying reinforced cement concrete in concrete mix **M40 for pre-cast beams and pile muff** at casting yard, excluding cost of steel reinforcements in position as per approved drawing and as directed by the EIC including mixing, laying, consolidating, curing, loading at casting yard, conveying from casting yard to site of placing (including handling), unloading and placing in position by suitable method including all labours, slings, shackles and required machineries such as cranes, lorries and pontoons etc., complete as directed by the EIC.	406	M^3	9998.05	M^3	4059208.30
7	Providing and laying cement concrete in **M40 mix for cast-in-situ deck concrete works** as per drawings, excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	981	M^3	8862.66	M^3	8694269.46
8	Providing and placing in-situ grade **M40 for wearing coat concrete over the deck slab**, all as per drawings with necessary shuttering, mixing, transporting, placing, vibrating, finishing and curing the concrete including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete as per EIC.	49	M^3	8862.66	M^3	434270.34
9	Supplying, fabricating and placing of **TMT, Fe500D grade steel for pile reinforcement cage in piles** including welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc., complete as directed by EIC.	226	MT	75712.76	MT	17111083.76

[BOQ-3]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
10	Supplying, fabricating and **placing of TMT, Fe500D grade steel bars for Pile muff**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	4	MT	75712.76	MT	302851.04
11	Supplying, fabricating and **placing of TMT, Fe500D grade steel bars for beams & Columns**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	65	MT	75712.76	MT	4921329.40
12	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for Slab**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	62	MT	75712.76	MT	4694191.12
13	Providing and **fixing G.I pipe hand railing 900mm high (above deck level) with vertical M.S post** c/c distance 1.5m with 40mm nominal bore G.I pipes horizontally fixed in two rows including epoxy painting as directed by EIC.	1.00	MT	75712.76	MT	75712.76
14	**Chipping /cutting of rebars and removal of Existing piles**, including removal of concrete debris from the site,complete for 1000mm dia of piles as directed by the EIC	71	M^3	7826.00	M^3	555646.00
15	**Conducting High Strain Dynamic Test on 1200mm dia pile** as per standard practices (ASTMD4945of1989) The rate is inclusive of testing, hire charges for all equipments like transducers, strain gauge, oscilloscope hammer crane and cost of development of pile concrete with liner and dismantling the developed length of concrete, transportation of equipment, labour and furnishing the test result but exclusive of cost of concreting & reinforcement,, complete and as directed by the EIC. The payment for concreting and reinforcement shall be made under the respective items.	1	NOS	150259.20	NOS	150259.20
				Total = Rs.		**82928941.79**

[BOQ-4]

SECTION-B (BERTHING DOLPHIN) - 4Nos

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
1	**Setting up the piling gantry** and connected equipment over each pile location, including cost of shifting, cost of all materials for piling gantry, labour, setting up the rig to alignment and correct dimensions as shown in the drawing and as directed by the EIC.					
	Berthing Dolphin (1400mm dia)- 4 nos	60	Nos	184013.86	Nos	11040831.60
2	**Providing and fabricating M.S.liners(8mm thick) of required length with M.S. shoes of 1.0 m height using 12mm** thick M.S. plates for 1400mm dia bored vertical pile measured from cut off level of pile to the terminating level including supplying, cutting, rolling, bending, handling and welding cost, labours, materials, accessories, etc., complete as per drawings and specification as directed by Engineer Incharge. Note:- 1.The stiffener shall be measured under this item. The liner shall be terminated at a depth as specified in the technical specifications of tender document.	434	MT	78714.03	MT	34161889.02
3	**Boring through all types of soils,** boulders, hard strata and rocks etc.. for 1400mm Dia vertical bored piles from the sea bed to the founding level (-) 47m CD of the piles, including bailing, chiselling, shifting of materials etc…complete as directed by the Engineer Incharge	2400	Rm	4866.65	Rm	11679960.00
4	**Chiseling/Breaking** using suitable tools and equipments the top of pile concrete up to the receipt of dense concrete and dressing the pile head suitably so as to receive the form work for deck work , including breaking to the required level exposing the pile reinforcement to sufficient length as per approved drawing for embedding into the deck slab etc. including removal of concrete debris from the site, complete for the following dia of piles as directed by the EIC.					
	Berthing Dolphin (1400mm dia)-4nos	60	Nos	6246.27	Nos.	374776.20

[BOQ-5]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
5	Providing and laying **cast-in-situ tremie concrete mix M40 as per standards for 1400mm Nominal dia** vertical bored cast-in-situ reinforced cement concrete piles measured from cut off level of the pile upto founding level excluding cost of reinforcements and M.S liners but including mixing, laying and compacting , consolidating complete as per approved drawings, standard specifications and as directed by the Engineer Incharge.	4612	M^3	9253.14	M^3	42675481.68
6	**Providing and laying reinforced cement concrete in concrete mix M40 for pre-cast beams** and pile muff at casting yard, excluding cost of steel reinforcements in position as per approved drawing and as directed by the EIC including mixing, laying, consolidating, curing, loading at casting yard, conveying from casting yard to site of placing (including handling), unloading and placing in position by suitable method including all labours, slings, shackles and required machineries such as cranes, lorries and pontoons etc., complete as directed by the EIC.	720	M^3	9431.38	M^3	6790593.60
7	**Providing and laying cement concrete in M40 mix for cast-in-situ deck concrete works as per drawings,** excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	2277	M^3	8862.66	M^3	20180276.82
8	Providing and placing in-situ grade **M40 for wearing coat concrete over the deck slab,** all as per drawings with necessary shuttering, mixing, transporting, placing, vibrating, finishing and curing the concrete including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete as per EIC.	97	M^3	8862.66	M^3	859678.02

[BOQ-6]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
9	Supplying, fabricating and placing of TMT, **Fe500D grade steel for Pile reinforcement cage in piles** including welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc., complete as directed by EIC.	1098	MT	75712.76	MT	83132610.48
10	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for Pile muff,** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	10	MT	75712.76	MT	757127.60
11	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for beams,Columns** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	146	MT	75712.76	MT	11054062.96
12	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for Slab,** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	118	MT	75712.76	MT	8934105.68
13	Providing and fixing **G.I pipe hand railing 900mm high (above deck level) with vertical M.S post c/c distance 1.5m with 40mm nominal bore G.I pipes** horizontally fixed in two rows including epoxy painting as directed by EIC.	1	MT	75712.76	MT	75712.76

[BOQ-7]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
14	**Supplying, handling, transporting and fixing in position of Dual Cone type fender [DCN 1100H (R1.3)]** with anchor bolts, U hooks, Chains shall be G.I coating with 80 micron including cutting, concrete chipping, drilling, grouting, necessary welding with deck reinforcement steel and necessary coal tar painting(wherever required) including all materials, labour, consumable items, machineries, tools, tackles, transportation etc... as per specification and complete as per directed by Engineer- In -Charge.	4	Nos	2500000.00	Nos.	10000000.00
15	**Supplying and fixing in position Quick Release hook** of required capacity all as per specification and drawing including concrete and provision of galvanised hold down bolts, nuts, washers and painting the bollards as per specification and all as directed including all labour, materials, tools equipments, fuel, transport, etc., as directed by EIC. Quick release Hooks - Double hook Mooring unit - 80 M.T S.W.L (Capacity of the base - 160 M.T.)	4	sets	4339500.00	sets	17358000.00
16	Fabrication and fixing of **steel ladder hot dip with G.I coating 80micron** of size (2.80m x 0.44m) using 75 x 20 mm .M.S Flat (2Nos. 2.80m)and 25mm dia M.S bar 44cm long at 30cm . Centre as cross bars and to welded with 2 nos . M.S flat (75 x 20mm) to a length of 35cm with 7cm length 25mm dia M.S bar (cross wire) to hold the ladder, drilling holes at M.S flat for holding M.S bar and welded and painting the steel ladder with one coat of red oxide primer and two coats of anti-corrosive black paint and fixing the ladder in the sea side wharf as per standard specifications and as directed by the EIC. The cost inclusive of all materials and fabrication charges, labour for fixing in position etc. complete complying with AISS and as directed by the EIC.	4	Nos	7880.78	Nos.	31523.12
17	**Supply and fixing of Mooring ring** 32mm dia 225 mm outer diameter stainless steel .	8	Each	1751.51	Each	14012.08
					Total = Rs.	**259120641.62**

[BOQ-8]

SECTION-C (APPROACH TRESTLE)

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
1	**Setting up the piling gantry** and connected equipment over each pile location, including cost of shifting, cost of all materials for piling gantry, labour, setting up the rig to alignment and correct dimensions as shown in the drawing and as directed by the EIC.					
	Approach Trestle (1000mm dia)	58	Nos	120744.00	Nos.	7003152.00
2	**Providing and fabricating M.S.liners** (8mm thick) of required length with M.S. shoes of 1.0 m height using 12mm thick M.S. plates for 1000mm dia bored vertical pile measured from cut off level of pile to the terminating level including supplying, cutting, rolling, bending, handling and welding cost, labours, materials, accessories, etc., complete as per drawings and specification as directed by Engineer- In-Charge. Note:- 1.The stiffener shall be measured under this item. The liner shall be terminated at a depth as specified in the technical specifications of tender document.	294	MT	78714.03	MT	23141924.82
3	**Boring through all types of soils**, boulders, hard strata and rocks etc.. for 1000mm Dia vertical bored piles from the sea bed to the founding level (-)45 CD of the piles, including bailing, chiselling, shifting of materials etc…complete as per directed by the Engineer Incharge	2204	Rm	4866.65	Rm	10726096.60
4	**Chiseling/Breaking** using suitable tools and equipments the top of pile concrete up to the receipt of dense concrete and dressing the pile head suitably so as to receive the form work for deck work, including breaking to the required level exposing the pile reinforcement to sufficient length as per approved drawing for embedding into the deck slab etc. including removal of concrete debris from the site,complete for the following dia of piles as directed by the EIC.					
	Approach Trestle (1000mm dia)	58	Nos	6246.27	Nos	362283.66

[BOQ-9]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
5	**Providing and laying cast-in-situ tremie concrete mix M40 as per standards for 1000mm Nominal dia** vertical bored cast-in-situ reinforced cement concrete piles measured from cut off level of the pile upto founding level excluding cost of reinforcements and M.S liners but including mixing, laying and compacting , consolidating complete as per approved drawings, standard specifications and as directed by the Engineer Incharge.	2199	M^3	9431.38	M^3	20739604.62
6	**Providing and laying reinforced cement concrete in concrete mix M40 for pre-cast beams, slab and pile muff** at casting yard, excluding cost of steel reinforcements in position as per approved drawing and as directed by the EIC including mixing, laying, consolidating, curing, loading at casting yard, conveying from casting yard to site of placing (including handling), unloading and placing in position by suitable method including all labours, slings, shackles and required machineries such as cranes, lorries and pontoons etc., complete as directed by the EIC.	724	M^3	9998.05	M^3	7238588.20
7	Providing and laying cement concrete in **M40 mix for cast-in-situ deck concrete works** as per drawings, excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	500	M^3	8862.66	M^3	4431330.00
8	Providing and placing in-situ grade **M40 for wearing coat concrete over the deck slab**, all as per drawings with necessary shuttering, mixing, transporting, placing, vibrating, finishing and curing the concrete including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete as directed by the EIC.	131	M^3	8862.66	M^3	1161008.46

[BOQ-10]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
9	Providing and laying cement concrete in **M40 mix for cast-in-situ kerb wall, pathway concrete** as per drawings, excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	47	M^3	8862.66	M^3	416545.02
10	Supplying, fabricating and **placing of TMT, Fe500D grade steel for pile reinforcement cage in piles** including welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc., complete as directed by EIC.	223	MT	75712.76	MT	16883945.48
11	Supplying, fabricating and **placing of TMT, Fe500D grade steel bars for Pile muff**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	14	MT	75712.76	MT	1059978.64
12	Supplying, fabricating and **placing of TMT, Fe500D grade steel bars for beams & Columns** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	204	MT	75712.76	MT	15445403.04
13	Supplying, fabricating and **placing of TMT, Fe500D grade steel bars for Slab**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	98	MT	75712.76	MT	7419850.48
14	Supplying, fabricating and **placing of TMT, Fe500D grade steel bars for Slab**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	5	MT	75712.76	MT	378563.80

[BOQ-11]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
15	Providing and fixing **G.I pipe railing 900mm high (above deck level) with vertical M.S post c/c** distance 1.5m with 40mm nominal bore G.I pipes horizontally fixed in two rows including epoxy painting as directed by EIC.	2.00	MT	75712.76	MT	151425.52
16	**Conducting High Strain Dynamic Test on 1000mm dia pile** as per standard practices (ASTMD4945of1989) The rate is inclusive of testing, hire charges for all equipments like transducers, strain gauge, oscilloscope hammer crane and cost of development of pile concrete with liner and dismantling the developed length of concrete, transportation of equipment, labour and furnishing the test result but exclusive of cost of concreting & reinforcement,, complete and as directed by the EIC. The payment for concreting and reinforcement shall be made under the respective items.	1	NOS	150259.20	NOS	150259.20
				Total = Rs.		**116709959.54**

[BOQ-12]

SECTION-D (MOORING DOLPHIN) - 4 Nos

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
1	**Setting up the piling gantry** and connected equipment over each pile location, including cost of shifting, cost of all materials for piling gantry, labour, setting up the rig to alignment and correct dimensions as shown in the drawing and as directed by the EIC.					
	Mooring Dolphin (1400mm dia)- 4nos	37	Nos	184013.86	Nos	6808512.82
2	Providing and **fabricating M.S.liners (8mm thick) of required length** with M.S. shoes of 1.0 m height using 12mm thick M.S. plates for 1400mm dia bored vertical pile measured from cut off level of pile to the terminating level including supplying, cutting, rolling, bending, handling and welding cost, labours, materials, accessories, etc., complete as per drawings and specification as directed by Engineer Incharge. Note:- 1.The stiffener shall be measured under this item. The liner shall be terminated at a depth as specified in the technical specifications of tender document.	255	MT	78714.03	MT	20072077.65
3	**Boring through all types of soils**, boulders, hard strata and rocks etc.. for 1400mm Dia vertical bored piles from the sea bed to the founding level (-) 45m CD of the piles, including bailing, chiselling, shifting of materials etc…complete as per directed by the Engineer Incharge	1406	Rm	4866.65	Rm	6842509.90
4	**Chiseling/Breaking** using suitable tools and equipments the top of pile concrete up to the receipt of dense concrete and dressing the pile head suitably so as to receive the form work for deck work , including breaking to the required level exposing the pile reinforcement to sufficient length as per approved drawing for embedding into the deck slab etc. including removal of concrete debris from the site,complete for the following dia of piles as directed by the EIC.					
	Mooring Dolphin (1400mm dia)- 4nos	37	Nos	6246.27	Nos	231111.99

[BOQ-13]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
5	**Conducting High Strain Dynamic Test on 1400mm dia pile** as per standard practices (ASTMD4945of1989) The rate is inclusive of testing, hire charges for all equipments like transducers, strain gauge, oscilloscope hammer crane and cost of development of pile concrete with liner and dismantling the developed length of concrete, transportation of equipment, labour and furnishing the test result but exclusive of cost of concreting & reinforcement, complete and as directed by the EIC. The payment for concreting and reinforcement shall be made under the respective items.	1	Nos	150259.20	Nos	150259.20
6	Providing and laying **cast-in-situ tremie concrete mix M40 as per standards for 1400mm Nominal dia** vertical bored cast-in-situ reinforced cement concrete piles measured from cut off level of the pile upto founding level excluding cost of reinforcements and M.S liners but including mixing, laying and compacting , consolidating complete as per approved drawings, standard specifications and as directed by the Engineer Incharge.	2756	M^3	9431.38	M^3	25992883.28
7	Providing and laying reinforced cement concrete in concrete mix **M40 for pre-cast beams and pile muff at casting yard**, excluding cost of steel reinforcements in position as per approved drawing and as directed by the EIC including mixing, laying, consolidating, curing, loading at casting yard, conveying from casting yard to site of placing (including handling), unloading and placing in position by suitable method including all labours, slings, shackles and required machineries such as cranes, lorries and pontoons etc., complete as directed by the EIC.	544	M^3	9998.05	M^3	5438939.20
8	Providing and laying cement concrete in **M40 mix for cast-in-situ deck concrete works** as per drawings, excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	1468	M^3	8862.66	M^3	13010384.88

[BOQ-14]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
9	Providing and placing in-situ grade **M40 for wearing coat concrete over the deck slab**, all as per drawings with necessary shuttering, mixing, transporting, placing, vibrating, finishing and curing the concrete including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete as per EIC.	80	M^3	8862.66	M^3	709012.80
10	Supplying, fabricating and placing of TMT, **Fe500D grade steel for pile reinforcement cage in piles** including welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc., complete as directed by EIC.	413	MT	75712.76	MT	31269369.88
11	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for Pile muff,** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	4	MT	75712.76	MT	302851.04
12	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for beams, Columns** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	90	MT	75712.76	MT	6814148.40
13	Supplying, fabricating and placing of TMT, **Fe500D grade steel bars for Slab**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	102	MT	75712.76	MT	7722701.52
14	Providing and fixing **G.I pipe railing 900mm high (above deck level) with vertical M.S post** c/c distance 1.5m with 40mm nominal bore G.I pipes horizontally fixed in two rows including epoxy painting as directed by EIC.	1	MT	75712.76	MT	75712.76

[BOQ-15]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
15	Supplying and fixing in position **Quick Release hook** of required capacity all as per specification and drawing including concrete and provision of galvanised hold down bolts, nuts, washers and painting the bollards as per specification and all as directed including all labour, materials, tools equipments, fuel, transport, etc., as directed by EIC. Quick release Hooks - Triple hook Mooring unit - 80 M.T S.W.L. (Capacity of the base - 240 M.T.)	4	sets	4339500.00	sets	17358000.00
16	Fabrication and **fixing of steel ladder hot dip with G.I coating 80 micron** of size (2.80m x 0.44m) using 75 x 20 mm .M.S Flat (2Nos. 2.80m)and 25mm dia M.S bar 44cm long at 30cm . Centre as cross bars and to welded with 2 nos . M.S flat (75 x 20mm) to a length of 35cm with 7cm length 25mm dia M.S bar (cross wire) to hold the ladder, drilling holes at M.S flat for holding M.S bar and welded and painting the steel ladder with one coat of red oxide primer and two coats of anti-corrosive black paint and fixing the ladder in the sea side wharf as per standard specifications and as directed by the EIC. The cost inclusive of all materials and fabrication charges, labour for fixing in position etc. complete complying with AISS and as directed by the EIC.	4	Nos	7880.78	Nos	31523.12
17	Supply and **fixing of Mooring ring 32mm dia** 225 mm outer diameter stainless steel .	8	Nos	1751.51	Nos	14012.08
					Total= Rs.	**142844010.52**

[BOQ-16]

(SECTION-E) WALK WAY - 4 Nos

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
1	**Setting up the piling gantry** and connected equipment over each pile location, including cost of shifting, cost of all materials for piling gantry, labour, setting up the rig to alignment and correct dimensions as shown in the drawing and as directed by the EIC. Walkway (1000mm dia)- 4nos	48	Nos	120744.00	Nos	5795712.00
2	Providing and fabricating **M.S.liners** (8mm thick) of required length with M.S. shoes of 1.0 m height using 12mm thick M.S. plates for 1000mm dia bored vertical pile measured from cut off level of pile to the terminating level including supplying, cutting, rolling, bending, handling and welding cost, labours, materials, accessories, etc., complete as per drawings and specification as directed by Engineer Incharge. Note:- 1. The stiffener shall be measured under this item. The liner shall be terminated at a depth as specified in the technical specifications of tender document.	242	MT	78714.03	MT	19048795.26
3	**Boring** through all types of soils, boulders, hard strata and rocks etc.. for 1000mm Dia vertical bored piles from the sea bed to the founding level (-) 45m CD of the piles, including bailing, chiselling, shifting of materials etc…complete as per directed by the Engineer Incharge	1824	Rm	4866.65	Rm	8876769.60
4	**Chiseling/Breaking** using suitable tools and equipments the top of pile concrete up to the receipt of dense concrete and dressing the pile head suitably so as to receive the form work for deck work, including breaking to the required level exposing the pile reinforcement to sufficient length as per approved drawing for embedding into the deck slab etc. including removal of concrete debris from the site, complete for the following dia of piles as directed by the EIC. Walkway (1000mm dia)- 4nos	48	Nos	6246.27	Nos	299820.96

[BOQ-17]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
5	Providing and laying **cast-in-situ tremie concrete** mix M40 as per standards for 1000mm Nominal dia vertical bored cast-in-situ reinforced cement concrete piles measured from cut off level of the pile upto founding level excluding cost of reinforcements and M.S liners but including mixing, laying and compacting , consolidating complete as per approved drawings, standard specifications and as directed by the Engineer Incharge.	1820	M^3	9431.38	M^3	17165111.60
6	Providing and laying reinforced cement concrete in concrete mix M40 **for pre-cast beams, slab and pile muff** at casting yard, excluding cost of steel reinforcements in position as per approved drawing and as directed by the EIC including mixing, laying, consolidating, curing, loading at casting yard, conveying from casting yard to site of placing (including handling), unloading and placing in position by suitable method including all labours, slings, shackles and required machineries such as cranes, lorries and pontoons etc., complete as directed by the EIC.	787	M^3	9998.05	M^3	7868465.35
7	Providing and laying cement concrete in M40 mix for **cast-in-situ deck concrete** works as per drawings, excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	477	M^3	8862.66	M^3	4227488.82
8	Providing and placing in-situ grade M40 for **wearing coat concrete** over the deck slab, all as per drawings with necessary shuttering, mixing, transporting, placing, vibrating, finishing and curing the concrete including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete as directed by the EIC.	27	M^3	8862.66	M^3	239291.82
9	Supplying, fabricating and placing of TMT, Fe500D grade steel for **pile reinforcement** cage in piles including welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc., complete as directed by EIC.	333	MT	75712.76	MT	25212349.08

[BOQ-18]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
10	Supplying, fabricating and placing of TMT, Fe500D grade steel bars **for Pile muff**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	12	MT	75712.76	MT	908553.12
11	Supplying, fabricating and placing of TMT, Fe500D grade steel bars **for beams**, **Columns** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	107	MT	75712.76	MT	8101265.32
12	Providing and fixing **G.I pipe hand railing** 900mm high (above deck level) with vertical M.S post c/c distance 1.5m with 40mm nominal bore G.I pipes horizontally fixed in two rows including epoxy painting as directed by EIC.	4	MT	75712.76	MT	302851.04
					Total = Rs.	**98046473.97**

[BOQ-19]

SECTION-F (Escape Route/Emergeny Exit) - 2 Nos

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
1	**Setting up the piling gantry** and connected equipment over each pile location, including cost of shifting, cost of all materials for piling gantry, labour, setting up the rig to alignment and correct dimensions as shown in the drawing and as directed by the EIC. Escape Route (1000mm dia)- 2 Nos.	36	Nos	120744.00	Nos	4346784.00
2	Providing and fabricating **M.S.liners** (8mm thick) of required length with M.S. shoes of 1.0 m height using 12mm thick M.S. plates for 1000mm dia bored vertical pile measured from cut off level of pile to the terminating level including supplying, cutting, rolling, bending, handling and welding cost, labours, materials, accessories, etc., complete as per drawings and specification as directed by Engineer Incharge. Note:- 1.The stiffener shall be measured under this item. The liner shall be terminated at a depth as specified in the technical specifications of tender document.	183	MT	78714.03	MT	14404667.49
3	**Boring** through all types of soils, boulders, hard strata and rocks etc. for 1000mm Dia vertical bored piles from the sea bed to the founding level (-)45m CD of the piles, including bailing, chiselling, shifting of materials etc…complete as per directed by the Engineer- In-Charge	1368	Rm	4866.65	Rm	6657577.20
4	**Chiseling/Breaking** using suitable tools and equipments the top of pile concrete up to the receipt of dense concrete and dressing the pile head suitably so as to receive the form work for deck work, including breaking to the required level exposing the pile reinforcement to sufficient length as per approved drawing for embedding into the deck slab etc. including removal of concrete debris from the site, complete for the following dia of piles as directed by the EIC. Escape Route (1000mm dia)- 2nos	36	Nos	6246.27	Nos	224865.72

[BOQ-20]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
5	Providing and laying **cast-in-situ tremie** concrete mix M40 as per standards for 1000mm Nominal dia vertical bored cast-in-situ reinforced cement concrete piles measured from cut off level of the pile upto founding level excluding cost of reinforcements and M.S liners but including mixing, laying and compacting, consolidating complete as per approved drawings, standard specifications and as directed by the Engineer- In-Charge.	1365	M^3	9431.38	M^3	12873833.70
6	Providing and laying reinforced cement concrete in concrete mix M40 for **pre-cast beams, slab and pile muff** at casting yard, excluding cost of steel reinforcements in position as per approved drawing and as directed by the EIC including mixing, laying, consolidating, curing, loading at casting yard, conveying from casting yard to site of placing (including handling), unloading and placing in position by suitable method including all labours, slings, shackles and required machineries such as cranes, lorries and pontoons etc., complete as directed by the EIC.	605	M^3	9998.05	M^3	6048820.25
7	Providing and laying cement concrete in M40 mix for **cast-in-situ deck concrete** works as per drawings, excluding cost of reinforcement in position and including shuttering, mixing, laying, consolidating , curing etc., and making necessary provision for fixing fixtures as per approved drawings complete as directed by the EIC.	326	M^3	8862.66	M^3	2889227.16
8	Providing and placing in-situ grade M40 for **wearing coat** concrete over the deck slab, all as per drawings with necessary shuttering, mixing, transporting, placing, vibrating, finishing and curing the concrete including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete as directed by the EIC.	21	M^3	8862.66	M^3	186115.86
9	Supplying, fabricating and placing of TMT, Fe500D grade steel for **pile reinforcement** cage in piles including welding, binding, with binding wire all as per drawing, technical specifications and including all labour, materials, tools transport, cage lowering, equipments, fuel etc., complete as directed by EIC.	258	MT	75712.76	MT	19533892.08

[BOQ-21]

It. No.	Description of Item	Quantity		Rate (Rs P)	Unit	Amount (Rs P)
10	Supplying, fabricating and placing of TMT, Fe500D grade steel bars **for Pile muff**, including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	9	MT	75712.76	MT	681414.84
11	Supplying, fabricating and placing of TMT, Fe500D grade steel bars **for beams**, **Columns** including lifting hooks for precast units and cutting, bending, welding, binding wire all as per technical specification, drawing, including all labour, materials tools, equipment, fuel and all sampling, testing and records etc., complete.	79	MT	75712.76	MT	5981308.04
12	Providing and fixing **G.I pipe hand railing** 900mm high (above deck level) with vertical M.S post c/c distance 1.5m with 40mm nominal bore G.I pipes horizontally fixed in two rows including epoxy painting as directed by EIC.	3	MT	75712.76	MT	227138.28
				Total = Rs.		**74055644.62**

Name of Work: **Construction of Liquid Cargo Handling Jetty (Outer Terminal-II) near 2nd Oil Jetty on the river Hooghly at Haldia Dock Complex, Kolkata Port Trust (Jetty Structure including Escape Route).**		
ABSTRACT		
Item.No	**Description of Work**	**Total Amount in (Rs.)**
1	(Section -A) Service Platform	**82928941.79**
2	(Section - B) Berthing Dolphin	**259120641.62**
3	(Section - C) Approach Trestle	**116709959.54**
4	(Section - D) Mooring Dolphin	**142844010.52**
5	(Section - E) Walkway	**98046473.97**
6	(Section - F) Escape Route (Emergeny Exit)	**74055644.62**
	Total Amount = Rs.	**77,37,05,672.06**
	(Total Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)	

ABSTRACT FORM OF TENDER

I / We hereby tender for the under mentioned work for its execution within the specified time and in accordance, in all respects with the specifications, design, drawing and instructions in writing and with such materials as are provided for, by and in all other respects in accordance with such conditions so far as practicable.

(TO BE FILLED IN BY THE BIDDER)

(a) Name of Work.	:	**CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL-II) NEAR 2ND OIL JETTY ON THE RIVER HOOGHLY AT HALDIA DOCK COMPLEX, KOLKATA PORT TRUST(JETTY STRUCTURE INCLUDING ESCAPE ROUTE)**
(b) Estimated Cost.	:	**Rs 77,37,05,672.06 (Total Rupees Seventy Seven Crores Thirty Seven Lakhs Five Thousand Six Hundred Seventy Two and Six paise Only)**
(c) Earnest Money	:	**Rs 87,37,100.00 (Rupees Eighty Seven Lakh Thirty Seven Thousand One Hundred Only)**
(d) Security Deposit (including Earnest money)	:	As per provisions in the tender.
(e) Time allowed for completion of the work	:	**24 (Twenty-four) months**
(f) Permanent I/T A/C No.	:	
(g) Maximum number of workmen to be engaged on any day.	:	

(h) Bank Details

Name of Bank: **Branch:**

Branch Code: **Account Number:**

IFS Code:-

TOTAL AMOUNT QUOTED BY ME/US IS : _____

(THE BIDDER IS NOT TO QUOTE IN THIS PAGE.THE PRICE BID WILL BE QUOTED ON LINE)

(Signature of the Bidder)

Witness: - Address:

(Name in block letters)

Address:

Occupation:

THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA

FORM OF TENDER

General Manager (Engineering)
HALDIA DOCK COMPLEX

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

THE TOTAL AMOUNT OF TENDER Rs. **Will be quoted online**

(Repeat in words) . **Will be quoted online**

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

I / We have deposited with the Trustees' General Manager (Finance), HDC, vide Receipt No. _____ of _____ as Earnest Money.

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

Dated: (Signature of Bidder with Seal)

WITNESS :

Signature : Name of the Bidder :

Name : Address :

(In Block Letters)

Address :

Occupation :

Annexure F

General Conditions of Contract

General Conditions of Contract Forms and Agreements

Sanctioned by the Trustees under Resolution No. 92 of the 6th Meeting held on 27th May, 1993

Including Addendum Sanctioned by the Trustees Meeting held on July, 2014

KOLKATA PORT TRUST

KOLKATA DOCK SYSTEM
& HALDIA DOCK COMPLEX

JULY, 2014

GENERAL CONDITIONS OF CONTRACT

AMENDMENT
TO
GENERAL CONDITIONS OF CONTRACT

❖ *Cl-3.4 THE TENDER /OFFER & ITS PRE-REQUISITES*

Table under sub-clause (a)

PREVIOUS			AS AMENDED			
			For works contract		For Contract of Supplying Materials or Equipment only	
	For Works Contract	For Contract of Supplying Materials or Equipment only	Estimated value of work	Amount of Earnest money	Estimated value of work	Amount of Earnest Money
Up to Rs. 1,00,000.00	5% of the estimated value of work	1% of the estimated value of work	Up to Rs. 10 Crore	2% of the estimated value of work	Up to Rs. 1,00,000.00	1% of the estimated value of work
Over Rs. 1,00,000.00	2% of the estimated value of work subject to a maximum of Rs. 20,000/- and minimum of Rs. 5,000/-.	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.	Over Rs. 10 Crore	2% on first Rs. 10 Crore + 1% on the balance	Over Rs. 1,00,000.00	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.

[AMENDMENT SANCTIONED BY THE BOARD OF TRUSTEES VIDE RESOLUTION NO 210 OF THE TRUSTEES' MEETING HELD ON 26.02.2013]

Table under sub-clause (d)

PREVIOUS			AS AMENDED		
Class of Registra-tion	Amount Of Fixed Security	Financial Limit Of Each Tender	Class of Registra-tion	Amount Of Fixed Security	Financial Limit Of Each Tender
A	Rs 10,000/-	Any tender priced upto Rs 2,00,000/-	**A**	Rs 50,000/-	Any tender priced up to Rs 10,00,000/-
B	Rs 5,000/-	Any tender priced upto Rs 1,00,000/-	**B**	Rs 25,000/-	Any tender priced upto Rs 5,00,000/-
C	Rs 2,500/-	Any tender priced upto Rs 50,000/-	**C**	Rs 15,000/-	Any tender priced upto Rs 3,00,000/-

[AMENDMENT SANCTIONED BY THE BOARD OF TRUSTEES VIDE RESOLUTION NO 82 OF THE TRUSTEES' MEETING HELD ON 12.10.2012]

1. DEFINITIONS

1.0	In the contract, as here in after defined, the following words and expressions shall have the meaning herein assigned to them, except where the context otherwise required.	
1.1	"Employer" or "Board" or "Trustees" means of the Board of Trustees for the Port of Calcutta, a body corporate under Section 3 of the Major Port Trusts Act, 1963, including their successors, representatives and assigns.	Employer
1.2	"Chairman" means the Chairman of the Board and includes the person appointed to act in his place under Sections 14 and 14A of the Major Port Trusts Act, 1963	Chairman
1.3	"Contractor" means the person or persons, Firm or Company whose tender/offer has been accepted by the Trustees and includes the Contractor's representatives, heirs, successor and assigns, if any, permitted by the Board/Chairman.	Contractor
1.4	"Engineer" means the Board's official who has invited the tender on its behalf and includes the Manager (Infrastructure & Civic Facilities) or other official as may be appointed from time to time by the Employer, with written notification to the Contractor, to act as Engineer for the purpose of the Contract, in place of the "Engineer" so designated.	Engineer
1.5	"Engineer's Representative" means any subordinate or Assistant to the Engineer or any other official appointed from time to time by the Engineer to perform the duties set forth in Clauses 2.4 to 2.6 hereof.	Engineer's Representative
1.6	"Work" means the work to be executed in accordance with the Contract and includes authorised "Extra Works" and 'Excess Works" and "Temporary Works".	Works
1.7	"Temporary Works" means all temporary works of every kind required in or about the execution, completion or maintenance of the works and includes (without thereby limiting the foregoing definitions) all temporary erections, scaffolding, ladders, timbering, soaking vats, site offices, cement and other godowns, platforms and bins for stacking building materials, gantries, temporary tracks and roads, temporary culverts and mixing platforms.	Temporary works
1.8	"Extra Works" means those works required by the Engineer for completion of the Contract which were not specifically and separately included in the schedule of items of the works i.e. (Bill of Quantities) of the tender. "Excess Works" means the required quantities of work in excess of the provision made against any item of the bill of Quantities.	Extra works and Excess works
1.9	"Specifications" means the relevant and appropriate Bureau of Indian Standard's specifications / International Standard's Specifications (latest revisions) for materials and workmanship unless stated otherwise in the Tender.	Specification

1.10	"Drawings" means the drawings referred to in the Tender and specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.	Drawings
1.11	"Contract" means and includes the General and Special Conditions of Contract, Specifications, Drawings, priced Bill of Quantities, the Tender / Offer, the letter of acceptance of the Tender/Offer, the Contract Agreement, if separately entered into and the Schedule of Rates and Price, if any, adopted by the Trustees at their discretion.	Contract
1.12	"Constructional Plant" means all appliances or things of whatsoever nature required or about the execution, completion or maintenance of the works or temporary works and includes (without thereby limiting the foregoing definition) all machinery and tools but does not include materials or other things intended to form or forming part of the permanent works.	Construction al Plant
1.13	"Site" means the land, waterways and other places, on, under, in or THROUGH which the works are to be executed by the Trustees for the purpose of the Contract.	Site
1.14	"Contract Price" means the sum named in the letter of acceptance of the Tender/Offer of the Contractor, subject to such additions thereto and deductions therefrom as may be made by the Engineer under the provisions here in after contained.	Contract Price
1.15	"Month" means English Calendar Month.	Month
1.16	"Excepted Risks" are riot in so far as it is uninsurable, war, invasion, act of foreign enemies, hostilities) whether war be declared or not), Civil War, rebellion, revolution, insurrection or military or usurped power or use or occupation by the Trustees of any portion of the works in respect of which a certificate of completion has been issued (all of which are herein collectively referred to as the excepted risks).	Excepted Risks
1.17	Word importing the singular only, also includes the plural and vice-versa where the context so requires.	Singular/ Plural
1.18	The heading and marginal notes in these General Conditions of Contract shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.	Headings/ Marginal Notes.
1.19	Unless otherwise stipulated the work "Cost" shall be deemed to include overhead costs of the Contractor, whether on or off the site.	Cost
2.0	DUTIES & POWERS OF ENGINEER & ENGINEER'S REPRESENTATIVE.	
2.1	The Contractor shall execute, compete and maintain the works in terms of the contract to the entire satisfaction of the Engineer and Shall comply with the Engineer's direction on any matter whatsoever.	Engineer's Authority

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

2.3 *The Engineer shall have full power and authority :* Engineer's Power

(a) to supply to the contractor from time to time during the progress of the works such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the contractor shall carry out and be bound by the same.

(b) to alter or modify the specification of any material and workmanship and to inspect the work at any time.

(c) to order for any variation, alteration and modification of the work and for extra works.

(d) to issue certificates as per contract.

(e) to settle the claims & disputes of the Contractor and Trustees, as the first referee.

(f) To grant extension of completion time.

2.4 *The Engineer's Representative shall :* Power of Engineer's Representative.

(i) watch and supervise the works.

(ii) test and examine any material to be used or workmanship employed in connection with the work.

(iii) have power to disapprove any material and workmanship not in accordance with the contract and the contractor shall comply with his direction in this regard.

(iv) take measurements of work done by the contractor for the purpose of payment or otherwise.

(v) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense.

(vi) have powers to issue alteration order not implying modification of design and extension of completion time of the work and

(vii) have such other powers and authorities vested in the Engineer, which have been delegated to him in writing by the Engineer under intimation to the Contractor.

2.5 *Provided always that the Engineer's Representative shall have no power :* Limitation of Engineer's Representative's Power

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

2.6 Provided also as follows : Engineer's Overriding Power

(a) Failure of Engineer's Representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or materials and to order the pulling down, removal, breaking-up thereof and re-constructing at the contractor's cost and the contractor shall have no claim to compensation for the loss if any sustained by him.

(b) If the contractor shall be dissatisfied by reason of any decision of the Engineer's Representative, he shall be entitled to refer the matter to the Engineer who shall thereupon confirm, reverse or vary such decision.

(c) Any written instructions or written approval given by the Engineer's Representative to the contractor, within the terms of delegation of power and authority vested in the Engineer to his Representative in writing, shall bind the contractor and the Trustees as though it had been given by the Engineer, who may from time to time make such delegation.

3.0 THE TENDER/OFFER AND ITS PRE-REQUISITES

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

(a) The form and nature of the site and its surroundings including their sub-surface, hydrological, tidal and climatic conditions, the means of access to the site and all other local conditions, including the likely charges and costs for temporary way-leave, if any, required for the work. Site & Local condition.

(b) The drawings, specifications, the nature and extent of work to be executed and the quality, quantity and availability of the required materials and labour for the work and the need to execute the work to the entire satisfaction of the Engineer, and also by complying with the General and Special Conditions of Contract. Drawing/ Specification/ Nature & extent of work to be done.

(c) The accommodation required for the workmen and site office, mobilisation/demobilisation and storage of all plant, equipment and Construction materials. — Accommodation for Contractor's men/materials.

(d) The sources and means of procurement of water for drinking, washing and execution of work, and source and availability of electrical power, all at Contractor's cost. — Water for drinking etc. /Electrical power.

(e) Payment of taxes and duties and compliance of all applicable statutes, ordinances and law together with the rules made thereunder, the rules, regulations and bye-laws of public bodies or any local or other authority by the Contractor, keeping the Trustees indemnified against penalties and liabilities of every kind arising from the Contractor's failure in such compliance. — Payment of Taxes/duties and observance of all statutes.

(f) Payment of all kinds of stamp-duty for executing the agreement or for any legal instrument including Bank Guarantees and Indemnity Bonds. — Payment of Stamp Duty by the Contractor.

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

3.3 If required by the Engineer or the Trustees, the Contractors in their tender or subsequently, shall disclose the names of their owners/partners/share holders at the required points of time. The failure in this regard shall be treated as a breach and a contract, if entered into, shall be liable to be cancelled. — Disclosure of Owner's name.

3.4 (a) Unless otherwise stipulated in the Notice Inviting Tender / Offer, every tender must be submitted with Earnest Money of the amount calculated as per the following scale. — Earnest Money and Security Deposit.

Estimated Value of Work	Amount of Earnest Money	
	For Works Contract	For Contract of Supplying Materials or Equipment only
Up to Rs. 1,00,000=00	5% of the estimated value of work	1% of the estimated value of work
Over Rs. 1,00,000=00	2% of the estimated value of work subject to a maximum of Rs. 20,000/- and minimum of Rs. 5,000/-.	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.

(b) Earnest Money shall be deposited with the Trustees' treasurer in cash or by Banker's Cheque of any Calcutta Branch of a Nationalised Bank of India drawn in favour of Calcutta Port Trust or in the form of any "Account Payee" Draft of any Nationalised Bank of India drawn in favour of "Calcutta Port Trust" and payable at Calcutta/Haldia, as the case may be, and the receipt granted therefor be kept attached to the Tender/Offer in the Sealed Cover. Method of Paying E.M.

(c) Earnest Money of unaccepted tender shall be refunded without any interest THROUGH A/c. Payee Cheque drawn on a Nationalised Bank of Calcutta / Haldia. Refund of E.M.

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

Class of Registration	Amount of Fixed Security	Financial Limit of Each Tender
A	Rs. 25,000/-	Any tender priced up to Rs.5,00,000/-
B	Rs. 10,000/-	Any tender priced up to Rs.2,00,000/-
C	Rs. 5,000/-	Any tender priced up to Rs.1,00,000/-

(e) (i) Tender submitted without requisite Earnest Money may be liable to rejection. Tender with-out EM liable to rejection.

(ii) If before expiry of the validity period of his Tender/Offer, the tenderer amends his quoted rates or tender/offer making them unacceptable to the Trustees and/or withdraws his tender/offer, the Earnest Money deposited shall be liable to forfeiture at the option of the Trustees. Forfeiture of E.M. before Acceptance of offer.

(f) The Earnest Money of accepted tender/offer shall be retained by the Trustees as part of the Security Deposit, for which a separate Treasury Receipt shall be issued to the Contractor after cancellation of the previous Receipt of Earnest Money. E.M. to be converted to part S.D.

(g) Balance security for works contract shall be recovered by deduction from all progressive Bill (including final Bill, if necessary) @ 10% of the gross value of work in each such bill, so that the total recovery may not exceed the quantum computed as per the under noted percentages of the total value of work actually done up to the stage of completion. Mode of recovery of balance S.D.

Value of Work	% of Security Deposit for works contract.	% of Security Deposit For contract of supply-ing materials & equipment only.	Scale of S.D. recovery.
For works up to Rs.10,00,000/-.	10% (Ten percent)	1% (One percent)	
For works costing more than Rs.10,00,000/- and up to Rs.20,00,000/-	10% on first Rs.10,00,000/- +7½% on the balance.	1% on first Rs.10,00,000/- + ½% on the balance.	
For works costing more than Rs.20,00,000/-	10% on first Rs.10,00,000/- + 7 ½% on the next Rs.10,00,000/- + 5% on the balance.	1% on first Rs.10,00,000/- + ½% on the next Rs.10,00,000/- + ¼% on the balance.	

(h) Balance Security for Contract of supplying materials and equipment computed in terms of the percentages given above, shall have to be deposited with the Trustees' Treasurer in advance and within 30 days from the date of placement of supply order, either in cash or by A/c. Payee Draft of a Nationalised Bank of India drawn in favour of Calcutta Port Trust and payable at Calcutta/Haldia, as the case may be. — S.D. for supply contracts to be deposited in advance.

(i) No interest shall be paid by the Trustees to the Tenderer/Contractor on the amount of Earnest Money/Security Deposit held by the Trustees, at any stage. — No interest payable on E.M. /S.D

3.5 (i) The Security Deposit shall refunded to the Contractor in terms of Clause 9.3 hereinafter and subject to deduction, if any, under the provision of Sub-clause 3.5 (ii) herein below. Id, however, the Contract provides for any maintenance period. 50% of the Security Deposit may be refunded against any of the treasury Receipt for that amount on expiry of half of the maintenance period and the balance deposit on the expiry of the said maintenance period and after the Engineer has certified the final completion of work in Form G.C.2 and the Contractor has submitted his "No Claim" Certificate in Form G.C.3. — Mode of refund of S.D.

(ii) The Security Deposit/Earnest Money may be liable to forfeiture at the option of the Trustees, if the Contractor fails to carry out the work or to perform/observe any of the conditions of the Contract. The Trustees shall also be at liberty to deduct any of their dues from the Security Deposit, fixed Security, Earnest Money or from any sum due or to become due to the Contractor under any other contract. — Forfeiture of S.D.

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

Bank Guarantee in lieu of Cash S.D. in certain cases

3.7 "Every Tenderer/ Bidder shall submit, in respect of a tender value of more than Rs 5 Crore, along with their tender comprising Special Conditions of Contract, General Conditions of Contract, BOQ, Earnest Money, etc. a Documentcalled Integrity Pact Agreement duly signed by their authorized representative. The Proforrma of the Integrity Pact Agreement shall as specified in the GCC. In case of tender value more than Rs 5 Crore, the Integrity Pact Agreement is an essential part and parcel of bid Documentto be submitted by each tenderer, without which the tender shall not be considered."

4.0 THE CONTRACT & GENERAL OBLIGATIONS OF CONTRACTOR

4.1 (a) The contract Documents shall be drawn-up in English language.

English language to be used

(b) The contract shall be governed by all relevant Indian Acts. As applicable only within the jurisdiction of the High Court at Calcutta, India, including the following Acts :

Applicability of laws on the contract

1. The Contract Act (India), 1872.
2. The Major Port Trusts Act, 1963.
3. The Workmen's Compensation Act, 1923.
4. The Minimum Wages Act, 1948.
5. The Contract Labour (Regulation & Abolition) Act,1970.
6. The Dock Workers' Act,1948.
7. The Arbitration and Conciliation Act (1996) (in the case of a definite Arbitration Agreement only).

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

Contractor to Execute Contract Agreement.

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

Interpretation of contract Documents –Engineers' Power

4.4 Two copies of the Drawings referred to in the general and special Conditions of Contract and in the Bill of Quantities, shall be furnished by the Engineer to the Contractors free of cost for his use on the work, but these shall remain the property of the Trustees and hence, the Contractor shall return them to the Engineer or his Representative on completion of the work, if not torn or mutilated on being regularly used at site.

All Drawings are Trustees' property.

4.5 The Contractor shall prove and make at his own expense any working or progress drawings required by him or necessary for the proper execution of the works and shall, when required, furnish copies of the same free of cost to the Engineer for his information and/or approval, without meaning thereby the shifting of Contractor's responsibility on the Engineer in any way whatsoever.

Contractor to prepare working / progress drawings

4.6 The Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof without the written permission of the Engineer. Even if such permission be granted, the Contractor shall remain responsible (a) for the acts, defaults and neglect of any sub-contractor, his agents, servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor himself or his agents, servants or workmen and (b) for his full and entire responsibility of the contract and for active superintendence of the works by him despite being sublet, provided always that the provision of labourers on a "piece rate" basis shall not be deemed to be sub-letting under this clause.

Contractor cannot sub-let the work

4.7 Unless otherwise specified, the Contractor shall be deemed to have included in his Tender/Offer all his cost for supplying and providing all constructional plant, temporary work. Materials both for temporary and permanent works, labour including supervision thereof, transporting to and from the site and in and about the work, including loading, unloading, fencing, watching, lighting, payment of fees, taxes and duties to the appropriate authorities and other things of every kind required for the construction, erection, completion and maintenance of the work.

Contractors' price is inclusive of all costs

4.8 The Contractor shall be solely responsible for the adequacy, stability and safety of all site operations and methods of construction, even if any prior approval thereto has been taken from the Engineer or his Representative. The Contractor shall not be responsible for the correctness of the design or specification of the Temporary and Permanent works formulated by the Engineer; but the Contractor shall be fully responsible for the correct implementation thereof, as also for any design and specification prepared/proposed/used by the Contractor.

Contractor is responsible for all construction process, except for correctness of design and specification formulated by the Engineer

4.9 Whenever required by the Engineer or his representative, the Contractor shall submit to him the details of his (a) programme for execution of the work, (b) proposed procedure and methods of work, (c) proposed deployment of plant, equipment, labour, materials and temporary works. The submission to and/or any approval by the Engineer or his Representative to any such programme or particulars shall not relieve the Contractor of any of his obligations under the contract.

Contractor to submit his programme of work

If for any reason the contractor be unable to adhere to his earlier programme, he shall submit his revised programme for completion of work within the stipulated time whenever asked to do so.

4.10 Necessary and adequate supervision shall be provided by the Contractor during execution of the works and as long thereafter as the Engineer or his representative shall consider necessary during the maintenance period. The Contractor or his competent and authorised agent or representative shall be constantly at site and instructions given to him by the Engineer or his representative in writing shall be binding upon the Contractor subject to limitation in Clause 2.5 hereof. The Contractor shall inform the Engineer or his representative in writing about such representative/agent of him at site.

Contractor to supervise the works

4.11 The Contractor shall employ in execution of the Contract only qualified careful and experienced persons and the Engineer shall be at liberty to direct the Contractor to stop deployment of any of is staff, workmen or official at site and the Contractor shall within 48 hours comply with such instruction without any demur whenever the Engineer shall feel that the deployment of the person concerned will not be conducive to the proper and timely completion of the work.

Contractor to deploy qualified men and Engineer's power to remove Contractor's men

4.12 The Contractor shall be responsible for the true and proper setting out of the works in relation to reference points/lines/levels given by the Engineer in writing. The checking of any setting-out or of any alignment or level by the Engineer or his Representative shall not in any way relieve the contractor of his responsibility for the correctness thereof and he shall fully provide protect and preserve all stakes, templates, bench marks, sight rails, pegs, level marks, profile marks and other things used in setting out the works.

Contractor is responsible for line, level, setting out etc.

4.13 From the commencement of the works till issue of the completion certificate in Form G.C.1, vide Clause 5.12 hereof, the contractor shall take full responsibility for the care thereof. Save for the excepted risks, any damage, loss or injury to the work or any part thereof shall be made good by the Contractor at his own cost as per instruction and to the satisfaction of the engineer, failing which the Engineer or his Representative may cause the same to be made good by any other agency and the expenses incurred and certified by the Engineer shall deem proper. This Clause will not apply to that part of the work, which might have been taken over by the Trustees on partial completion of the work and in such case the Contractor's obligation will be limited to repairs and replacement for manufacturing or construction defects during the Maintenance period (Guarantee Period) as per the directions of the Engineer as also for defects/damages if any caused to the work by the Contractor during such repairs and replacement in the maintenance period.

Contractor is responsible to protect the work

4.14 The Contractor shall at his own cost protect support and take all precautions in regard to the personnel or structure or services or properties belonging to the Trustees or not which may be interfered with or affected or disturbed or endangered and shall indemnify and keep indemnified the Trustees against claim for injury, loss or damage caused by the Contractor in connection with the execution and maintenance of the work to the aforesaid properties, structures and services and/or to any person including the Contractor's workmen. Cost of Insurance Cover, if any, taken by the Contractor shall not be reimbursed by the Trustees, unless otherwise stipulated in the Contract.

Contractor is responsible for all damages to other structures / persons caused by him in executing the work.

4.15 The Contractor shall immediately inform the Engineer's Representatives if any fossil, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological importance be discovered at site which shall remain the property of the Trustees and protect them from being damaged by his workmen and arrange for disposal of them at the Trustees' expense as per the instruction of the Engineer's Representative.

Fossils, Treasure travois, etc. are Trustees' property

4.16 The Contractor shall be deemed to have indemnified and shall indemnify the Trustees against all claims, demands, actions and proceedings and all costs arising therefrom on account of :

Contractor to Indemnify the Trustees against all claims for loss, damage, etc.

(a) Infringement of any patent right, design, trademark or name or other protected right in connection with the works or temporary work.

(b) Payment of all royalties, rent, toll charges, local taxes, other payments or compensation, if any, for getting all materials and equipment required for the work.

(c) Unauthorised obstruction or nuisance caused by the contractor in respect of Public or Private or Private road, railway tracks, footpaths, crane tracks, waterways, quays and other properties belonging to the Trustees or any other person.

(d) Damage/injury caused to any highway and bridge on account of the movement of Contractor's plants and materials in connection with the work.

(e) Pollution of waterway and damage caused to river, lock, sea-wall or other structure related to waterway, in transporting contractor's plants and materials.

(f) The Contractor's default in affording all reasonable facilities and accommodation as per the direction of the Engineer or his Representative to the workmen of the Trustees and other agencies employed by or with the permission and/or knowledge of the Trustees on or near the site of work.

4.17 Debris and materials, if obtained by demolishing any property, building or structure in terms of the Contract shall remain the property of the Trustees.

Dismantled materials Trustees' property

4.18 The Contractor's quoted rates shall be deemed to have been inclusive of the following : Contractor's quoted rates/price must be all inclusive

(a) Keeping the site free of unnecessary obstruction and removal from site of constructional plant wreckage, rubbish, surplus earth or temporary works no longer required.

(b) Cleaning and removal from site all the surplus materials of every kind to leave the site clean and tidy after completion of the work, without which payment against final bill may be liable to be withheld.

(c) Precautionary measures to secure efficient protection of Docks, the River Hooghly and other waterways against pollution of whatever nature during execution and maintenance of the works and to prevent rubbish, refuse and other materials from being thrown into the water by the Contractor's men or those of his agency.

(d) Making arrangements for deployment of all labourer and workers, local or otherwise including payment for their wages, transport, accommodation, medical and all other statutory benefits and entry permits, wherever necessary.

(e) Making arrangements in or around the site, as per the requirements of local authority or the Engineer or his Representative for preventing (i) spread of any infectious disease like smallpox, cholera, plague or malaria by taking effective actions for destruction of rats, mice, vermin, mosquitoes, etc. and by maintaining healthy and sanitary condition, (ii) illegal storage and distribution of Drugs, Narcotics, Alcoholic liquor, Arms and Ammunitions, (iii) unlawful, riotous or disorderly conduct of the Contractor's or his Sub-Contractor's workmen, (iv) deployment of workmen of age less than 16 years.

4.19 Every direction or notice to be given to the Contractor shall be deemed to have been duly served on or received by the Contractor, if the same is posted or sent by hand to the address given in the tender or to the Contractor's Site Office or to the Registered Office of the Contractor. The time mentioned in these conditions for doing any act after direction or notice shall be reckoned from the time of such posting or despatch. Notice to Contractor.

4.20 The Contractor and his Sub-contractor or their agents and men and any firm supplying plant, materials and equipment shall not publish or caused to be published any photographs or description of the works without the prior authority of the Engineer in writing. Contractor not to publish photograph or particulars of work

4.21	The Contractor shall at the Trustees' cost to be decided by the Engineer render all reasonable facilities and Co-operation as per direction of the Engineer or his representative to any other Contractor engaged by the Trustees and their workmen to the Trustees' own staff and to the men of other Public Body on or near the site of work and in default the Contractor shall be liable to the Trustees for any delay or expense incurred by reason of such default.	Contractor to provide facilities to outsiders
4.22	The work has to be carried out by the Contractor causing the minimum of hindrance for any maritime traffic or surface traffic.	Work to cause minimum possible hindrance to traffic movement
4.23	All constructional plants, temporary works and materials when brought to the site by the Contractor shall be deemed to be the property of the Trustees who will have lien on the same until the satisfactory completion of the work and shall only be removed from the site in part or in full with the written permission of the Engineer or his Representative.	Trustees' lien on Contractor's Plant & Equipment.

5.0 COMMENCEMENT, EXECUTION AND COMPLETION OF WORK.

5.1	The Contractor shall commence the work within 7 days of the receipt of Engineer's letter informing acceptance of the Contractor's tender/offer by the Trustees or within such preliminary time as mentioned by the Contractor in the Form of Tender or the time accepted by the Trustees. The Contractor shall then proceed with the work with due expedition and without delay, except as may be expressly sanctioned or ordered by the Engineer or his Representatives, time being deemed the essence of the contract on the part of the contractor.	Preliminary time to commence work an maintenance of steady rate of progress
5.2	The Contractor shall provide and maintain a suitable office at or near the site to which the Engineer's Representative may send communications and instructions for use of the Contractor.	Contractor's site office
5.3	Unless specified otherwise in the contract or prior permission of the Engineer has been taken, the contractor shall not execute the work beyond the working hours observed by the Engineer's Representative and on Sundays and Holidays observed in the Trustees' system, except in so far as it becomes essential on account of tidal work or for safety of the work. If the progress of the work lags behind schedule or the work has been endangered by any act or neglect on the part of the contractor, then the Engineer or his Representative shall order and the contractor at his own expense shall work by day and by night and on Sundays and Public Holidays. Any failure of the Engineer or his Representative to pass such an order shall not relieve the contractor from any of his obligations. The Engineer's decision in this regard shall be final binding and conclusive.	Contractor to observe Trustees' working hours

5.4	Unless stipulated otherwise in the contract all materials required for the work shall be procured and supplied by the contractor with the approval of the Engineer or his Representative and subject to subsequent testing as may be required by the Engineer or his Representative. The Engineer shall exercise his sole discretion to accept any such materials.	Contractor to supply all materials as per requirement of the Engineer or his representative
5.5	Unless stipulated otherwise in the contract all materials, workmanship and method of measurement shall be in accordance with the relevant Codes (Latest Revision) of the Bureau of Indian Standards and the written instructions of the Engineer or his Representative. Where no specific reference is available in the contract, the material and workmanship shall be of the best of their respective kinds to the satisfaction of the Engineer.	Materials & Works
5.6	Samples shall be prepared and submitted for approval of the Engineer or his representative, whenever required to do so, all at the Contractor's cost.	Contractor to submit samples for approval
	Unless stipulated otherwise in the contract, the cost of any test required by the Engineer or his representative in respect of materials and workmanship deployed on the work, shall be borne by the Contractor.	Contractor to arrange all testing at his own cost.
5.8	Regarding the supply of any materials by the Trustees to the contractor in accordance with the contract, the following conditions shall apply :	
	(a) The Contractor shall, at his own expense, arrange for transporting the materials from the Trustees' Stores, watching, storing and keeping them in his safe custody, furnishing of statement of consumption thereof in the manner required by the Engineer or his representative, return of surplus and empty container to the Trustees' Stores as per the direction of the Engineer or his Representative.	The Contractor shall account for and look after the Trustees' materials
	(b) Being the custodian of the Trustees' materials, the contractor shall remain solely responsible for any such materials issued to him and for any loss or damage thereof for any reason other than "Excepted Risks", the Contractor shall compensate the Trustees' in the manner decided by the Engineer and shall at no stage remove or cause to be removed any such material from the site without his permission in writing.	Contractor to compensate for loss and damage to Trustees' materials
	(c)The Trustees' materials will generally be supplied in stages and in accordance with the rate of progress of work but except for grant of suitable extension of completion time of work as decided by the Engineer. The Contractor shall not be entitled to any other compensation, monetary or otherwise, for any delay in the supply of Trustees' materials to him. The Contractor shall, however, communicate his requirement of such materials to the Engineer from time to time.	Delay in supply of Trustees' materials will only entitle the Contractor for extension of completion time of work

(d) Unless stipulated otherwise in the contract, the value of the Trustees' materials issued to the contractor shall be recovered from the contractor's bills and/or any of his other dues, progressively according to the consumption thereof on the work and/or in the manner decided by the Engineer or his representative and at the rate/s stipulated in the contract. These rates shall only be considered by the contractor in the preparation of his tender/offer and these will form the basis of escalation/variation, if in future the contractor is required to procure and provide any such material on the written order of the Engineer consequent on the Trustees' failure to effect timely supply thereof.

Recovery from Contractor for Trustees' materials under normal cirCu.Mstances

(e) If the Engineer decides that due to the contractor's negligence, any of the Trustees' materials issued to the contractor has been – (i) lost or damaged, (ii) consumed in excess of requirement and (iii) wasted by the contractor in excess of normal wastage, then the value thereof shall be recovered from the contractor's bills or from any of his other dues, after adding 19 ¼% extra over the higher one of the followings -

Recovery from Contractor for Trustees' materials under other cirCu.Mstances.

(1) The issue rate of the materials at the Trustees' Stores and

(2) The market price of the material on the date of issue as would be determined by the Engineer.

5.9 The Engineer or his Representative shall have the power to insect any material and work at any time and to order at any time – (I) for removal from the site of any material which in his opinion is not in accordance with the contract or the instruction of the engineer or his representative, (ii) for the substitution of the proper and suitable materials, or (iii) the removal and proper re-execution of any work which in respect of material and workmanship is not in accordance with the contract or the instructions of the Engineer. The Contractor shall comply with such order at his own expense and within the time specified in the order. If the contractor fails to comply, the Engineer shall be at liberty to dispose any such materials and re-do any work in the manner convenient to the Trustees by engaging any outside agency at the risk and expense of the contractor and after giving him a written prior notice of 7 days.

Contractor to replace materials/work not acceptable to the Engineer or his Representative

5.10 No work shall be covered up and put out of view by the contractor without approval of the Engineer or his Representative and whenever required by him, the contractor shall uncover any part or parts of the work or make openings in or THROUGH the same as may be directed by the Engineer or his representative from time to time and shall reinstate or make good those part of works thus affected to the satisfaction of the Engineer, all at the cost of the contractor.

Contractor to seek approval of Engineer or his Representative before covering up any portion of work

The Trustees shall reimburse such cost as determined by the Engineer, if the initial covering up was with prior written order of the Engineer or his Representative.

5.11 On a written order of the Engineer or his Representative, the contractor shall delay or suspend the progress of the work till such time the written order to resume the execution is received by him. During such suspension the contractor shall protect and secure the work to the satisfaction of the Engineer or his Representative. All extra expenses in giving effect to such order shall be considered by the Trustees, unless such suspension is –

Contractor to suspend work on Order from Engineer or his Representative

(a) otherwise provided for in the contract, or

(b) necessary by reason of some default on the part of the contractor, or

(c) necessary by reason of climatic conditions on the site, or

(d) necessary for proper execution of the works or for the safety of the works or any part thereof.

The Engineer shall settle and determine such extra payment and/or Extension of completion time to be allowed to the contractor, as shall, in the opinion of the Engineer be fair and reasonable, and the same shall be final and binding on the Contractor.

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

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

Completion Certificate G.C.1.

6.0 TERMS OF PAYMENT :

6.1 No sum shall be considered as earned by or due to the Contractor in respect of the work till final and satisfactory completion thereof and until a certificate of final completion in Form G.C.2 has been given by the Engineer.

On account payments, if any, made prior to issue of the certificate in Form G.C.2, shall all be treated as mere advance, which shall stand recoverable in full or in part, if the Engineer so decides in the context of Contractor's unfulfilled contract condition, if any.

All interim payments are advances till issue of Certificate in Form G.C.2

6.2 All payments shall be made to the Contractor only on the basis of measurements of actual work done, as recorded in the Trustees' measurement books and at accepted tendered or at agreed rates, as the case may be, except as otherwise provided in the contract and when the Engineer decides any other rate for change in the scope of work or omission, if any, on the part of the Contractor.

Payment on the basis of measurements at agreed rates.

6.3 For work of sanctioned tender value more than Rs.50,000/- or having an initially stipulated completion period of 4 months or more, on account payments may be made sat the discretion of the Engineer or his Representative at intervals deemed suitable and justified by him. Provided always that subject to execution of work of substantial value in the context of the contract price, the interval of such on account payments shall be decided by the Engineer or his Representative, which shall ordinarily not be less than 1 month in between two payments for on account bill and/or advance.

Limitation for on account payment

6.4 Measurement for works done shall be progressively taken by the Engineer's Representative and entered in the Trustees' Measurement Book, at intervals deemed suitable and proper by him and/or the Engineer. The Contractor or his duly accredited Representative or Agent shall remain present at the time of such measurement and assist the engineer's Representative in every manner required by him. After the measurements taken have been entered in the Measurement Book, the Contractor or his Agent shall sign the Measurement Book at the wend of such Measurements over the Contractor's Rubber Stamp as a token of acceptance of all such measurements, recorded above and prior to such signature. If the Contractor or his Agent fails to participate even after 3 days written notice from the Engineer's Representative, the measurement shall be taken ex-parte by the Engineer's Representative and those shall be accepted by the Contractor.

Recording of measurements

6.5 Based on the quantum of work and the value thereof computed in the Measurement Book, the Contractor shall type out his bill in the proforma approved by the Engineer and submit the same to the Engineer's Representative in quadruplicate, duly signed by him or his accredited Agent over his Rubber Stamp. The Engineer or his Representative may in his absolute discretion, allow advance payment against such bill to the extent of an amount not exceeding 75% of the "net payable" sum of the said bill, subject to adjustment thereof against the bill at the time of checking and auditing the bill at the Trustees' end. The measurement Book will not be handed over to the Contractor; but he will obtain the abstracts of quantities, amounts and recoveries to type out the bill.

Contractor to prepare and submit his bills

6.6 At the discretion of the Engineer or his Representative and only in respect of accepted offers/where estimated amount put to tender would be Rs.2,00,000/- or more, advance payment may be made to the extent of 75% of the value of any material purchased and brought to the site by the Contractor. Provided always that –

(i) the materials shall, in the opinion of the Engineer or his Representative be of imperishable nature,

(ii) the value of such materials shall be assessed by the engineer or his Representative at their own discretion,

(iii) a formal agreement has been drawn up with the contractor, under which the Trustees secure a lien on the contractor's materials,

(iv) the materials are safe-guarded by the contractor against losses, shortage and misuse due to the contractor postponing the execution of the work or otherwise,

(v) in the event of storage of such materials within the Trustees' protected areas in the Docks, the contractor shall submit an Indemnity Bond in the proforma and manner acceptable to Trustees' whereby the contractor shall indemnify the Trustees against all financial loss/damage, on account of loss/damage to such materials for whatever reasons,

Advance payment against Non-perishable materials

(vi) in the event of storage of such materials outside the Trustees' protected areas the Contractor shall submit to the Engineer an irrevocable Bank Guarantee favouring the Trustees and for the same sum as is being advance, in the proforma and manner acceptable to the Trustees. The Guarantee shall be of a Calcutta/Haldia Branch of any Nationalised Bank or a Schedule Commercial Bank, as the case may be, acceptable to the Trustees and shall remain valid till the anticipated period of consumption of such materials in the work. The Bank Guarantee must bear an undertaking by the issuing Bank guaranteeing automatic payment of the guaranteed sum to the Trustees by the Bank on the date of expiry of the validity of the Guarantee, unless with the prior written approval of the Engineer on behalf of the Trustees, the Bank has extended the validity of the Guarantee.

(vii) The amount of advance shall be recoverable from the contractor's bills or any other dues, progressively with the consumption of the materials on the basis of quantity consumed. Consequent on full recovery of the advance the Indemnity Bond/Bank Guarantee, vide Sub-clause (v) & (vi) above, shall be returned to the Contractor duly discharged by the Engineer on behalf of the Trustees.

6.7 No certificate of the Engineer or his representative shall protect the Contractor against or prevent the Trustees from obtaining repayment from the Contractor, in case the Engineer or his representative should overcertify for payment or the Trustees should over-pay the Contractor on any account.

Recovery for wrong and over payment

6.8 No claim for interest shall be admissible or payable to the Contractor at any stage and in respect of any money or balance or Bank Guarantee, which may be due to the Contractor from the Trustees, owing to dispute or otherwise or for any delay on the part of the Trustees in making interim or final payment or otherwise.

Interest not admissible to Contractor

7.0 VARIATION AND ITS VALUATION :

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

Quantities in Bill of Quantities of Tender

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

Engineer's power to vary the works

7.2 (a) Increase or decrease the quantity of any work included in the contract.

(b) Omit any work included in the contract.

(c) Change the Character or quality or kind of any work included in the contract.

(d) Change the levels, lines, position and dimensions of any part of the work, and

(e) Execute extra and additional work of any kind necessary for completion of the works

Variation by engineer do not vitiate the contract

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

Where written order for variation is not needed

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

Payment for extra or additional, or omitted work or substituted work, Engineer's powers

7.5 (a) The Contractor shall not be entitled to any claim of extra or additional work unless they have been carried out under the written orders of the Engineer.

(b) The Engineer shall solely determine the amount (if any) to be added to or deducted from the sum named in the tender in respect of any extra work done or work omitted by his order.

(c) All extra, additional or substituted work done or work omitted by order of the Engineer shall be valued on the basis of the rates ad prices set out in the contract, if in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices directly applicable to the extra, additional or substituted work, then the Engineer may decide the suitable rates on the basis of Schedule of Rates (including surcharge in force at the time of acceptance of tender), if any, adopted by the Trustees with due regard to the accepted contractual percentage, if any thereon. In all other cases the Engineer shall solely determine suitable rates in the manner deemed by him as fair and reasonable, and his decision shall be final, binding and conclusive.

(d) If the nature or amount of any omission or addition relative to the nature or amount of the whole of the contract work or to any part thereof shall be such that, in the opinion of the Engineer, the rate of prices contained in the contract for any item of the works or the rate as evaluated under sub-clauses (b) and (c) of this clause, is by reason of such omission or addition rendered unreasonable or in-applicable, the Engineer shall fix such other rate or price as he deems proper and the Engineer's decision shall be final, binding and conclusive.

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

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

Extension of completion time

8.2 (a) If the Contractor fails to complete the work within the stipulated dates or such extension thereof as communicated by the Engineer in writing, the Contractor shall pay as compensation (Liquidated Damage) to the Trustees and not as a penalty, ½% (half percent) of the total value of work (contract piece) as mentioned in the letter of acceptance of the tender/offer, for every week or part thereof the work remains unfinished. Provided always that the amount of such compensation shall not exceed 10% of the said value of work. The amount of Liquidated damages shall be determined by the Engineer, which shall be final and binding.

'Liquidated Damage' and other compensation due to Trustees

(b) Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation/damage in Sub-clause (a) of this clause, from any money due or likely to become due to the Contractor. The payment or deduction of such compensation/damage shall not relieve the Contractor from his obligation to complete the work or from any of his other obligations/liabilities under the contract and in case of the Contractor's failure and at the absolute discretion of the Engineer, the work may be ordered to be completed by some other agency at the risk and expense of the Contractor, after a minimum three days notice in writing has been given to the Contractor by the Engineer or his Representative.

8.3 Without being liable for any compensation to the Contractor, the Trustees may, in their absolute discretion, terminate the contract and enter upon the site and works and expel the Contractor there from after giving him a minimum 3 days' notice in writing, due to occurrence of any of the following reasons and decision of the Trustees in this respect, as communicated by the Engineer shall be final and conclusive :

Default of the Contractors remedies & powers/Termination of Contract.

(i) The Contractor has abandoned the contract.

(ii) In the opinion of the Engineer, either the progress of work is not satisfactory or the work is not likely to be completed within the agreed period on account of Contractor's lapses.

(iii) The Contractor has failed to commence the works or has without any lawful excuse under these conditions has kept the work suspended for at least 15 days despite receiving the Engineer'' or his Representative'' written notice to proceed with the work.

(iv) The Contractor has failed to remove materials from site or to dismantle or demolish and replace work for 7 days after receiving from the Engineer or his representative the written notice stating that the said materials or work were condemned and rejected by him under these conditions.

(v) The Contractor is not executing the works in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract.

(vi) Any bribe, commission, gift or advantage is given, promised or offered by or on behalf of the contractor t any officer, servant or representative of the Trustees or to any person on his or their behalf in relation to the obtaining or to the execution of the contract.

(vii) The Contractor is adjusted insolvent or enters into composition with his creditors or being a company goes into liquidation either compulsory or voluntary.

8.3.1 Upon receipt of the letter of termination of work, which may be issued by the Engineer on behalf of the Trustees, the Contractor shall hand over all the Trustees' tools, plant and materials issued to him at the place to be ascertained from the Engineer, within 7 days of receipt of such letter.

8.3.2 In all such cases of Termination of work, the Trustees shall have the power to complete the work THROUGH any other agency at the Contractor's risk and expense and the Contractor shall be debited any sum or sums that may be expended in completing the work beyond the amount that would have been due to the Contractor, had he duly completed the work of the work in accordance with the contract.

8.3.3 Upon termination of contract, the Contractor shall be entitled to receipt payment of only 90% of the value of work actually done or materials actually supplied by him and subject to recoveries as per contract, provided the work done and materials conform to specifications at the time of taking over by the Trustees. The payment for work shall be based on measurements of actual work done and priced at approved contract rates or other rates, as decided by the Engineer. The payment for materials supplied shall be at the rates as decided by the Engineer, which shall I in no case be more than market rates prevailing at the time of taking over by the Trustees. The Engineer's decision in all such case shall be final, binding and conclusive.

8.3.4 The Trustees shall have the power to retain all moneys due to the Contractor until the work is completed by other agency and the Contractor's liabilities to the Trustees are known in all respect.

9.0 MAINTENANCE AND REFUND OF SECURITY DEPOSIT

9.1 On completion of execution of the work the Contractor shall maintain the same for a period, as may be specified in the form of a Special Condition of the Contract, from the date mentioned in the Initial Completion Certificate in Form G.C.1. Any defect/fault, which may appear in the work during aforesaid maintenance period, arising, in the sole opinion of the Engineer or his representative, from materials or workmanship not in accordance with the contract or the instruction of the Engineer or his representative, shall, upon the written notice of the Engineer or his representative, be amended and made good by the Contractor at his own cost within seven days of the date of such notice, to the satisfaction of the Engineer or his representative, failing which the Engineer or his representative shall have the defects amended and made good THROUGH other agency at the Contractor's risk and cost and all expenses, consequent thereon or incidental thereto, shall be recoverable from the Contractor in any manner deemed suitable by the Engineer.

Contractor's obligation for maintenance of work.

9.2 The Contractor shall not be considered completed and the work shall not be treated as finally accepted by the Trustees, until a Final Completion Certificate in Form G.C.2 annexed hereto shall have been signed and issued by the Engineer to the contractor after all obligations under the Contract including that in the maintenance period, if any, have been fulfilled by the Contractor. Previous entry on the works or taking possession, working o using thereof by the Trustees shall not relieve the Contractor of his obligations under the contract for full and final completion of the work. Certificate of final completion

9.3 On completion of the contract in the manner aforesaid, the Contractor may apply for the refund of his Security Deposit by submitting o the Engineer (I) The Treasury Receipts granted for the amount of Security held by the Trustees, and (ii) his "No further claim" Certificate in Form G.C.3 annexed hereto (in original), where upon the Engineer shall issue Certificate in Form G.C.2 and within two months of the Engineer's recommendation, the Trustees shall refund the balance due against the Security Deposit to the Contractor, after making deduction there from in respect of any sum due to the Trustees from the Contractor. Refund of Security Deposit

10.0 INTERPRETATION OF CONTRACT DOCUMENTS, DISPUTES AND ARBITRATION

10.1 In all disputes, matters, claims, demands or questions arising out of or connected with the interpretation of the Contract including the meaning of Specifications, drawings, designs and instructions or as to the quality of workmanship or as to the materials used in the work or the execution of the work whether during the progress of the works or after the completion and whether before or after the determination, abandonment or breach of the contract the decision of the Engineer shall be final and binding on all parties to the contract and shall forthwith be given effect to by the Contractor. Engineer's decision

10.2 If the Contractor be dissatisfied with any such decision of the Engineer, he shall within 15 days after receiving notice of such decision require that the matter shall be referred to Chairman, who shall thereupon consider and give a decision. Chairman's award.

10.3 If, however, the Contractor be still dissatisfied with the decision of the Chairman, he shall within 15 days after receiving notice of such decision require that within 60 days from his written notice, the Chairman shall refer the matter to an Arbitrator of the panel of Arbitrators to be maintained by the Trustees for the purpose and any such reference shall be deemed to be a submission to arbitration within the meaning of Indian Arbitration Act, 1940 or any statutory modification thereof. Arbitration.

10.3.1. If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another person from panel shall be appointed as Sole Arbitrator and he shall proceed from the stage at which his predecessor left it.

10.3.2 The Arbitrator shall be deemed to have entered on reference on the date he issues notice to both the parties fixing the date of first hearing.

10.3.3 The time limit within which the Arbitrator shall submit his award shall normally be 4 months as provided in Indian Arbitration Act, 1940 or any amendment thereof. The Arbitrator may, if found necessary, enlarge the time for making and publishing the award, with the consent of the parties..

10.3.4 The venue of the arbitration shall be either Calcutta or Haldia as may be fixed by the Arbitrator in his sole discretion. Upon every or any such reference the cost of any incidental to the reference and award respectively shall be in the discretion of the Arbitrator who may determine, the amount thereof or by whom and to whom and in what manner the same shall be borne and paid.

10.3.5 The Award of the Arbitrator shall be final and binding on all parties subject to the provisions of the Indian Arbitration Act 1940 or any amendment thereof. The Arbitrator shall give a separate award in respect of each item of disputes and respective claim referred to him by each party and give reason for the award.

10.3.6 The Arbitrator shall consider the claims of all the parties to the contract – within only the parameters of scope and conditions of the contract in question.

10.3.7 Save as otherwise provided in the contract the provisions of the Arbitration Act, 1940 and rules made there under, for the time being in force, shall apply to the arbitration proceedings under this Clause.

10.4 The Contractor shall not suspend or delay the work and proceed with the work with due diligence in accordance with Engineer's decision. The Engineer also shall not withhold any payment, which, according to him, is due or payable to the Contractor, on the ground that certain disputes have cropped up and are likely to be referred to arbitration.

10.5 Provided always as follows:

[a] Nothing of the provisions in paragraphs 10.3 to 10.3.7 hereinabove would apply in the cases of contracts, where tendered amount appearing in the letter of acceptance of the tender / offer is less than Rs.40,00,000/-.

[b] The Contractor shall have to raise disputes or differences of any kind whatsoever in relation to the execution of the work to the Engineer within 30 days from the date of occurrence of the cause of dispute and before the preparation of the final bill, giving detailed justifications, in the context of contract conditions.

[c] Contractor's dispute if any arising only during the maintenance period, if any, stipulated in the contract, must be submitted to the Engineer, with detailed justification in the context of contract conditions, before the issuance of final completion certificate in Form G.C.-2 ibid.

No dispute or difference on any matters whatsoever, the Contractor can raise pertaining to the Contract after submission of certificate in form G.C.3 by him.

[d] Contractor's claim / dispute raised beyond the time limits prescribed in sub-clauses 10.5[b] and 10.5 [c] hereinabove, shall not be entertained by the Engineer and / or by any Arbitrator subsequently.

[e] The Chairman / Trustees shall have the right to alter the panel of Arbitrators, vide Clause 10.3 hereinabove, on their sole discretion, by adding the names of new Arbitrators and / or by deleting the names of existing Arbitrators, without making any reference to the Contractor.

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX

FORM G.C.1

Contractor _____

Address ----------

Date of completion :

Dear sir(s),

This is to certify that the following work viz :-

Name of work : ……..

……..

……..

Estimate No. E.E.0……Dt……..

C.E.O……..Dt……..

Work Order No…….
Allocation……
Contract No. ……

which was carried out by you is in the opinion of the undersigned complete in every respect on the _____ day of _____ 20 in accordance with terms of the Contract and you are required to maintain the work as per Clause 62 of the General Conditions of Contract and under provisions of the Contract for a period of _____ weeks / months / years

from the _____ day of
_____ 20 to _____ day of _____ 20 .

Yours faithfully,

Signature…….
(ENGINEER/ENGINEER'S REPRESENTATIVE)
Name…….
Designation……
OFFICE SEAL

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX

FORM G.C.2.

Certificate of Final Completion.

The Financial Adviser & Chief Accounts Officer
The General Manager (Finance), Haldia Dock Complex.

This is to certify that the following work viz:-

Name of work : …….

Estimate No. E.E.O……..dt…….
C.E.O…….dt…….

Work Order No……..

Contract No. ……

Resolution & Meeting No. ……

Allocation : ……

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

Signature…….
(ENGINEER/ENGINEER'S REPRESENTATIVE)
NAME…….
DESIGNATION…….
OFFICE SEAL

KOLKATA PORT TRUST
HALDIA DOCK COMPLEX

FORM G.C.3

('NO CLAIM ' CERTIFICATE FROM CONTRACTOR)

The Sr.Dy.Manager- IZ&R (I&CF)
Haldia Dock Complex
Calcutta Port Trust
Haldia.
(Atten:…….)

Dear Sir,

I / We do hereby declare that I / we have received full and final payment from the Calcutta Port Trust for the execution of the following work viz:-

Name of work : _____

_____

Work Order No :-_____

Contract No. _____

Agreement No……..Dt……

and I / we have no further claim against the Calcutta Port Trust in respect of the above-mentioned job.

Yours faithfully,

(Signature of the Contractor)

Dated _____

Name of Contractor……

Address:……..

(OFFICIAL SEAL OF THE CONTRACTOR)

KOLKATA PORT TRUST

PROFORMA OF FORM OF AGREEMENT

THIS AGREEMENT made _____ day of _____20____ between the "Board Of Trustees for the Port Of Calcutta , a statutory body constituted under Major Port Trust Act ,1963 under the rules there under and statutory modification thereto having Registered Office at 15, Strand Road , Calcutta -700001 (hereinafter called "EMPLOYER'' which expression unless excluded by or repugnant to the context be deemed to include his successor/s in office) on the one part and _____ _____ (hereinafter called the "CONTRACTOR" which expression shall unless excluded by or repugnant to the context he deemed to include his heirs, executors, administrators, representative, successor in officer and permitted assigns) of the other part.

WHEREAS The TRUSTEES are desirous that certain works should be executed viz_____ and have accepted a Tender/Offer by the contractor for the execution, completion and maintenance of such works .

NOW THIS CONTRACT AGREEMENT WITNESSETH as follows :-

1. In this agreement words expressions shall have the same meanings as are respectively assigned to them in General Conditions Of Contract, hereinafter referred to.

2. The following Documents shall be deemed to form and be read and construed as part of this Agreement , viz :-

   i. The said Tender/Offer & the acceptance of Tender/ Offer.

   ii. The Drawings.

   iii. The General Conditions Of Contract.

   iv. Special Conditions Of Contract (If any).

   v. The Conditions Of Tender.

   vi. The Specifications.

   vii. The Bill Of Quantities.

   viii. All correspondences by which the contract is added, amended, varied or modified in any way by mutual consent.

3. In consideration of the payments to be made by the Trustees to the Contractor as hereinafter mentioned the contractor hereby covenant with the Trustees to execute ,complete and maintain the work in conformity in all respects with the provisions of Contract.

4. The Trustees hereby covenants to pay to the contractor in consideration of such execution ,completion and maintenance of the works the Contract Prices at the times and in the manner prescribed by the contractor .

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

The Seal of
_____

Was hereunto affixed in the presence of :

Name :-
_____

Address :-
_____

OR

SIGNED SEALED AND DELIVERED

By the said _____

In the presence of :

Name :-
_____

Address :-
_____

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

Name :-
_____

Address :-
_____

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

Ref. _____ Bank Guarantee No. _____

Date _____

To
The Board of Trustees for the Port of Kolkata,
15, Strand Road
Kolkata – 700 001

Dear Sirs,

In consideration of the Board of Trustees For the Port of Kolkata, - (hereinafter referred to as the " EMPLOYER"which expression shall unless repugnant to the context or meaning thereof include its successors administrators and assigns) having awarded to _____, with registered office at _____ (hereinafter referred to as the "CONTRACTOR " which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) a CONTRACT by issue of EMPLOYER'S work order dated _____ the same having been unequivocally accepted by the Contractor resulting in a 'CONTRACT' bearing Letter Of Award No _____ dated _____ Valued at Rs _____ for " " and the contractor having agreed to prove a Contract performance Guarantee for the faithful performance of the entire Contract equivalent to Rs. (Rupees only) to the EMPLOYER.

We, the Bank, , Kolkata/ Haldia having its Head Office at (hereinafter referred to as the "Bank", which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer on demand any and all monies payable by the Contractor to the extent of Rs. -(only) as aforesaid at any time upto without any demur, reservation, contest, recourse or protest an/or without any reference to the CONTRACTOR, Any such demand made by Employer on the Bank shall be conclusive and binding notwithstanding any difference between EMPLOYEER and CONTRACTOR or any dispute pending before any Court, tribunal, Arbitrator or any other Authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of employer and further agrees that the guarantee herein contained shall continue to be enforceable till the Employer discharges his guarantee.

EMPLOYER shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee from time to time to extend the time for performance of the CONTRACT by CONTRACTOR. Employer shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or any right which they might have against Contractor, and to exercise the same at any time in any manner, and other to enforce or to forebear to enforce any covenants, contained or implied, in the CONTRACT between EMPLOYER and CONTRACTOR or any other course of remedy or security available to EMPLOYER . The Bank shall not be released of its obligations under these presents by any exercise by EMPLOYER of its liberty with reference to the matters aforesaid or any of them or by reason or any other acts of omission or commission on the part of employer or any other indulgence shown by EMPLOYER or by any other matter or thing whatsoever which under Law would, but for this provision, have the effect of reliving the bank.
The Bank also agreed that EMPLOYER at its option shall be entitled to enforce this Guarantee against the Bank as principal debtor, in the first instance without proceeding against CONTRACTOR and notwithstanding any security or other guarantee that EMPLOYER may have in relation to the CONTRACTOR'S liabilities.

Notwithstanding anything contained herein above our liability under this guarantee is restricted to Rs (rupees
only) and it shall remain in force up to and including and shall be extended from time to time for such period , on whose behalf this guarantee has been given.

Dated, this ……. day of ……..20 …….. at …….

WITNESSES

---------- ----------

(Signature) (Signature)

---------- ----------

(Name) (Name)

---------- ----------

(Official address) (Designation with Bank Stamp)
+ Attorney as per power of Attorney No.

Dated …….

Integrity Pact

Between
Kolkata Port Trust (KoPT) hereinafter referred to as "**The Principal/ Employer**".

And

…….. hereinafter referred to as "**The Bidder/Contractor**"

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for ……. The Principal values full compliances 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, an Independent External Monitor (IEM) appointed by the principal, will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the PRINCIPAL/EMPLOYER to get the contractual work executed and/or to obtain/dispose the desired said stores/ equipment at a competitive price in conformity with the defined specifications/ scope of work by avoiding the high cost and the distortionary impact of corruption on such work /procurement/ disposal and Enabling BIDDERs/ CONTRACTORs to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the PRINCIPAL/EMPLOYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

Section 1 – Commitments of the Principal/ Employer.

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

a. No employee of the Principal, personally or THROUGH family members, will 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 will, during the tender process treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the tender process, provide to all Bidder(s) the same information and will 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 will 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 Indian Penal Code (IPC)/Prevention of Corruption (PC) Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section-2 –Commitments of the Bidder(s) / Contractor(s)

(1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

a. The Bidder(s) /Contractor(s) will 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/she 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(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contract, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or Documentprovided 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(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractor(s) of Indian Nationality shall furnish the name and address of the foreign principles, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Bidder(s)/Contractor(s). 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 annexed and marked as Annex-A.

e. The Bidder(s)/Contractor(s) will when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2). The Bidder(s)/Contractor(s) will 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(s)/Contractor(s) 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 his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as considered appropriate.

Section 4-Compensation for damages

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover 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 from the Contractor liquidated damages of the contract value or the amount equivalent to Performance Bank Guarantee.

Section 5-Previous transgression

(1) The Bidder declares that no previous transgressions occurred in the last 3 years from the date of signing the Integrity pact with any other Company in any country conforming to the anti corruption approach or with any other Public Sector Undertaking / Enterprise in India, Major Ports/ Govt. Departments of India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken as considered appropriate.

Section 6- Equal treatment of all Bidders/Contractors/Sub-Contractors

(1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

(2) The Principal, will enter into agreements with identical conditions as this one with all Bidders, Contractors and Sub-contractors.

(3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7- Other Legal actions against violating Bidder(s)/ Contractor(s)/ Sub Contractor(s)

The actions stipulated in this Integrity pact are without prejudice to any other legal action that may follow in accordance with provisions of the extant law in force relating to any civil or criminal proceedings. .

Section 8 – Role of Independent External Monitor (IEM):

(a) The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.

(b) The Monitors shall not be subject to instructions by the representatives of the parties and shall perform their functions neutrally and independently.

(c) Both the parties accept that the Monitors have the right to access all the Documents relating to the contract.

(d) As soon as the Monitor notices, or has reason to believe, a violation of this pact, he will so inform the authority designated by the Principal and the Chief Vigilance Officer of Kolkata Prot Trust.

(e) The BIDDER/ CONTRACTOR(s) accepts that the Monitor has the right to access without restriction to all contract Documentation of the PRINCIPAL including that provided by the BIDDER/ CONTRACTOR. The BIDDER/ CONTRACTOR will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract Documentation, if any. The same is applicable to sub-contractors. The Monitor shall be under contractual obligation to treat the information and Documents of the Bidder/Contractor/ Sub-contractor(s) with confidentiality.

(f) The Principal/ Employer will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the

contractual relations between the Principal and the Contractor. The parties offer to the Monitor, the option to participate in such meetings.

(g) The Monitor will submit a written report to the designated Authority of Principal/ Employer/ Chief Vigilance Officer of Kolkata Port Trust within 8 to 10 weeks from the date of reference or intimation to him by the Principal/ Employer/ Bidder/ Contractor and should the occasion arise, submit proposals for correcting problematic situation. BIDDER/ CONTRACTOR can approach the Independent External Monitor (s) appointed for the purposes of this Pact.

(h) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or to 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.

(i) If the Monitor has reported to the Principal substantiated suspicion of an offence under the relevant IPC/PCA, and the Principal/ Employer has not, within reasonable time, taken visible action to proceed against such offence or reported to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

(j) The word 'Monitor' would include both singular and plural.

Section 9 – Facilitation of Investigation:

In case of any allegation of violation of any provisions of this Pact or payment of commission, the PRINCIPAL/EMPLOYER or its agencies shall be entitled to examine all the Documents including the Books of Accounts of the BIDDER/CONTRACTORS and the BIDDER/CONTRACTOR shall provide necessary information and Documents **in English** and shall extend all possible help for the purpose of such examination.

Section 10 – Pact Duration:

The pact beings with when both parties have legally signed it and will extend upto 2 years or the complete execution of the contract including warranty period whichever is later. In case bidder/contractor is unsuccessful this Integrity Pact shall expire after 6 months from the date of signing of the contract.

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 Chairman, KoPT.

Section 11 – Other Provisions:

(1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal in Kolkata.

(2) Changes and supplements as well as termination notices need to be made in writing in English.

(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 turn out to be invalid, the reminder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

_____ _____

(For & on behalf of the Principal) (For & on behalf of Bidder/Contractor).

(Office Seal) (Office Seal)

Place :

Date :

Witness 1:

(Name & Address) ……..

……

……

Witness 2:

(Name & Address) ……

……
……

ANNEXURE-A

GUIDELINES FOR INDIAN AGENTS OF FOREIGN SUPPLIERS

1.1 There shall be compulsory registration of Indian agents of Foreign suppliers for all Tenders. An agent who is not registered with KoPT shall apply for registration in the prescribed Application-Form.

1.2 Registered agents will file an authenticated Photostat copy (duly attested by a Notary Public)/Original certificate of the principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/salary/retainer ship being paid by the principal to the agent before the placement of order by KoPT.

1.3 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 DISCLOSURE OF PARTICULARS OF AGENTS/REPRESENTATIVES IN INDIA. IF ANY.

2.1 Tenderers of Foreign nationality shall furnish the following details in their offer:

2.1.1 The name and address of the agents/representatives in India, if any and the extent of authorization and authority given to commit the Principals. In case the agent/representative be a foreign Company, it is to be conformed whether it is real substantial Company and details of the same shall be furnished.

2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India.

2.1.3 Confirmation of the Tenderer that the commission/remuneration if any, payable to his agents/ representatives in India, is to be paid by KoPT in Indian Rupees only.

2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:

2.2.1 The name and address of the foreign principals indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or THROUGH the agents /representatives.

2.2.2 The amount of commission/remuneration included in the price(s) quoted by the Tenderer for himself.

2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/remunerations, if any, reserved for the Tenderer in the quoted price(s), is to be paid by KoPT in India in equivalent Indian Rupees.

2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/remuneration, if any payable to the agents/representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.

2.4 Failure to furnish correct and detailed information as called for in paragraph-2.0 above will render the concerned tender liable for rejection or in the event of a contract materializing, the same liable to termination by KoPT. Besides this there would be a penalty of banning business dealings with KoPT or damage or payment of a named sum.

Annexure G

General Arrangement Drawings.

N

TENDER DRAWINGS

GOOD FOR CONSTRUCTION DRAWINGS

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED
2. ALL LEVELS ARE IN "m" W.R.T CD

LEGENDS:

- APPROACH TRESTLE
- SERVICE PLATFORM (SP)
- BERTHING DOLPHIN (BD)
- MOORING DOLPHIN (MD)
- WALKWAY
- EMERGENCY EXIT

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE

ENGINEERING FIRM:

Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

CLIENT :

HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :

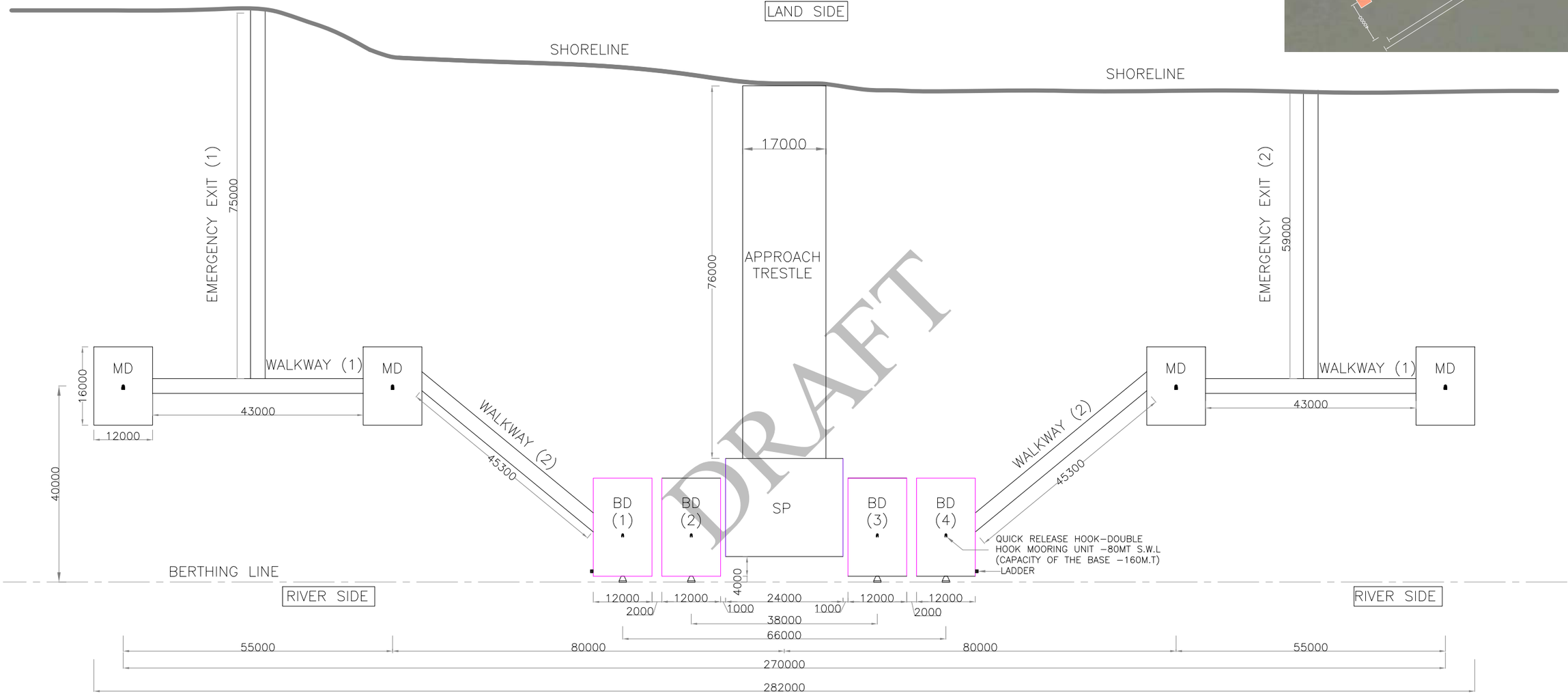
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	04/05/2018	00

DRAWING TITLE :

LOCATION OF PROPOSED LIQUID CARGO HANDLING JETTY

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/KPT/HDC/1001



DRAFT

GENERAL LAYOUT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D

VESSEL DETAILS:

DWT	: 40,000T
LENGTH	: 185m
BEAM	: 32.3m
DRAFT	: 9m

TIDAL LEVEL W.R.T CD:

HHW	: (+) 7.26m
MHW	: (+) 5.01m
MLW	: (+) 1.34m
LLW	: (–) 0.07m

SL NO.	COMPONENT	DIMENSION IN mm	NOS.
1	BERTHING DOLPHIN (BD)	12000X20000	4
2	MOORING DOLPHIN (MD)	12000X16000	4
3	SERVICE PLATFORM (SP)	24000X20000	1
4	WALKWAY (1)	45000X1500	2
5	WALKWAY (2)	45300X1500	2
6	EMERGENCY EXIT (1)	75000X1500	1
7	EMERGENCY EXIT (2)	59000X1500	1

TOWER MONITORS TO BE LOCATED AT:

SL NO.	COMPONENT
1	BERTHING DOLPHIN (BD1)
2	BERTHING DOLPHIN (BD4)
3	SERVICE PLATFORM (SP)

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT–II/LCHJ/1001	00	LOCATION MAP

ENGINEERING FIRM: Prof. R. SUNDARAVADIVELU., FNAE, INSTITUTE CHAIR PROFESSOR, MEMBER BOG IIT MADRAS, DEPARTMENT OF OCEAN ENGINEERING IIT MADRAS, CHENNAI – 36

SIGNATURE :

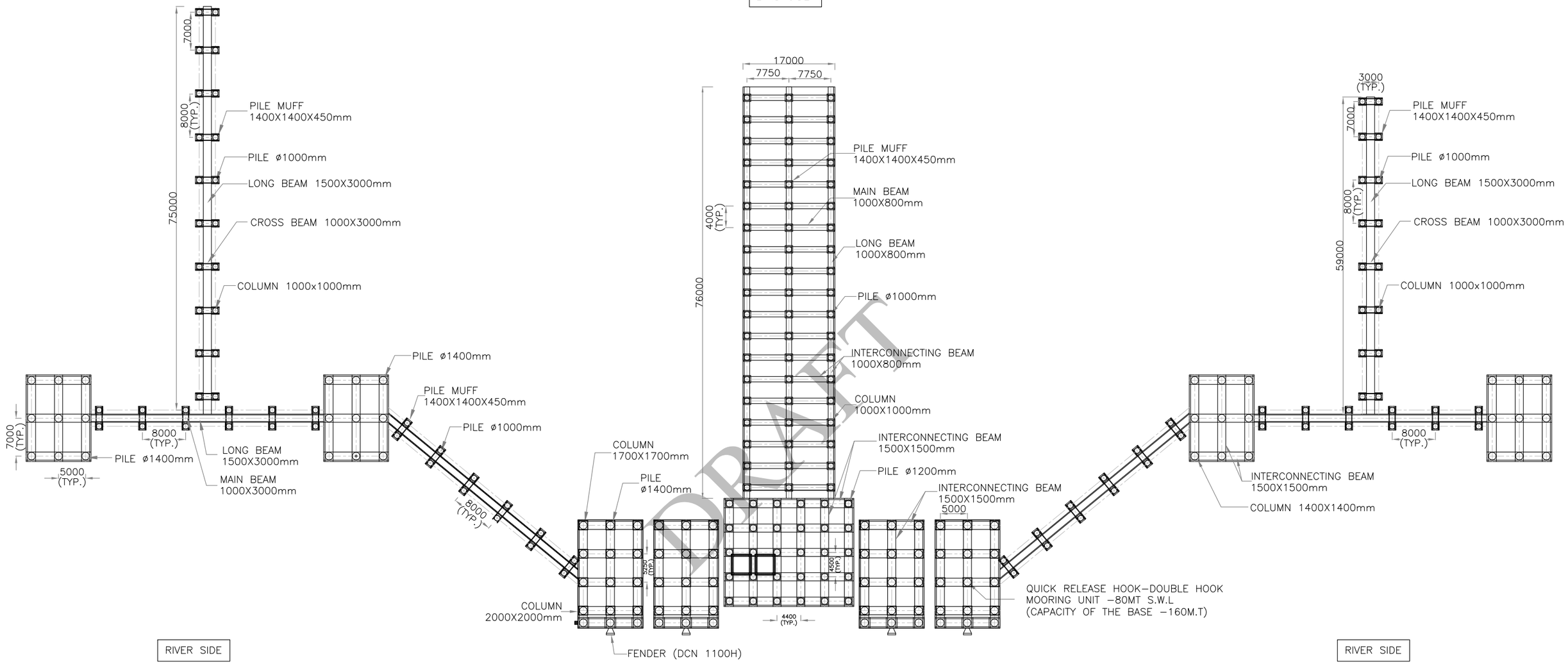
CLIENT : HALDIA DOCK COMPLEX (HDC), KOLKATA PORT TRUST (KoPT), HALDIA.

PROJECT TITLE : CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	09/07/2018	00

DRAWING TITLE : LAYOUT OF PROPOSED LIQUID CARGO HANDLING JETTY

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT–II/LCHJ/1002



GENERAL ARRANGMENT

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT–II/LCHJ/1002	00	LAYOUT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

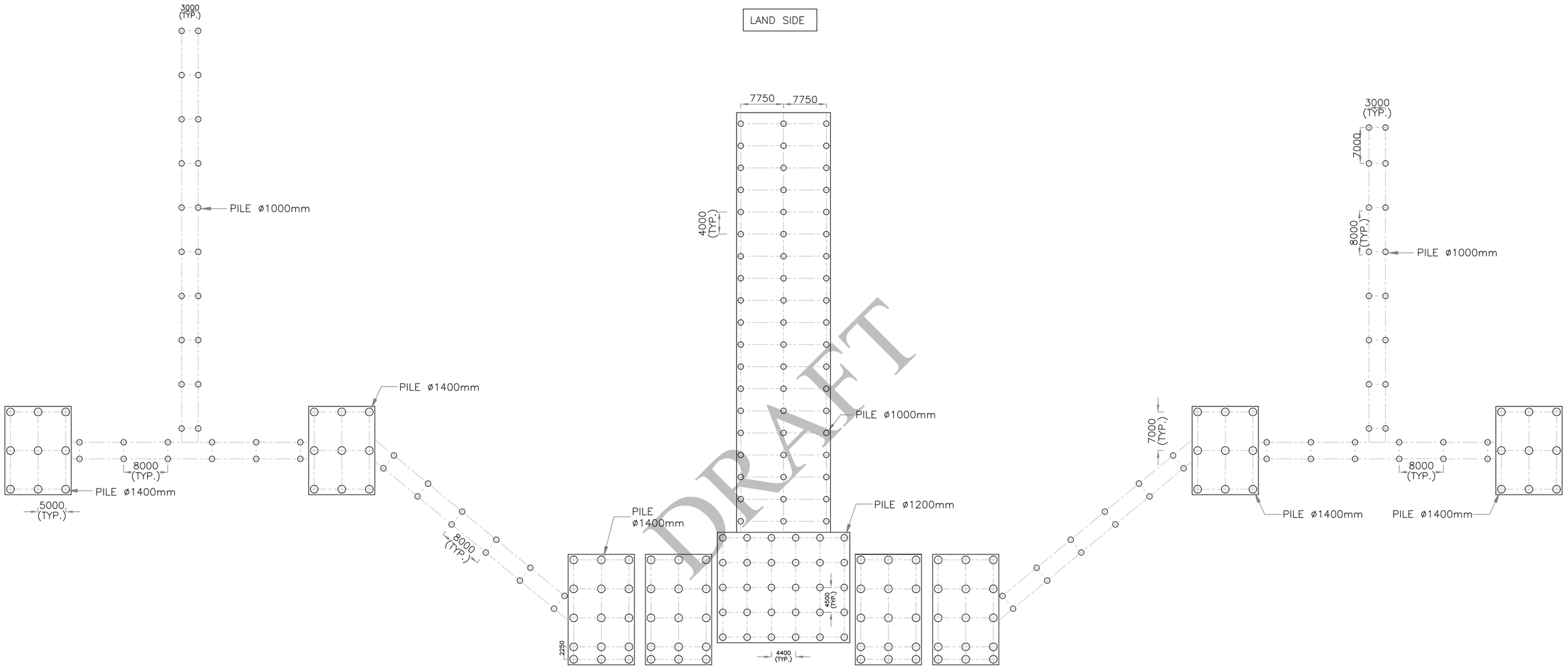
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST.
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	09/07/2018	00

DRAWING TITLE :
GENERAL ARRANGEMENT

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT–II/LCHJ/1004



DRAFT

PILE LAYOUT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA DOCK SYSTEM, KOLKATA PORT TRUST.
HALDIA.

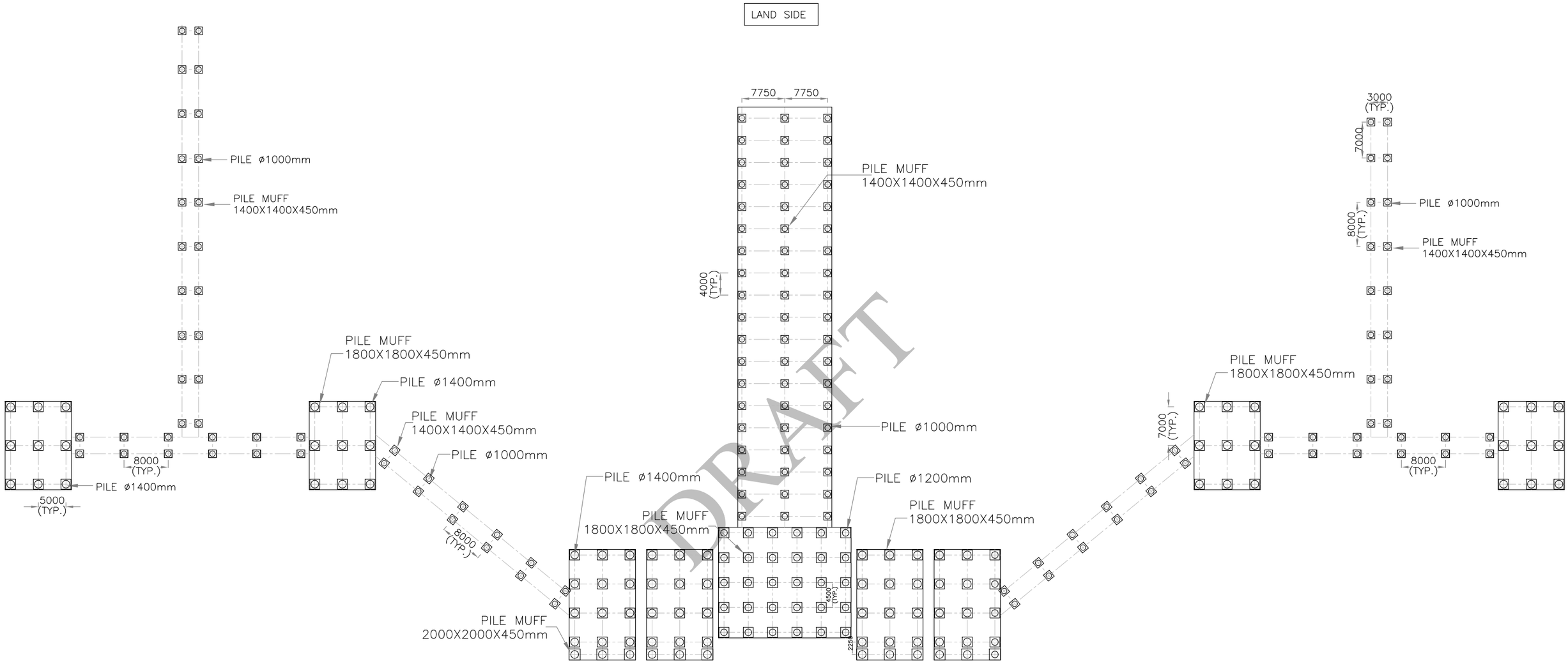
PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	09/07/2018	00

DRAWING TITLE :
PILE LAYOUT

SH.SCALE: AS SHOWN

DRAWING NUMBER: IITM/DOE/HDC/OT-II/LCHJ/1005



DRAFT

PILE MUFF LAYOUT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT
2	IITM/DOE/HDC/OT-II/LCHJ/1005	00	PILE LAYOUT

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

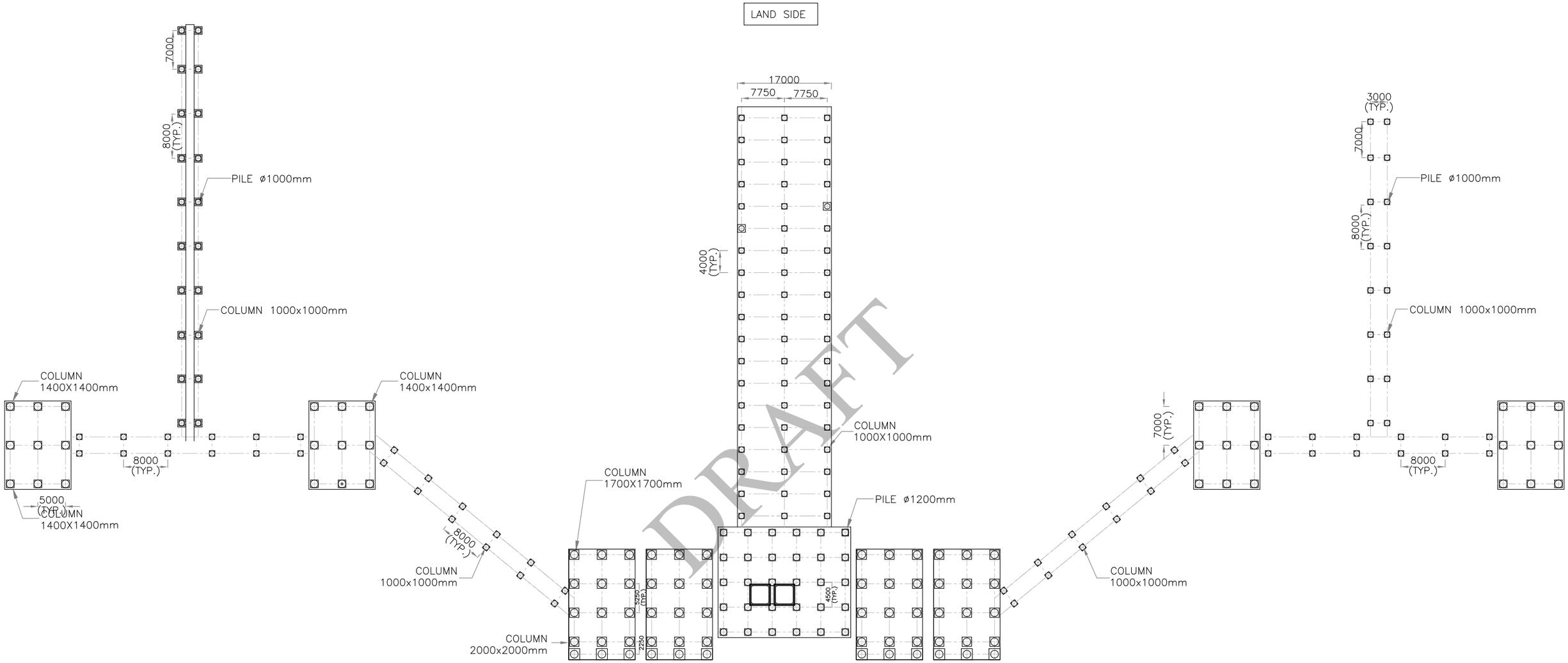
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	09/07/2018	00

DRAWING TITLE :
PILE MUFF LAYOUT

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/1006



DRAFT

COLUMN LAYOUT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT
2	IITM/DOE/HDC/OT-II/LCHJ/1005	00	PILE LAYOUT
2	IITM/DOE/HDC/OT-II/LCHJ/1006	00	PILE MUFF LAYOUT

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

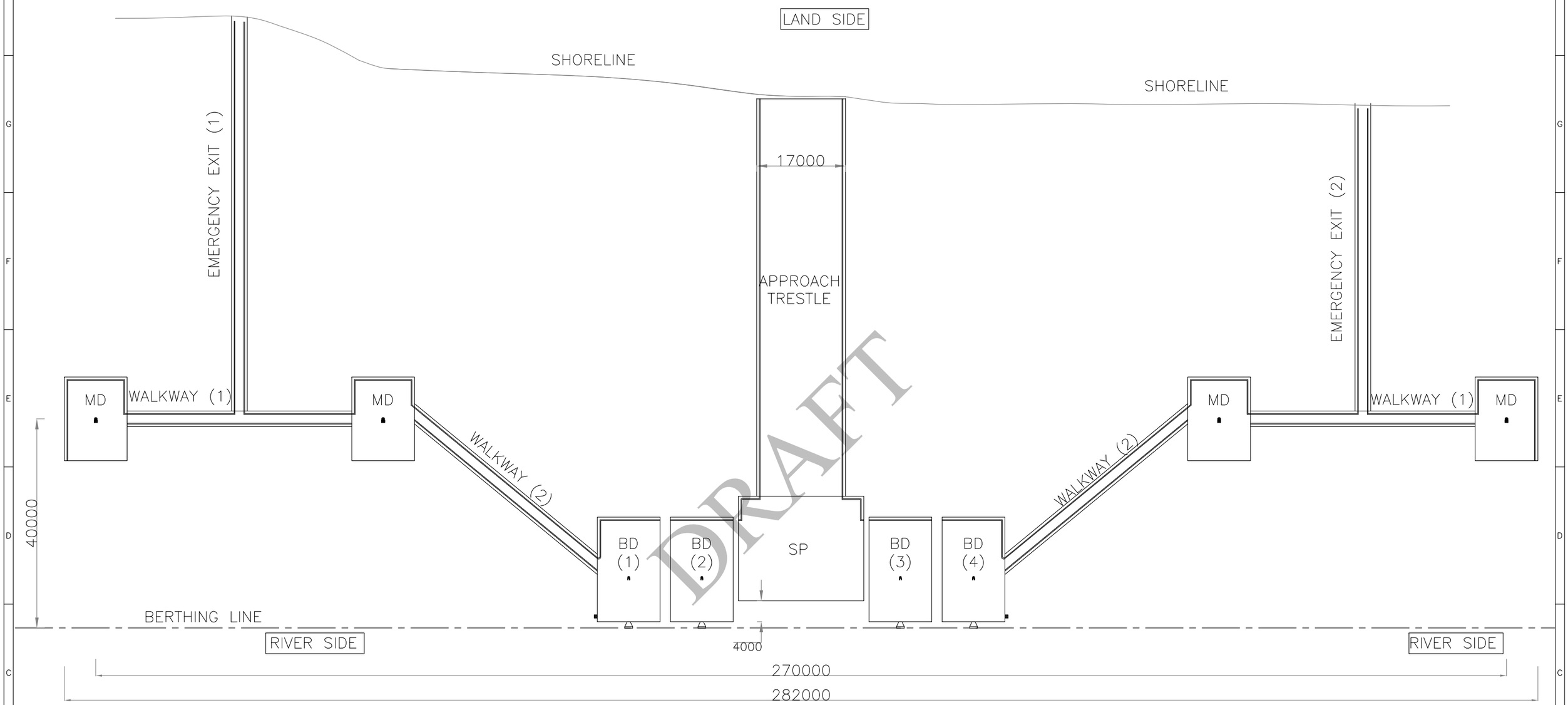
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	09/07/2018	00

DRAWING TITLE :
COLUMN LAYOUT

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/1007



DRAFT

HAND RAIL LAYOUT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D

═══ – HANDRAIL

SL NO.	COMPONENT	DIMENSION IN mm	NOS.
1	BERTHING DOLPHIN (BD)	12000X20000	4
2	MOORING DOLPHIN (MD)	12000X16000	4
3	SERVICE PLATFORM (SP)	24000X20000	1
4	WALKWAY (1)	45000X1500	2
5	WALKWAY (2)	45300X1500	2
6	EMERGENCY EXIT (1)	75000X1500	1
7	EMERGENCY EXIT (2)	59000X1500	1

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/1002	00	LAYOUT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

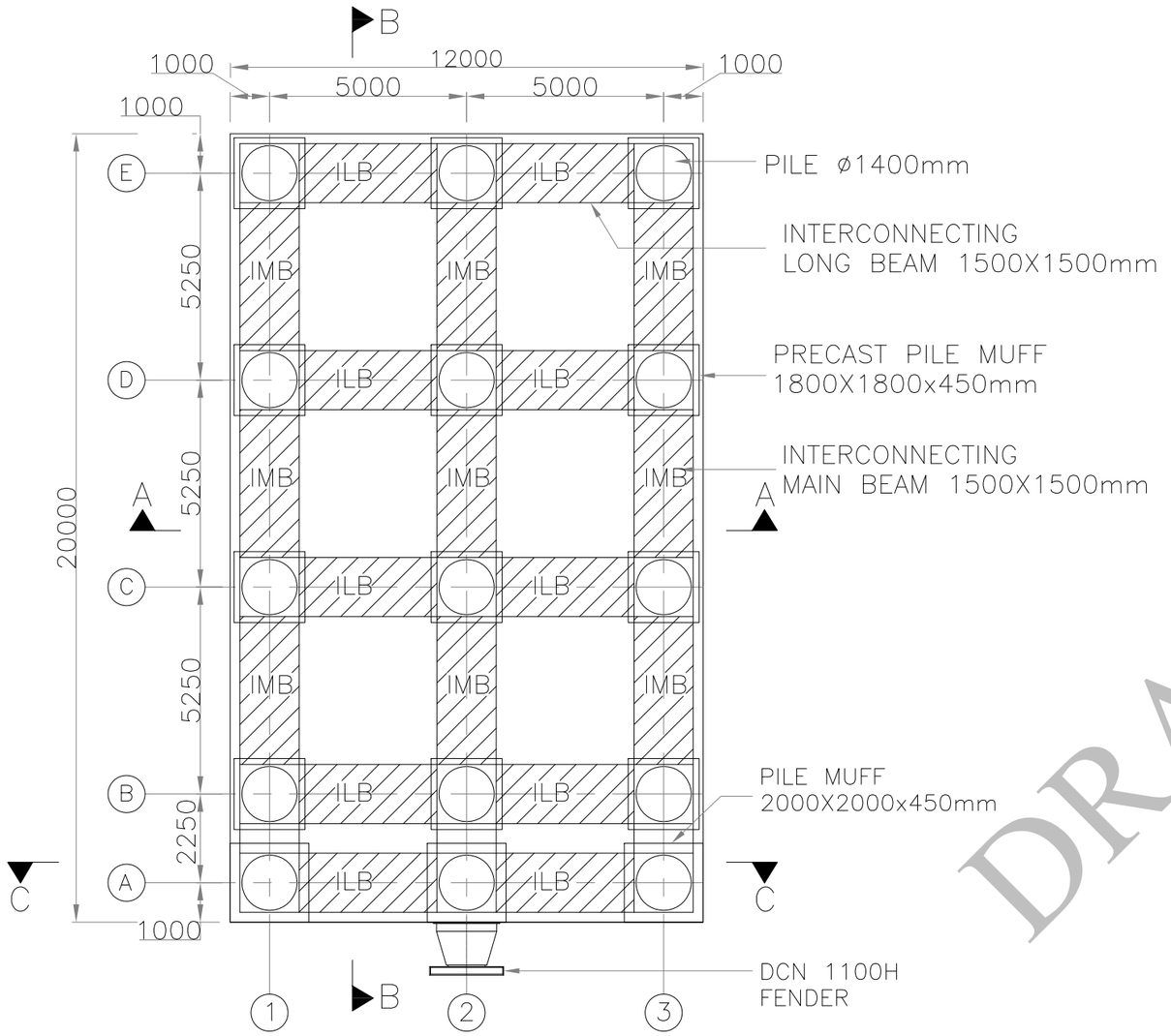
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

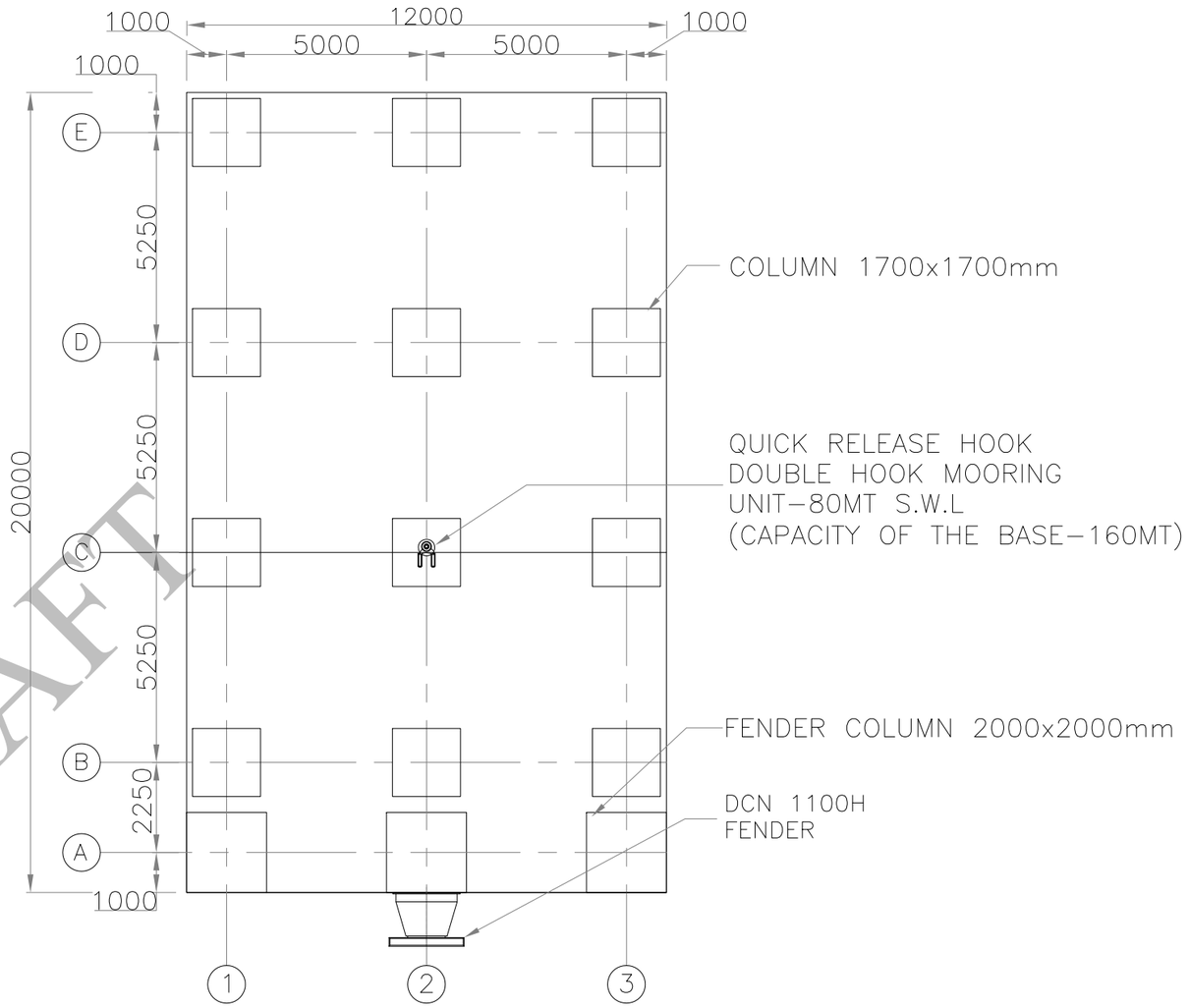
DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	09/07/2018	00

DRAWING TITLE :
HAND RAIL LAYOUT

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/1008



PLAN AT (+)4.73m



PLAN AT (+)8.70m

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" .W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
5. GRADE OF CONCRETE : M40
6. GRADE OF STEEL : Fe 500D
7. PILE –1400mmø
8. DECK TOP LEVEL – (+)8.70m CD
9. DREDGE LEVEL – (–)11.00m CD
10. FOUNDING LEVEL – (–)47.00m CD

SL.NO	COMPONENTS	DETAILS
①	PILE	15
②	PILE MUFF	15
③	COLUMN	12
④	FENDER COLUMN	3
⑤	INTERCONNECTING LONG BEAM	10
⑥	INTERCONNECTING MAIN BEAM	9

SL.NO	COMPONENTS	DETAILS
①	INTERCONNECTING LONG BEAM 3500X1500X1500mm	1500 1500 1500
②	INTERCONNECTING MAIN BEAM 3750X1500X1500mm	1500 1500 1500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1.	IITM/DOE/HDC/OT–II/LCHJ/1001	00	LOCATION OF PROPOSED LIQUID CARGO HANDLING JETTY
2.	IITM/DOE/HDC/OT–II/LCHJ/1002	00	LAYOUT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM: Prof. R. SUNDARAVADIVELU., FNAE, INSTITUTE CHAIR PROFESSOR, MEMBER BOG IIT MADRAS, DEPARTMENT OF OCEAN ENGINEERING IIT MADRAS, CHENNAI – 36

SIGNATURE :

CLIENT : HALDIA DOCK COMPLEX (HDC), KOLKATA PORT TRUST (KoPT), HALDIA

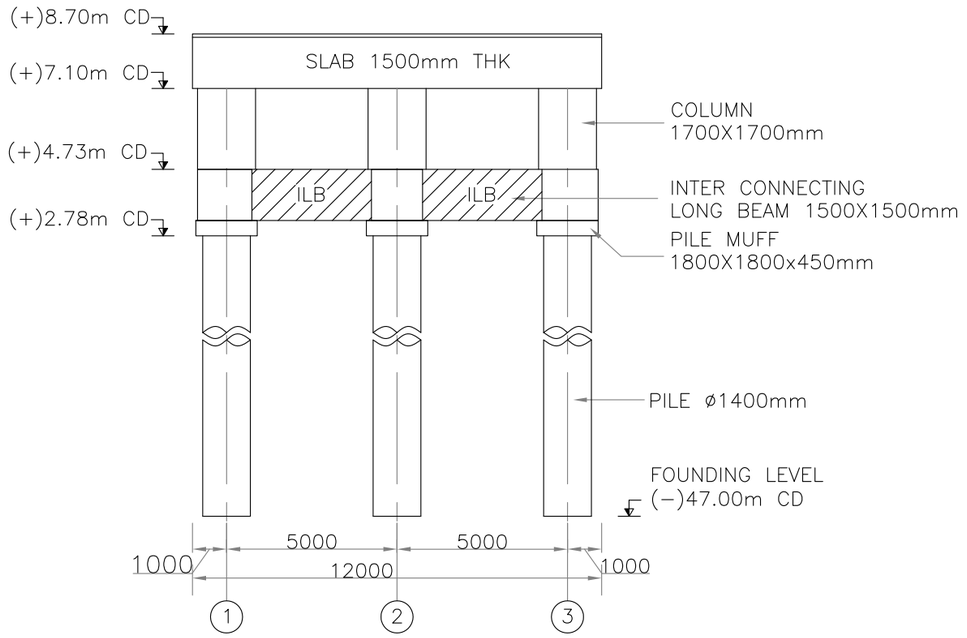
PROJECT TITLE : CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL–II) NORTH OF LOCK OF ENTRANCE AT HALDIA DOCK COMPLEX.

DRN.	CHK.	APP.	DATE	REV
SSK	GB	RSUN	09/07/2018	00

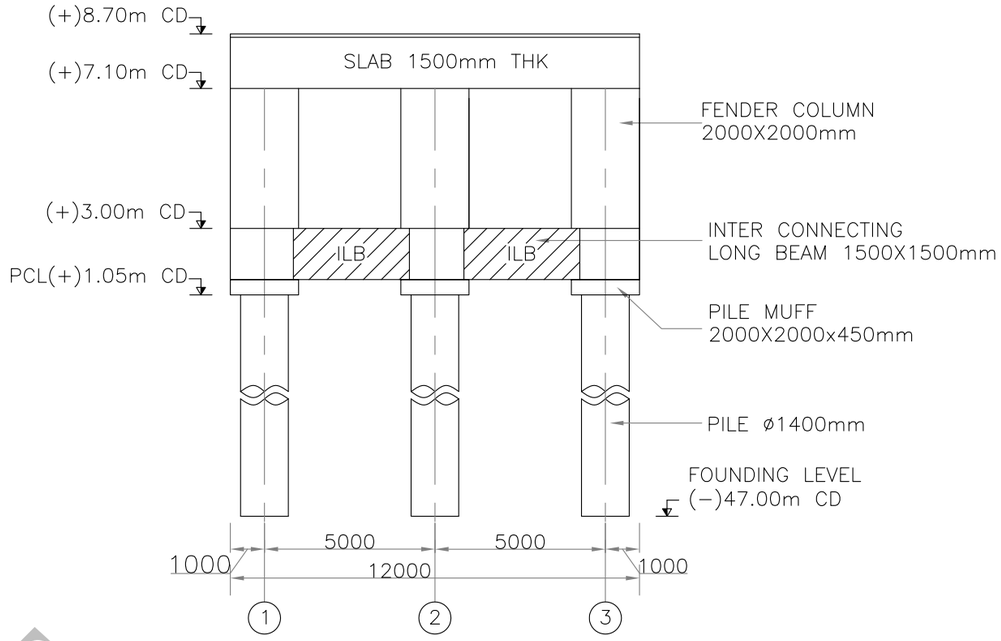
DRAWING TITLE : GENERAL ARRANGEMENTS (BERTHING DOLPHIN)

SH.SCALE: AS SHOWN

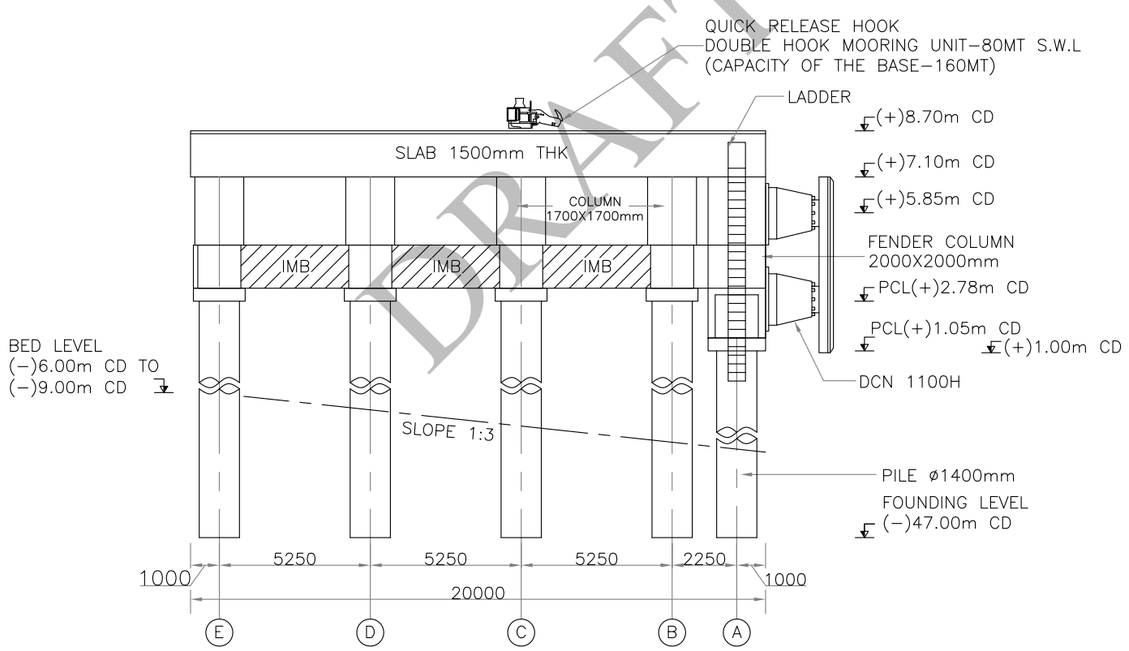
DRAWING NUMBER: IITM/DOE/HDC/OT–II/LCHJ/2001



SECTION−AA



SECTION−CC



SECTION−BB

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" .W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
5. GRADE OF CONCRETE : M40
6. GRADE OF STEEL : Fe 500D
7. PILE −1400mmø
8. DECK TOP LEVEL − (+)8.70m CD
9. DREDGE LEVEL − (−)11.00m CD
10. FOUNDING LEVEL − (−)47.00m CD

SL.NO	COMPONENTS	DETAILS
①	PILE	15
②	PILE MUFF	15
③	COLUMN	12
④	FENDER COLUMN	3
⑤	INTERCONNECTING LONG BEAM	10
⑥	INTERCONNECTING MAIN BEAM	9

SL.NO	COMPONENTS	DETAILS
①	INTERCONNECTING LONG BEAM 3500X1500X1500mm	1500 / 1500
②	INTERCONNECTING MAIN BEAM 3750X1500X1500mm	1500 / 1500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1.	IITM/DOE/HDC/OT−II/LCHJ/1001	00	LOCATION OF PROPOSED LIQUID CARGO HANDLING JETTY
2.	IITM/DOE/HDC/OT−II/LCHJ/1002	00	LAYOUT OF PROPOSED LIQUID CARGO HANDLING JETTY
3.	IITM/DOE/HDC/OT−II/LCHJ/2001	00	GENERAL ARRANGEMENTS (BERTHING DOLPHIN)

ENGINEERING FIRM: Prof. R. SUNDARAVADIVELU., FNAE, INSTITUTE CHAIR PROFESSOR, MEMBER BOG IIT MADRAS, DEPARTMENT OF OCEAN ENGINEERING IIT MADRAS, CHENNAI − 36

CLIENT : HALDIA DOCK COMPLEX (HDC), KOLKATA PORT TRUST (KoPT), HALDIA.

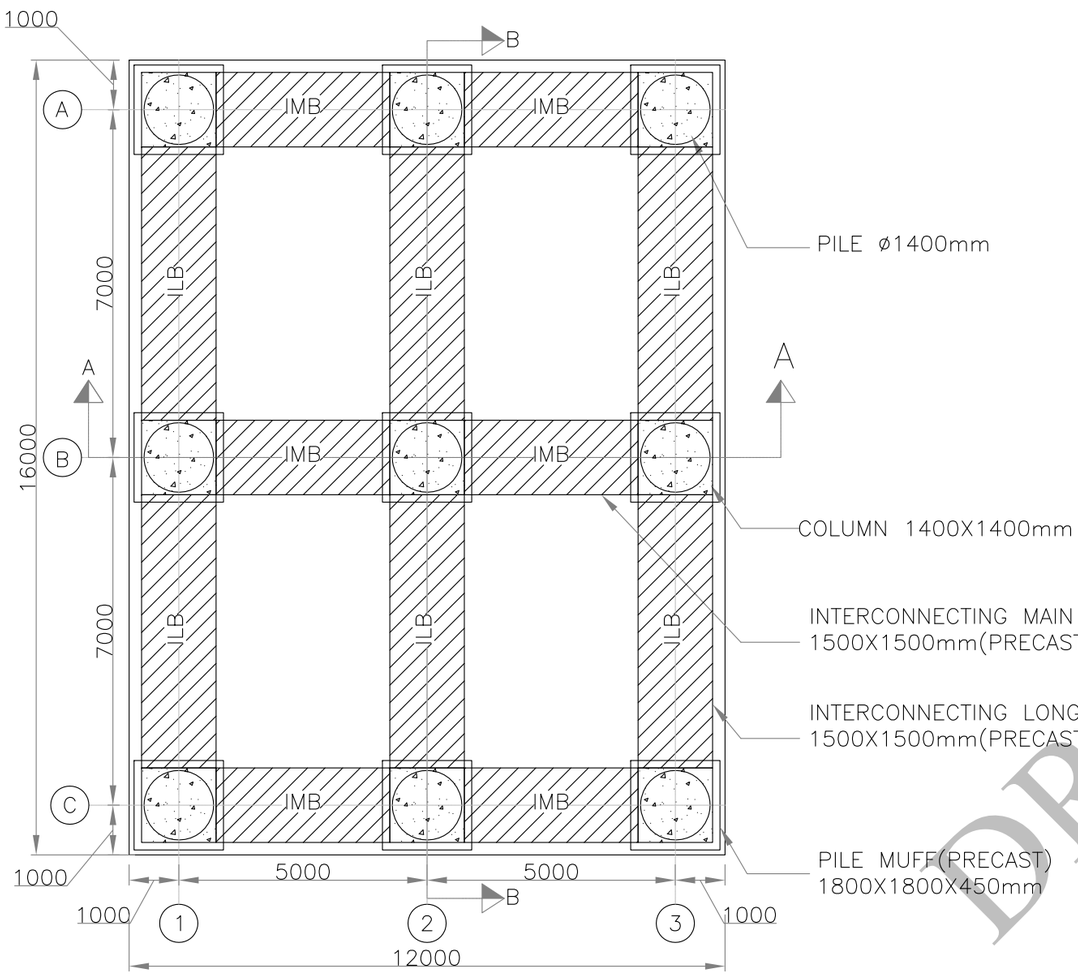
SIGNATURE :

PROJECT TITLE : CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OUTER TERMINAL−II) NORTH OF LOCK OF ENTRANCE AT HALDIA DOCK COMPLEX.

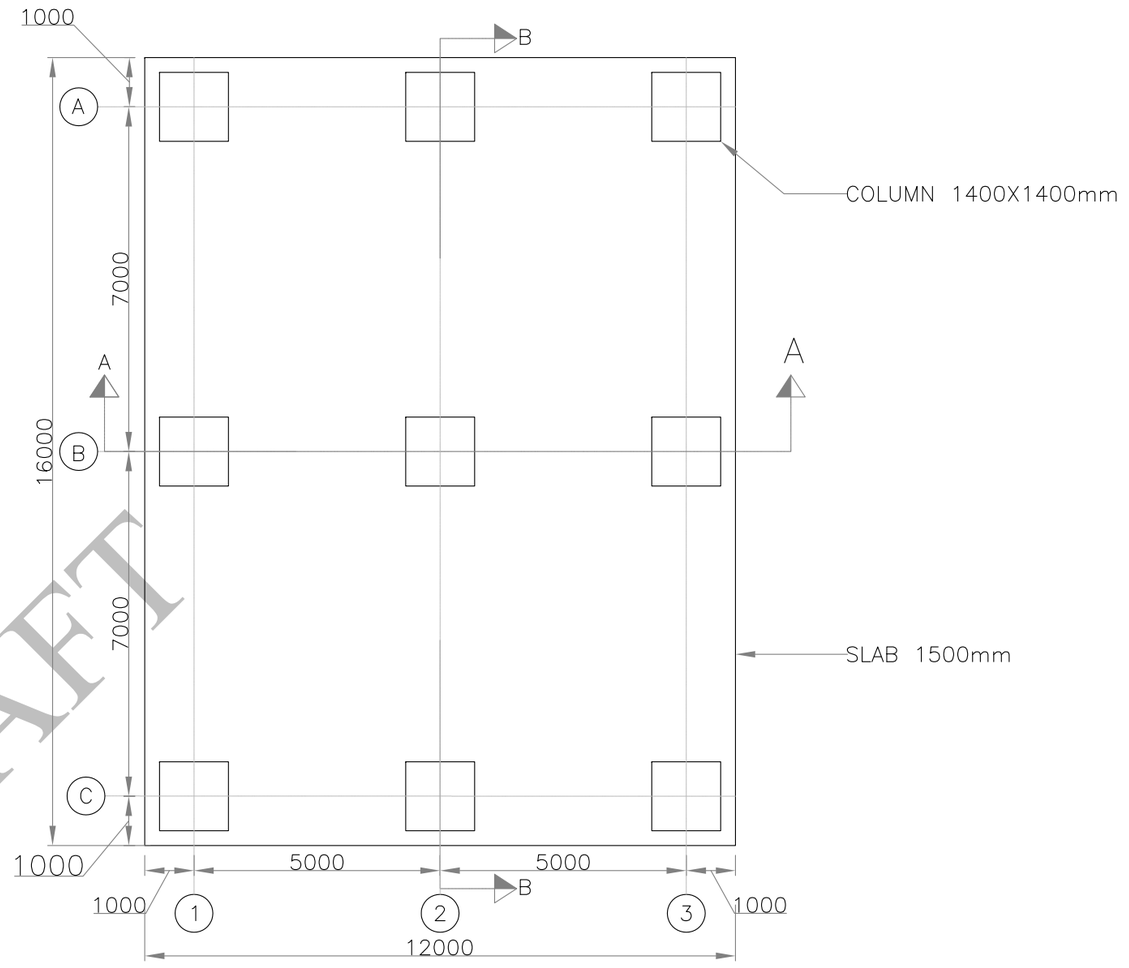
DRN.	CHK.	APP.	DATE	REV
SSK	GB	RSUN	09/07/2018	00

DRAWING TITLE : CROSS SECTIONS − BERTHING DOLPHIN

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT−II/LCHJ/2002



PLAN AT (+)4.73m



PLAN AT (+)8.70m

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
7. GRADE OF STEEL : Fe500D
8. DECK TOP LEVEL :(+)8.70m CD
9. DREDGE LEVEL :(−)11.00m CD
10. PILE :1400mmø
11. DEPTH OF LINER BASED ON SITE CONDITION
12. MS LINER :8mm THK
13. FOUNDING LEVEL :(−)45.00m CD

Sl.No	COMPONENTS	NUMBERS
1	PILE	9
2	PILE MUFF	9
3	COLUMN	9
4	INTERCONNECTING MAIN BEAM	6
5	INTERCONNECTING LONG BEAM	6

Sl.No	COMPONENTS	DETAILS
1	INTERCONNECTING MAIN BEAM(IMB) 3500X1500X1500mm(PRECAST)	1500 / 1500
2	INTERCONNECTING LONG BEAM(ILB) 5500X1500X1500mm(PRECAST)	1500 / 1500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1.	IITM/DOE/HDC/OT-II/LCHJ/1001	00	LOCATION OF PROPOSED LIQUID CARGO HANDLING JETTY
2.	IITM/DOE/HDC/OT-II/LCHJ/1002	00	LAYOUT OF PROPOSED LIQUID CARGO HANDLING JETTY
3.	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

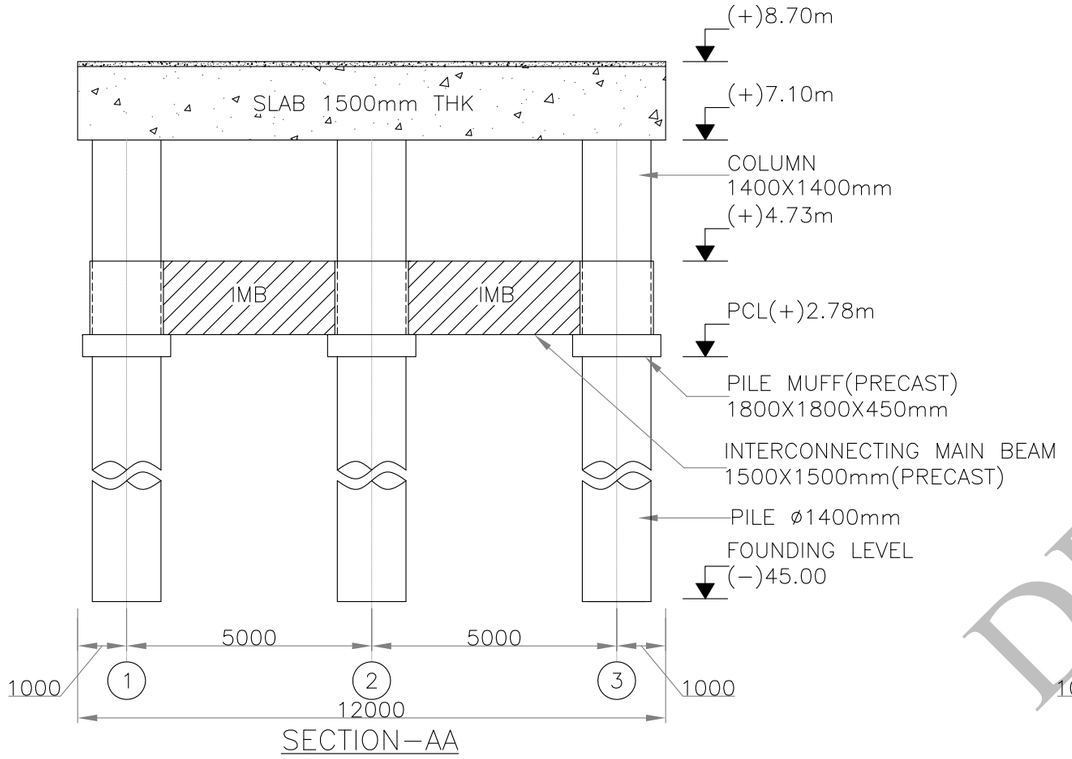
CLIENT :
HALDIA DOCK COMPLEX(HDC),
KOLKATA PORT TRUST(KoPT),
HALDIA

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

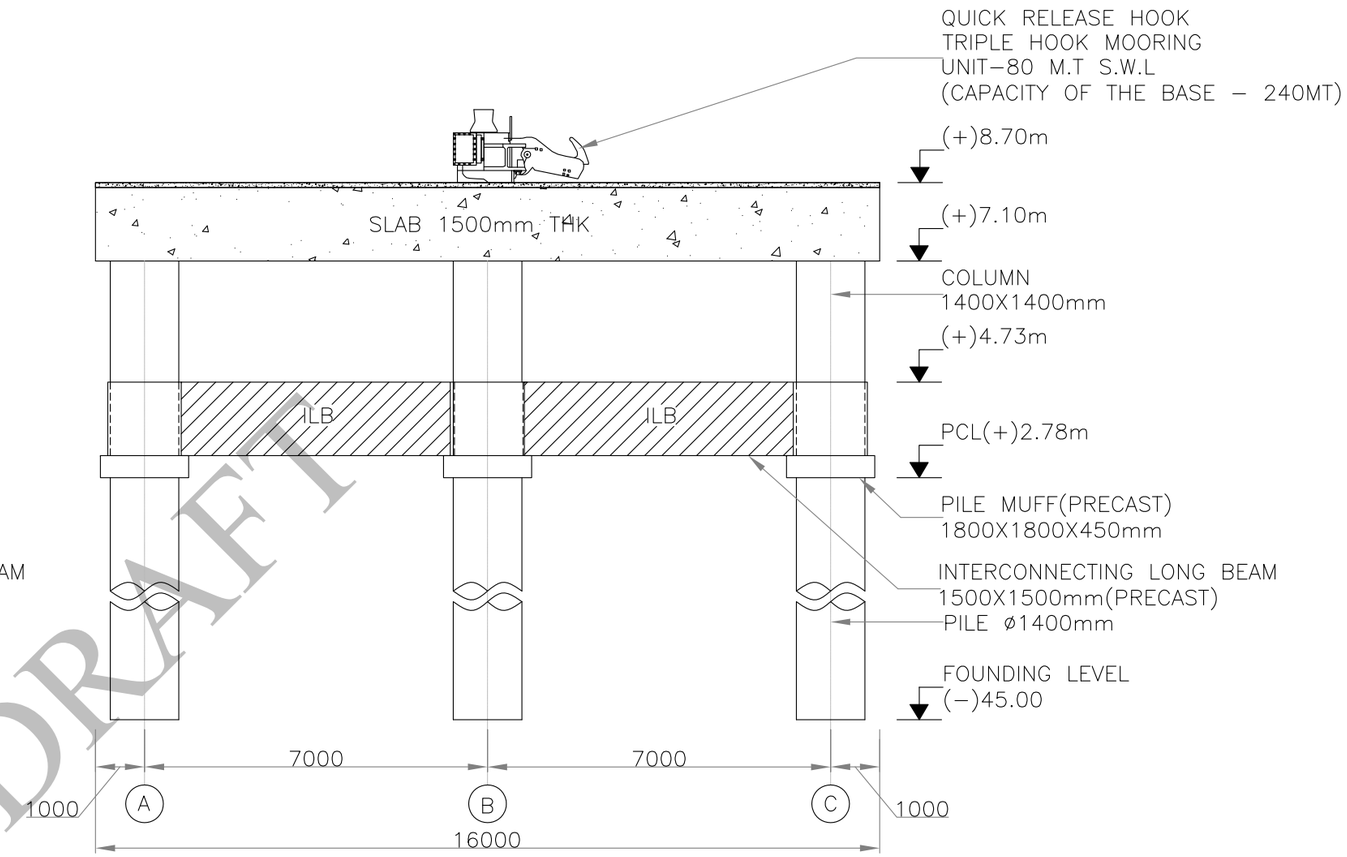
DRN.	CHK.	APP.	DATE	REV
KSR	NS	RSUN	09/07/2018	00

DRAWING TITLE :
PLAN–MOORING DOLPHIN

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/3001



SECTION−AA



SECTION−BB

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
7. GRADE OF STEEL : Fe500D
8. DECK TOP LEVEL :(+)8.70m CD
9. DREDGE LEVEL :(−)11.00m CD
10. PILE :1400mmø
11. DEPTH OF LINER BASED ON SITE CONDITION
12. MS LINER :8mm THK
13. FOUNDING LEVEL :(−)45.00m CD

Sl.No	COMPONENTS	NUMBERS
1	PILE	9
2	PILE MUFF	9
3	COLUMN	9
4	INTERCONNECTING MAIN BEAM	6
5	INTERCONNECTING LONG BEAM	6

Sl.No	COMPONENTS	DETAILS
1	INTERCONNECTING MAIN BEAM(IMB) 3500X1500X1500mm(PRECAST)	1500 / 1500
2	INTERCONNECTING LONG BEAM(ILB) 5500X1500X1500mm(PRECAST)	1500 / 1500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1.	IITM/DOE/HDC/OT−II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY
2.	IITM/DOE/HDC/OT−II/LCHJ/3001	00	PLAN−MOORING DOLPHIN

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI − 36

SIGNATURE :

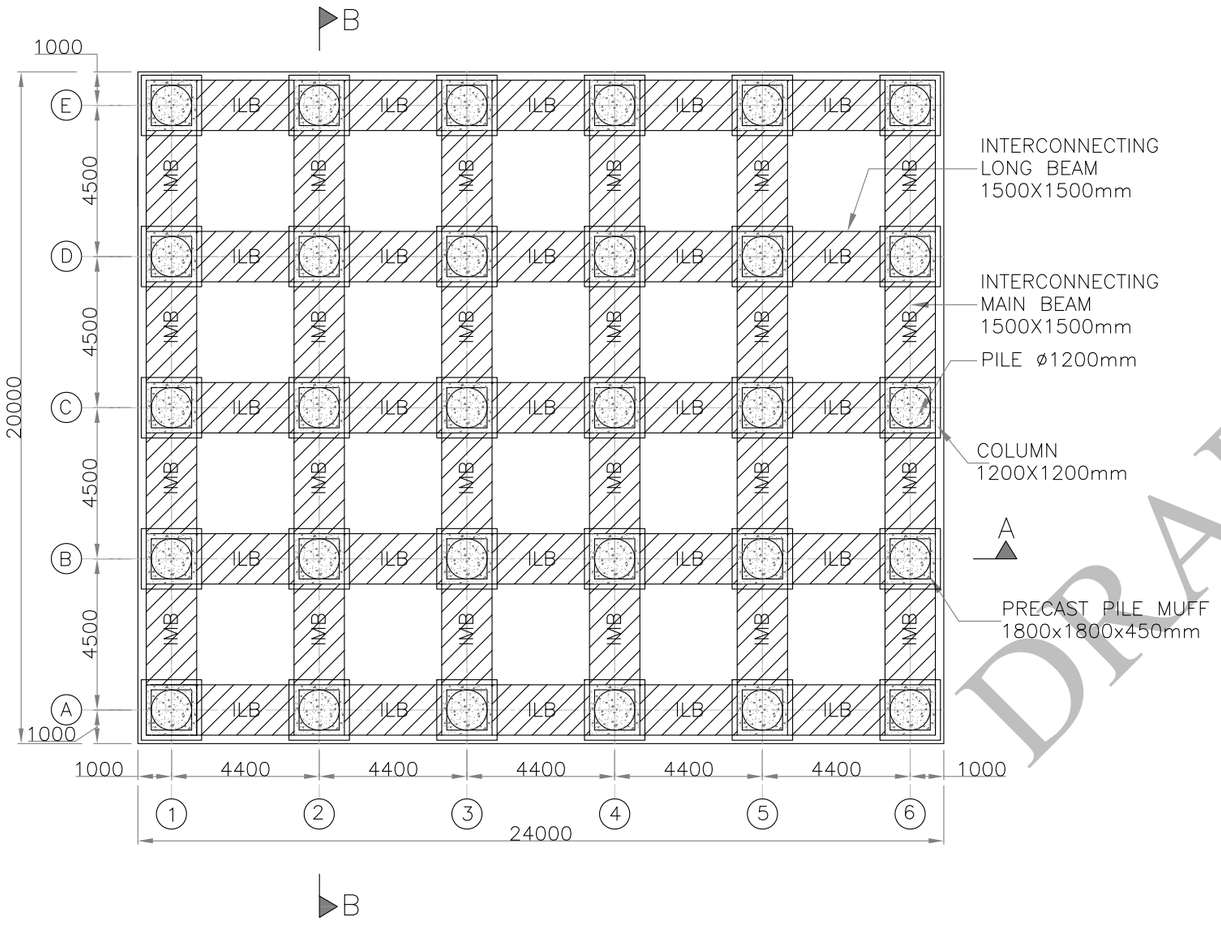
CLIENT :
HALDIA DOCK COMPLEX(HDC),
KOLKATA PORT TRUST(KoPT),
HALDIA

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT−II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX.

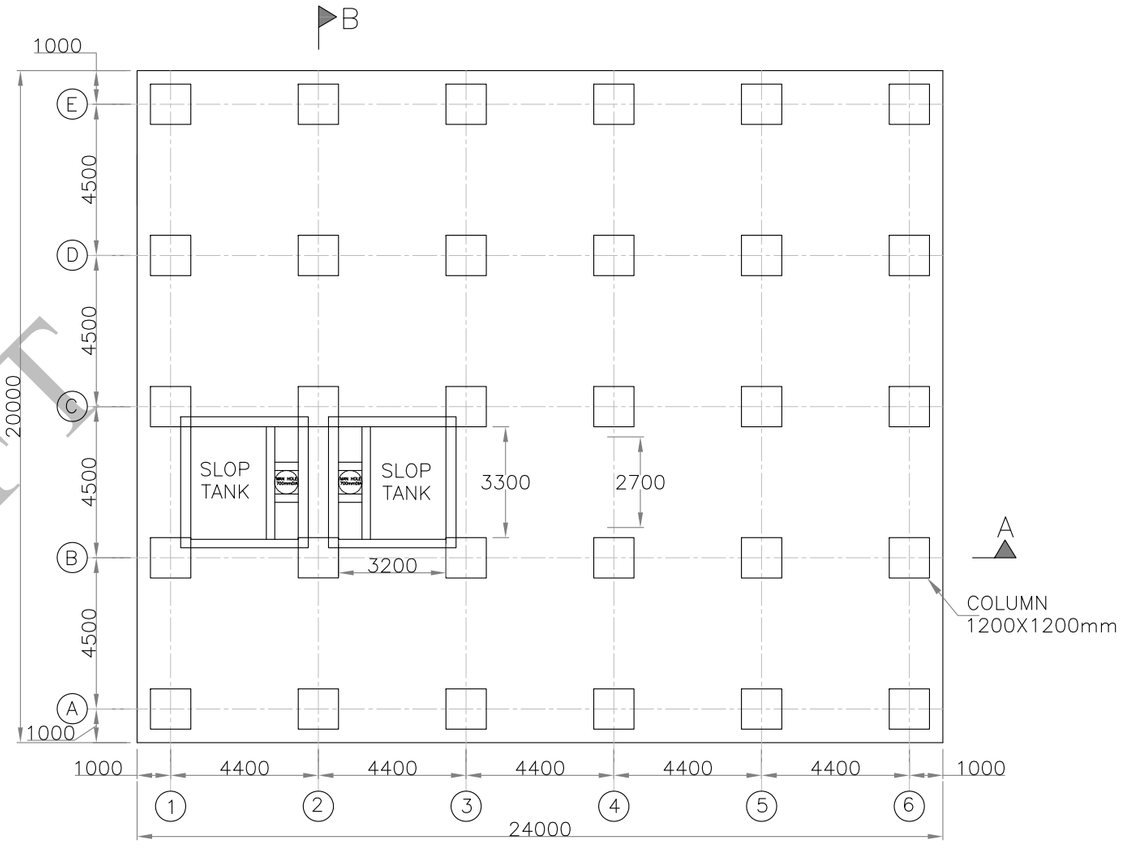
DRN.	CHK.	APP.	DATE	REV
KSR	NS	RSUN	09/07/2018	00

DRAWING TITLE :
SECTION AA&BB−MOORING DOLPHIN

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT−II/LCHJ/3002



PLAN AT (+)4.73m



PLAN AT (+) 8.70m

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL : (–)11.0m CD

Sl.No	COMPONENTS	NUMBERS
1	PILE	30
2	PILE MUFF	30
3	COLUMN	30
4	INTERCONNECTING MAIN BEAM	24
5	INTERCONNECTING LONG BEAM	25

Sl.No	COMPONENTS	DETAILS
1	INTERCONNECTING MAIN BEAM 3000X1500X1500mm(PRECAST) (IMB)	1500 / 1500
2	INTERCONNECTING LONG BEAM 2900X1500X1500mm(PRECAST) (ILB)	1500 / 1500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
01	IITM/DOE/HDC/OT–II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

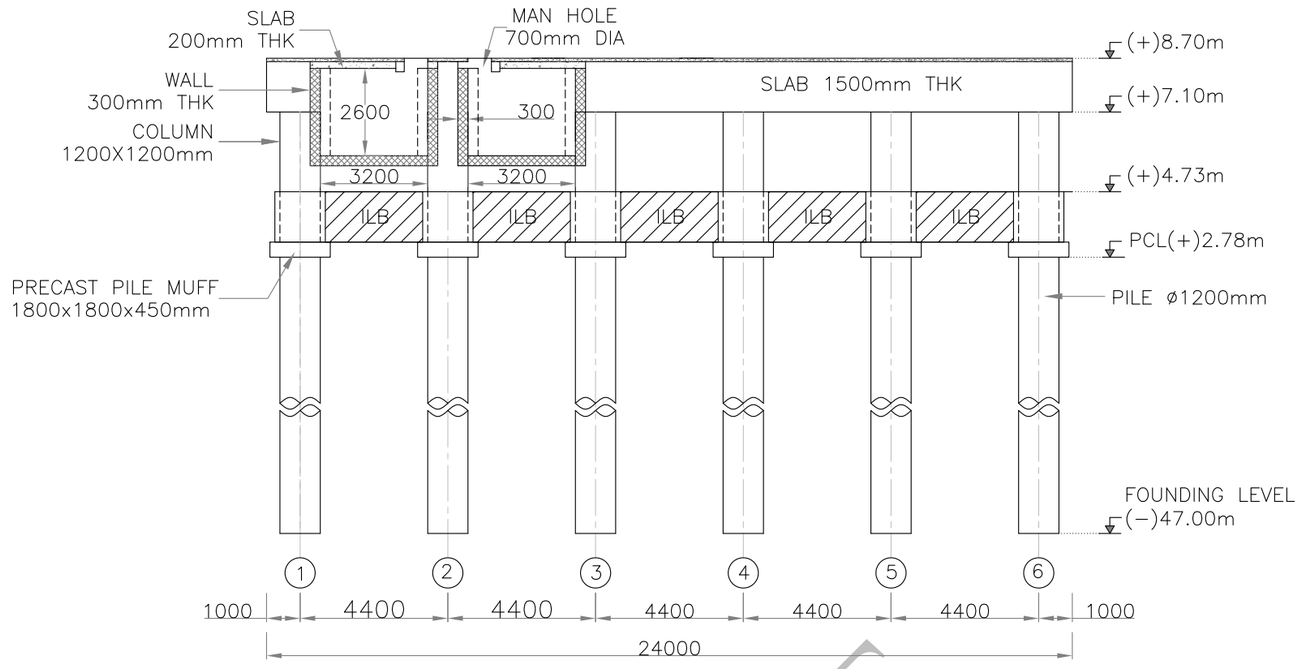
PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

DRN.	CHK.	APP.	DATE	REV
NS	SM	RSUN	09/07/2018	00

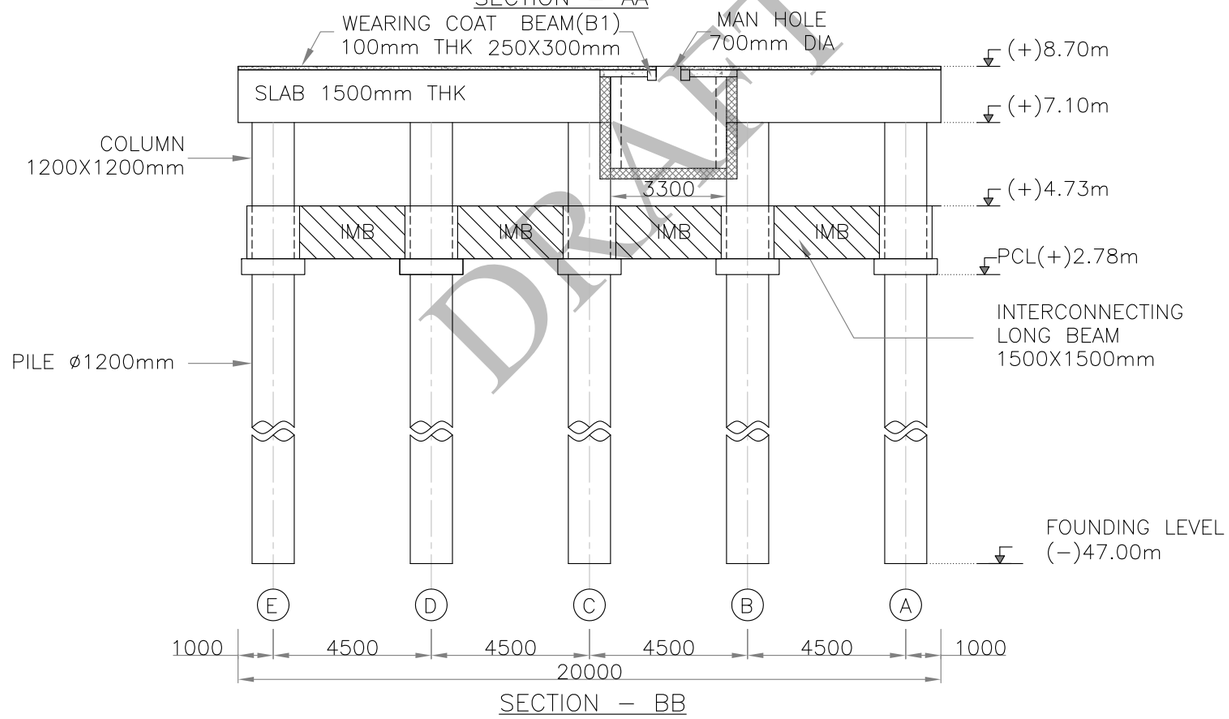
DRAWING TITLE :
PLAN – SERVICE PLATFORM

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT–II/LCHJ/4001

DRAFT



SECTION – AA



SECTION – BB

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL : (−)11.0m CD

Sl.No	COMPONENTS	NUMBERS
1	PILE	30
2	PILE MUFF	30
3	COLUMN	30
4	INTERCONNECTING MAIN BEAM	24
5	INTERCONNECTING LONG BEAM	25

Sl.No	COMPONENTS	DETAILS
1	INTERCONNECTING MAIN BEAM 3000X1500X1500mm(PRECAST) (IMB)	1500 / 1500
2	INTERCONNECTING LONG BEAM 2900X1500X1500mm(PRECAST) (ILB)	1500 / 1500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
01	IITM/DOE/HDC/OT-II/LCHJ/4001	00	PLAN – SERVICE PLATFORM

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

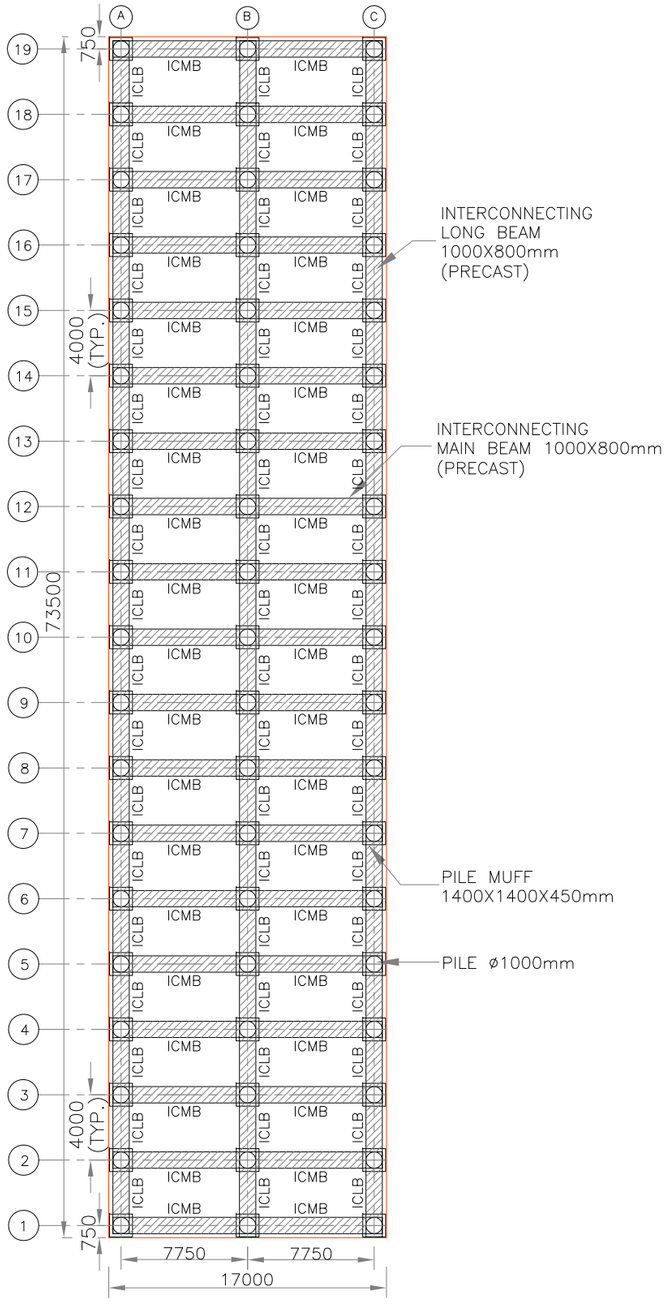
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

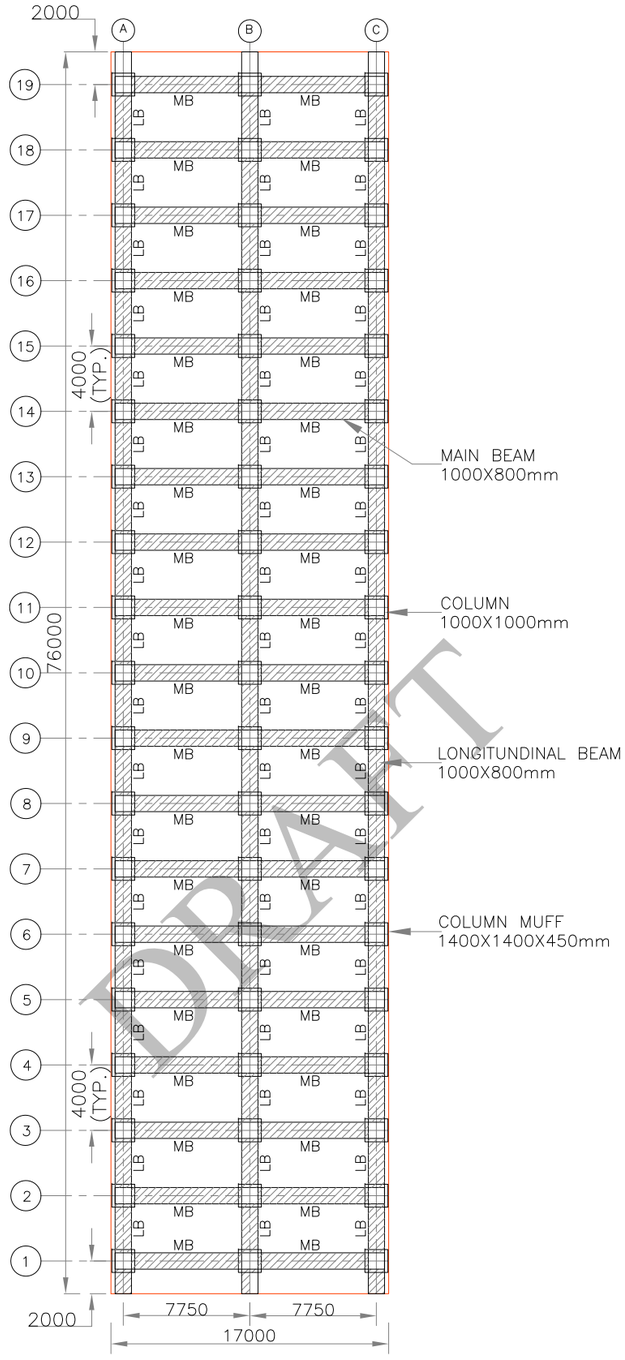
DRN.	CHK.	APP.	DATE	REV
NS	SM	RSUN	09/07/2018	00

DRAWING TITLE :
SECTION AA & BB – SERVICE PLATFORM

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/4002



PLAN AT (+)4.03m LEVEL



PLAN AT (+)8.30m LEVEL

SI.NO	DETAILS		SHAPE
1	INTERCONNECTING MAIN BEAM(ICMB)	6750X1000X800mm	800 / 1000
2	INTERCONNECTING LONG BEAM(ICLB)	4000X1000X800mm	800 / 1000
3	MAIN BEAM(MB)	6750X1000X500mm	500 / 1000
4	LONG BEAM(LB)	4000X1000X500mm	500 / 1000

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
8. DECK TOP LEVEL – (+)8.70m CD
9. DREDGE LEVEL – (–)12.00m CD
10. FOUNDING LEVEL – (–)45.00m CD

NUMBERS OF APPROACH TRESTLE COMPONENTS

SL.NO	DESCRIPTION	TOTAL
1	PILE	57 NOS
2	PILE MUFF	57 NOS
3	COLUMN	57 NOS
4	COLUM MUFF	57 NOS
5	INTERCONNECTING MAIN BEAM	38 NOS
6	INTERCONNECTING LONG BEAM	54 NOS
7	MAIN BEAM	38 NOS
8	LONG BEAM	54 NOS
9	PRE–CAST SLAB	72 NOS

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1.	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY .

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING,
IIT MADRAS, CHENNAI – 36.

SIGNATURE :

CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

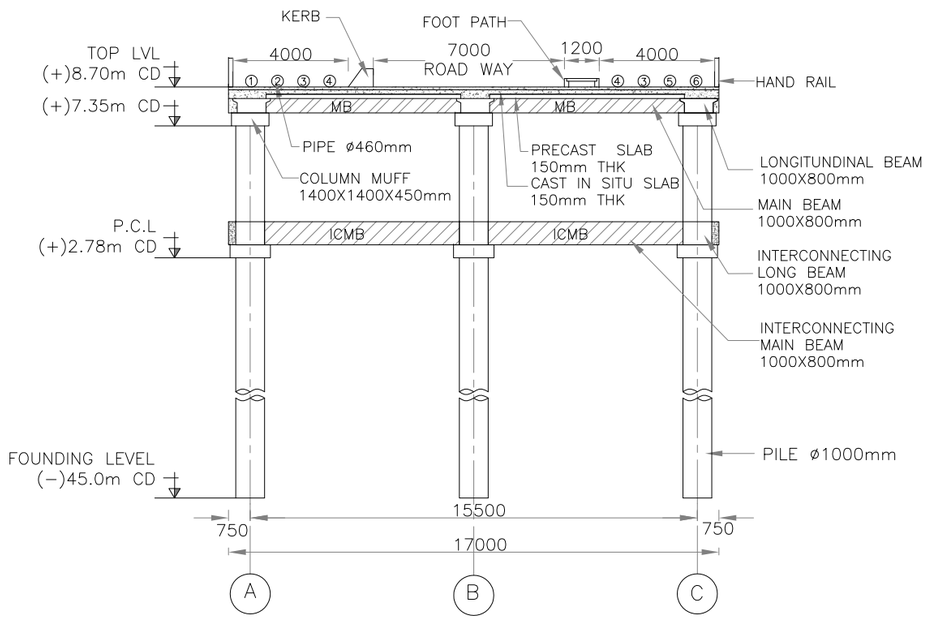
DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	27/04/2018	00

DRAWING TITLE :
PLAN – APPROACH TRESTLE

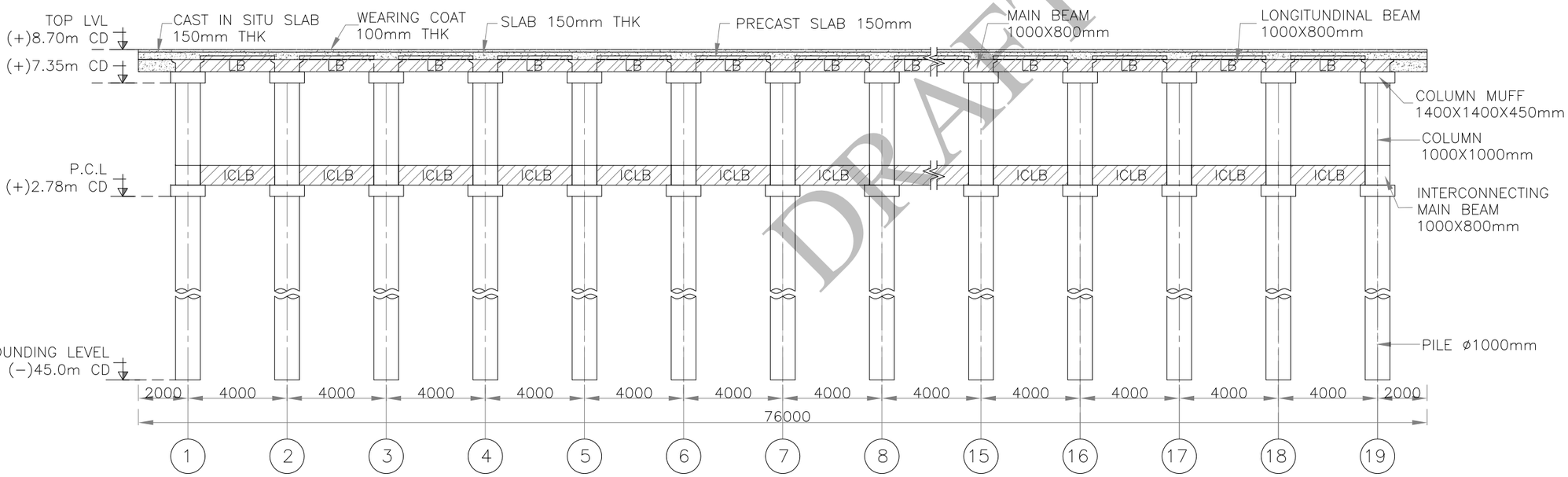
SH.SCALE

DRAWING NUMBER
IITM/DOE/HDC/OT–II/LCHJ/5001

DRAFT



CROSS SECTION



LONGITUDINAL SECTION

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:
1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
8. DECK TOP LEVEL – (+)8.70m CD
9. DREDGE LEVEL – (−)12.00m CD
10. FOUNDING LEVEL – (−)45.00m CD

DETAILS OF PIPE LINE	
SL.NO	DESCRIPTION
1	EDIBLE OIL LINE
2	EDIBLE OIL LINE
3	FRESH WATER LINE
4	FIRE WATER LINE
5	POL LINE
6	POL LINE

SI.NO	DETAILS		SHAPE
1	INTERCONNECTING MAIN BEAM(ICMB)	6750X1000X800mm	1000 / 800
2	INTERCONNECTING LONG BEAM(ICLB)	4000X1000X800mm	1000 / 800
3	MAIN BEAM(MB)	6750X1000X500mm	1000 / 500
4	LONG BEAM(LB)	4000X1000X500mm	1000 / 500

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1.	IITM/DOE/HDC/OT-II/LCHJ/5001	00	PLAN OF APPROACH TRESTLE

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING,
IIT MADRAS, CHENNAI – 36.

SIGNATURE :

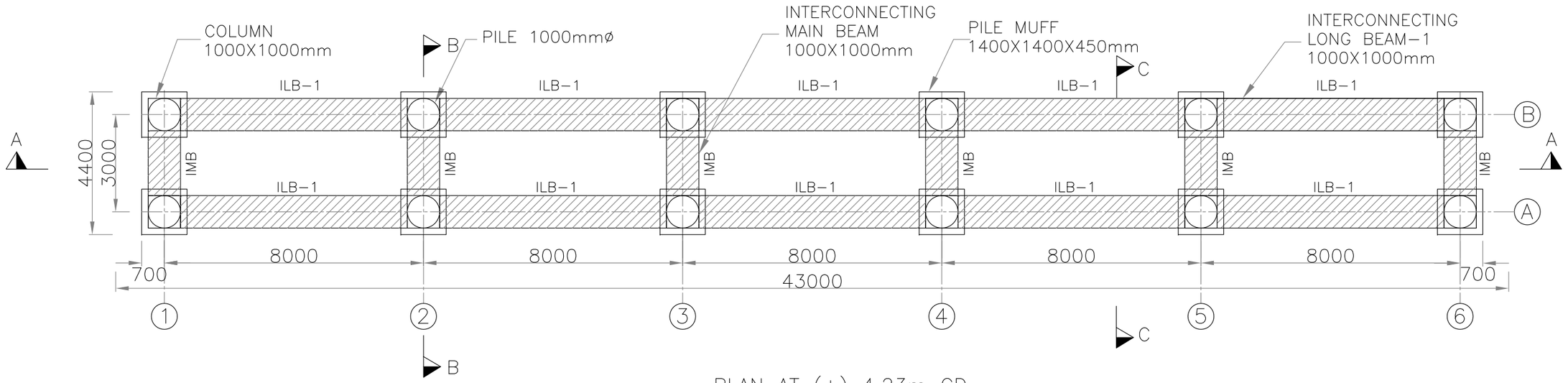
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

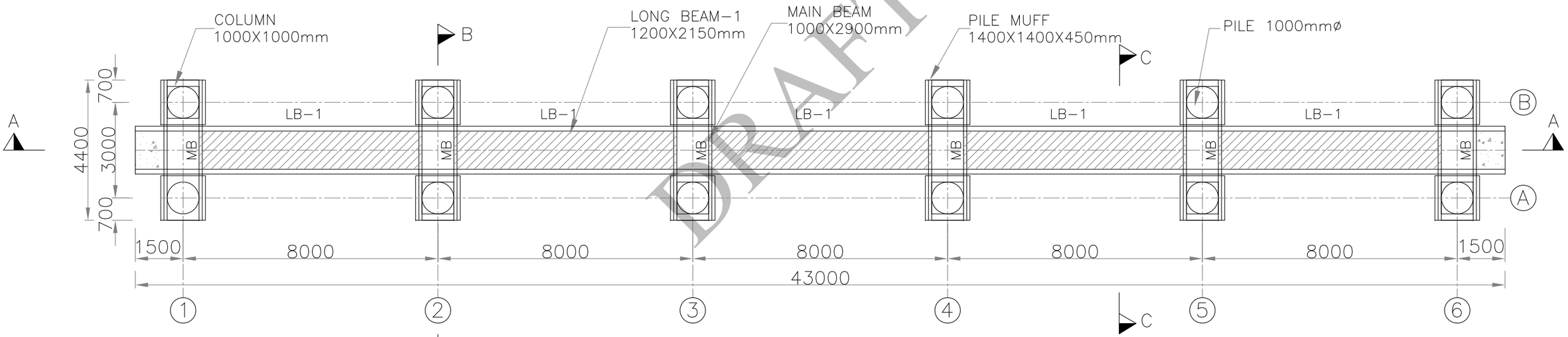
DRN.	CHK.	APP.	DATE	REV
SSK	NS	RSUN	27/04/2018	00

DRAWING TITLE :
SECTION AA & BB APPROACH TRESTLE

SH.SCALE	DRAWING NUMBER
	IITM/DOE/HDC/OT–II/LCHJ/5002



PLAN AT (+) 4.23m CD



PLAN AT (+) 8.7m CD

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (–) 11m CD

	COMPONENTS OF 43m WALKWAY	
SL.NO	DESCRIPTION	TOTAL
1	PILE	12 NOS
2	PILE MUFF	12 NOS
3	COLUMN	12 NOS
4	COLUMN MUFF	12 NOS
5	INTERCONNECTING LONG BEAM–1	10 NOS
6	INTERCONNECTING MAIN BEAM	6 NOS
7	LONG BEAM–1	5 NOS
8	MAIN BEAM	6 NOS

	REFERENCE DRAWINGS		
SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT–II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

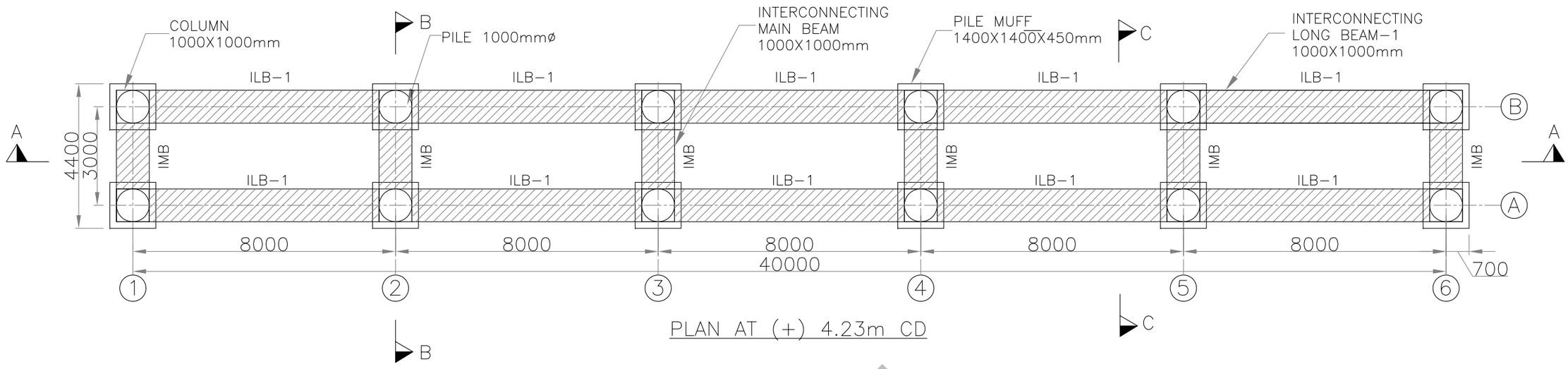
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

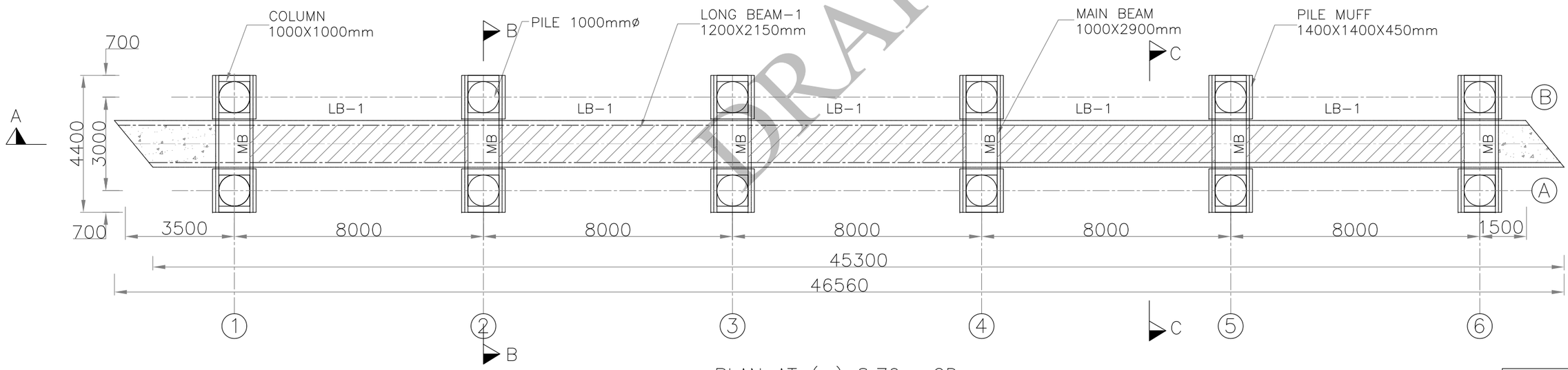
DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
PLAN OF WALKWAY–I

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT–II/LCHJ/6001–A



PLAN AT (+) 4.23m CD



PLAN AT (+) 8.70m CD

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (−) 11m CD

	COMPONENTS OF 45.3m WALKWAY	
SL.NO	DESCRIPTION	TOTAL
1	PILE	12 NOS
2	PILE MUFF	12 NOS
3	COLUMN	12 NOS
4	COLUMN MUFF	12 NOS
5	INTERCONNECTING LONG BEAM−1	10 NOS
6	INTERCONNECTING MAIN BEAM	6 NOS
7	LONG BEAM−1	5 NOS
8	MAIN BEAM	6 NOS

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI − 36

SIGNATURE :

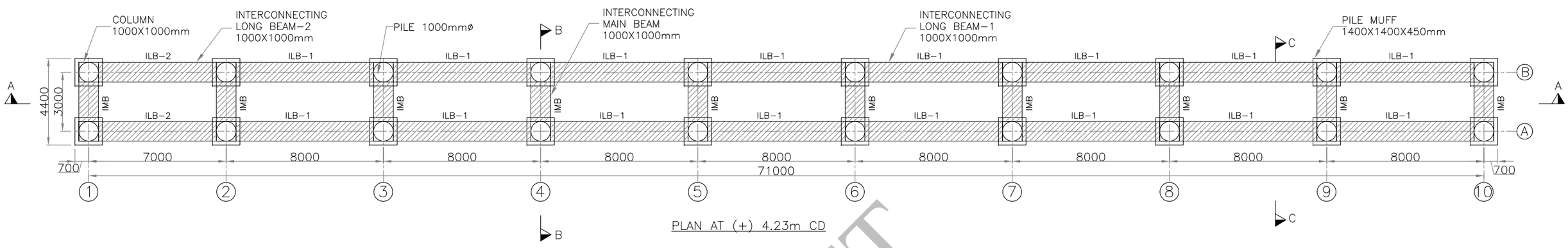
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT−II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

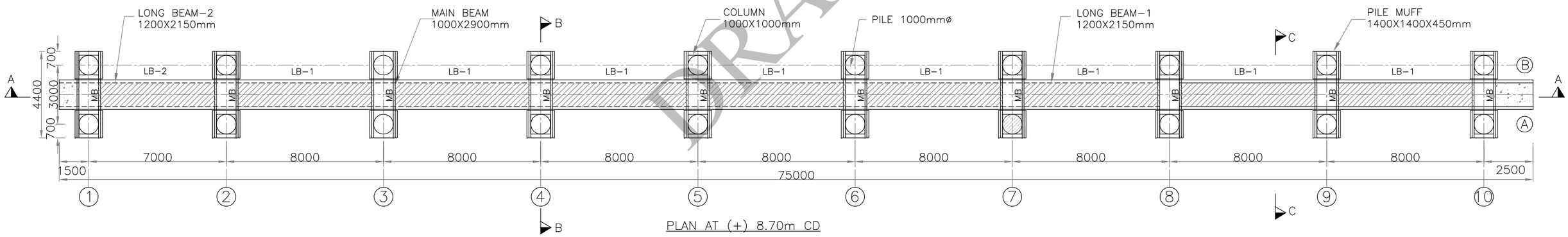
DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
PLAN OF WALKWAY−II

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/6001-B



PLAN AT (+) 4.23m CD



PLAN AT (+) 8.70m CD

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (–) 11m CD

	COMPONENTS OF 75m EMERGENCY EXIT	
SL.NO	DESCRIPTION	TOTAL
1	PILE	20 NOS
2	PILE MUFF	20 NOS
3	COLUMN	20 NOS
4	COLUMN MUFF	20 NOS
5	INTERCONNECTING LONG BEAM–1	16 NOS
6	INTERCONNECTING LONG BEAM–2	2 NOS
7	INTERCONNECTING MAIN BEAM	10 NOS
8	LONG BEAM–1	8 NOS
9	LONG BEAM–2	1 NOS
10	MAIN BEAM	10 NOS

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT–II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

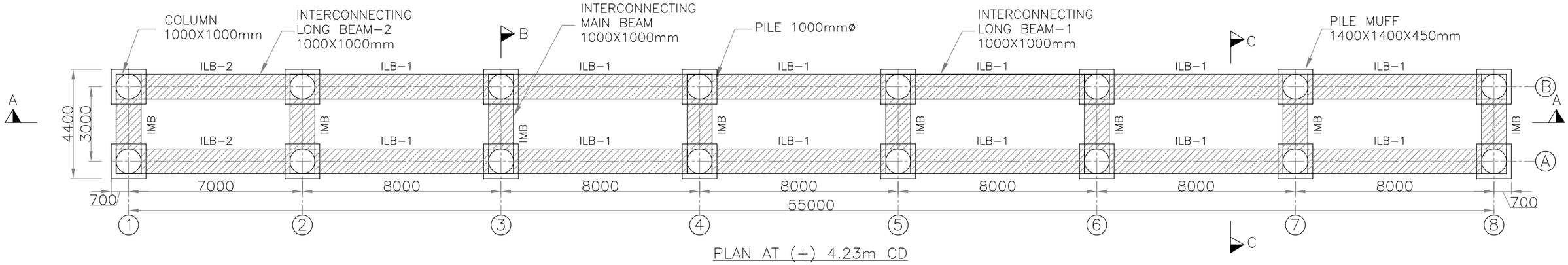
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

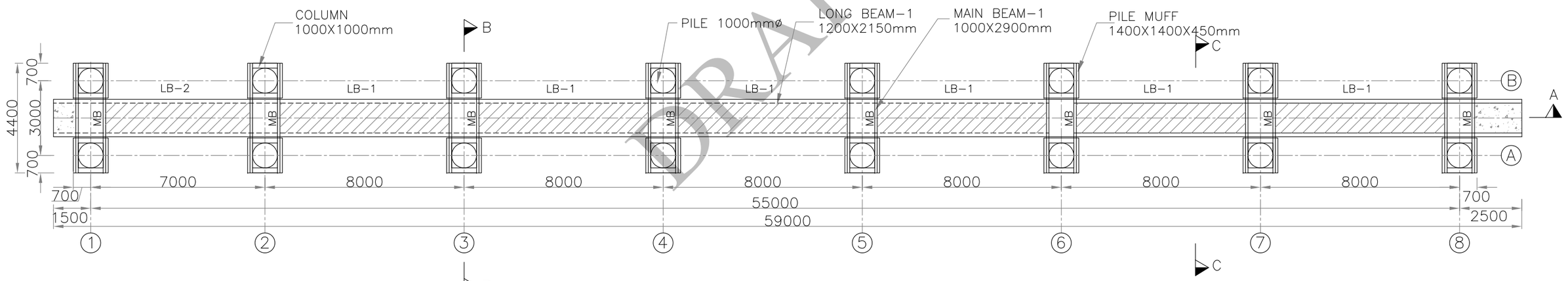
DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
PLAN OF EMERGENCY EXIT–I

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT–II/LCHJ/6002–A



PLAN AT (+) 4.23m CD



PLAN AT (+) 8.70m CD

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:

1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (-) 11m CD

COMPONENTS OF 59m EMERGENCY EXIT

SL.NO	DESCRIPTION	TOTAL
1	PILE	16 NOS
2	PILE MUFF	16 NOS
3	COLUMN	16 NOS
4	COLUMN MUFF	16 NOS
5	INTERCONNECTING LONG BEAM-1	12 NOS
6	INTERCONNECTING LONG BEAM-2	2 NOS
7	INTERCONNECTING MAIN BEAM	8 NOS
8	LONG BEAM-1	6 NOS
9	LONG BEAM-2	1 NOS
10	MAIN BEAM	8 NOS

REFERENCE DRAWINGS

SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/1004	00	GENERAL ARRANGEMENT OF PROPOSED LIQUID CARGO HANDLING JETTY

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI - 36

SIGNATURE :

CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

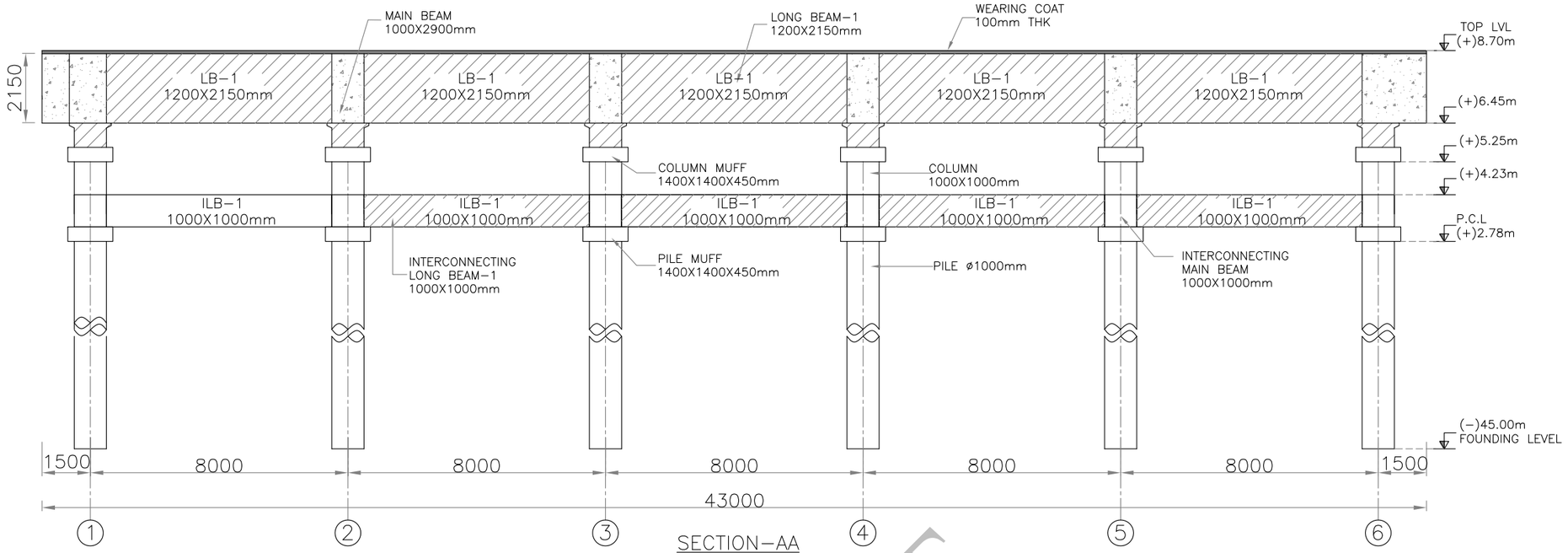
PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

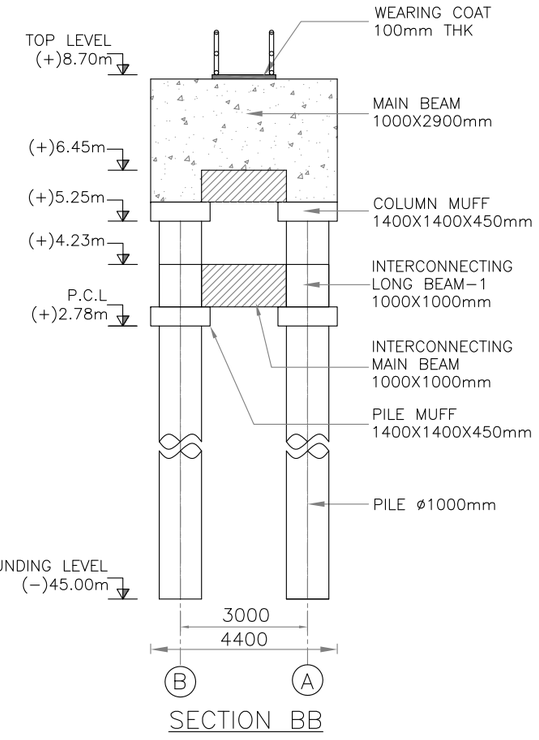
DRAWING TITLE :
PLAN OF EMERGENCY EXIT-II

SH.SCALE: AS SHOWN

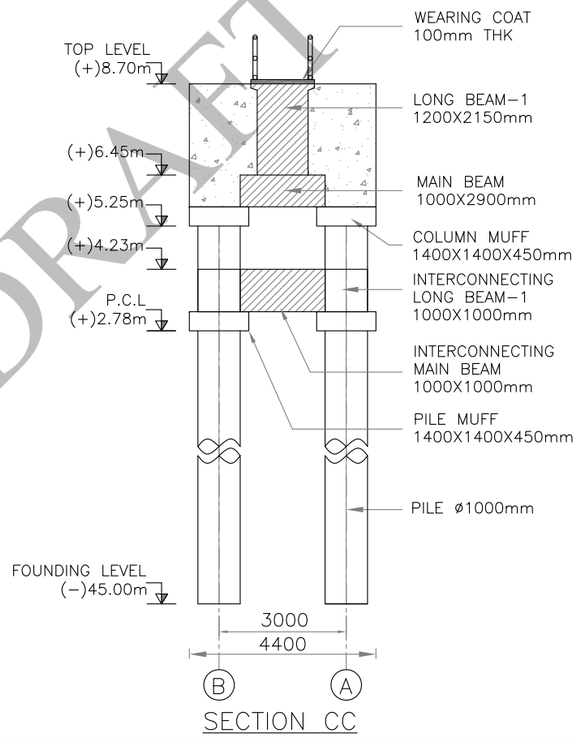
DRAWING NUMBER: IITM/DOE/HDC/OT-II/LCHJ/8002-B



SECTION-AA



SECTION BB



SECTION CC

SI.NO	DETAILS		SHAPE
1	LONG BEAM-1 (LB-1)	7000X1200X2150mm (PRECAST)	2150, 1200
2	LONG BEAM-2 (LB-2)	6000X1200X2150mm (PRECAST)	2150, 1200
3	INTERCONNECTING LONG BEAM-1 (ILB-1)	7000X1000X1000mm (PRECAST)	1000, 1000
4	INTERCONNECTING LONG BEAM-2 (ILB-2)	6000X1000X1000mm (PRECAST)	1000, 1000
5	MAIN BEAM	4400X1000X2900mm (INSITU+PRECAST)	2900, 2150, 750, 1000
6	INTERCONNECTING MAIN BEAM	2000X1000X1000mm (PRECAST)	1000, 1000

DRAFT

NOTES:
1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (-) 11m CD

	COMPONENTS OF 43m WALKWAY	
SL.NO	DESCRIPTION	TOTAL
1	PILE	12 NOS
2	PILE MUFF	12 NOS
3	COLUMN	12 NOS
4	COLUMN MUFF	12 NOS
5	INTERCONNECTING LONG BEAM-1	10 NOS
6	INTERCONNECTING MAIN BEAM	6 NOS
7	LONG BEAM-1	5 NOS
8	MAIN BEAM	6 NOS

	REFERENCE DRAWINGS		
SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/6001-A	00	PLAN OF WALKWAY-I

TENDER DRAWINGS ☐
GOOD FOR CONSTRUCTION DRAWINGS ☑

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI - 36

SIGNATURE :

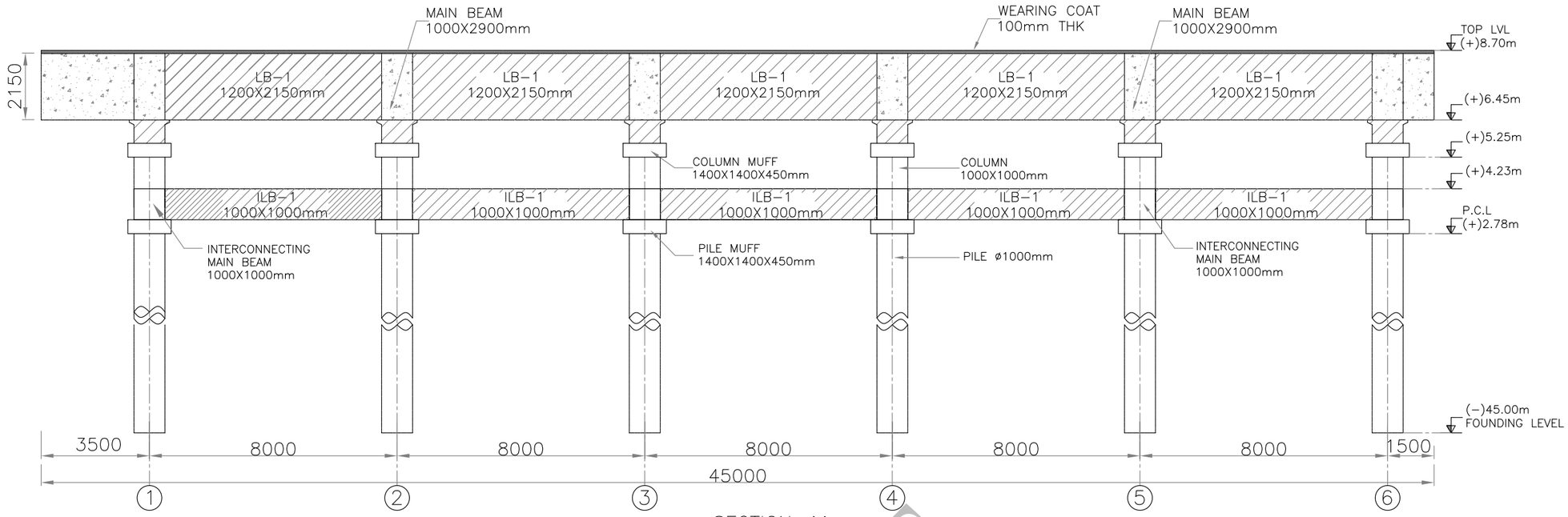
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

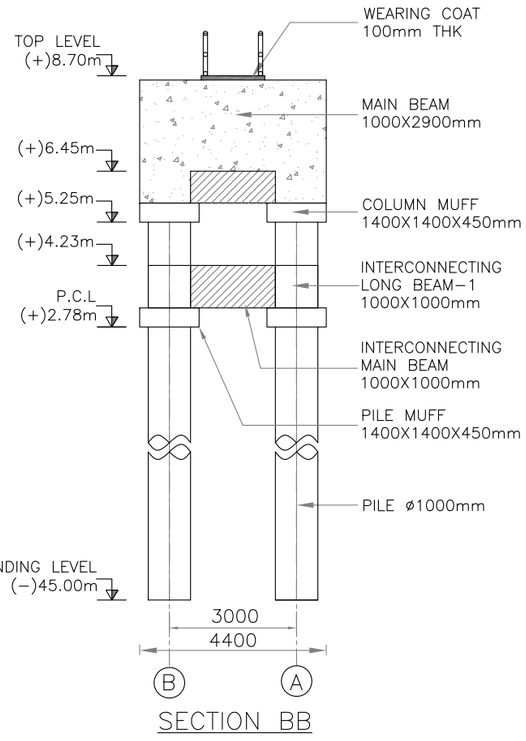
PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
SECTION AA,BB&CC OF WALKWAY-I

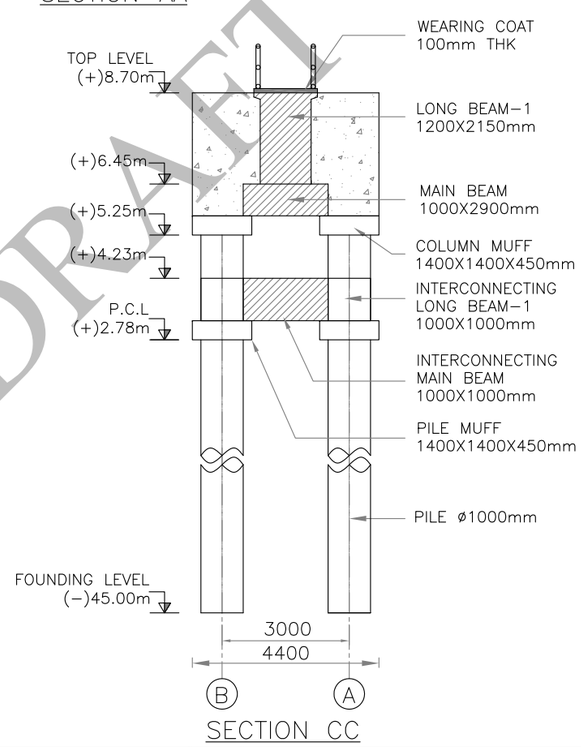
SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/6003-A





SECTION BB

SECTION-AA



SECTION CC

SI.NO	DETAILS		SHAPE
1	LONG BEAM-1 (LB-1)	7000X1200X2150mm (PRECAST)	2150, 1200
2	LONG BEAM-2 (LB-2)	6000X1200X2150mm (PRECAST)	2150, 1200
3	INTERCONNECTING LONG BEAM-1 (ILB-1)	7000X1000X1000mm (PRECAST)	1000, 1000
4	INTERCONNECTING LONG BEAM-2 (ILB-2)	6000X1000X1000mm (PRECAST)	1000, 1000
5	MAIN BEAM	4400X1000X2900mm (INSITU+PRECAST)	2900, 2150, 750, 1000
6	INTERCONNECTING MAIN BEAM	2000X1000X1000mm (PRECAST)	1000, 1000

DRAFT

TENDER DRAWINGS ☐

GOOD FOR CONSTRUCTION DRAWINGS ☑

NOTES:
1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (-) 11m CD

	COMPONENTS OF 45.3m WALKWAY	
SL.NO	DESCRIPTION	TOTAL
1	PILE	12 NOS
2	PILE MUFF	12 NOS
3	COLUMN	12 NOS
4	COLUMN MUFF	12 NOS
5	INTERCONNECTING LONG BEAM-1	10 NOS
6	INTERCONNECTING MAIN BEAM	6 NOS
7	LONG BEAM-1	5 NOS
8	MAIN BEAM	6 NOS

	REFERENCE DRAWINGS		
SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/6001-B	00	PLAN OF WALKWAY-II

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI - 36

SIGNATURE :

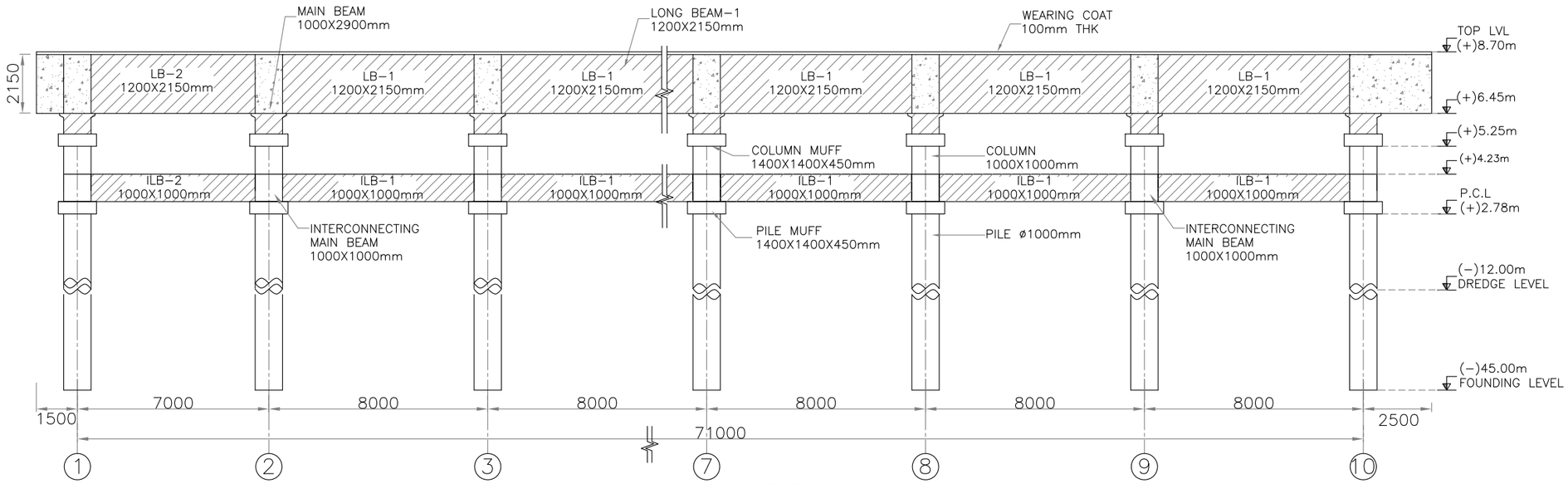
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

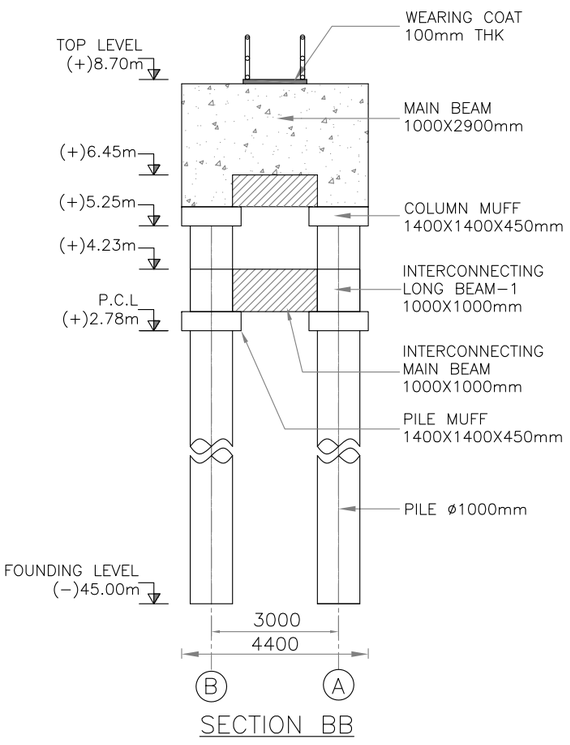
DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
SECTION AA,BB&CC OF WALKWAY-II

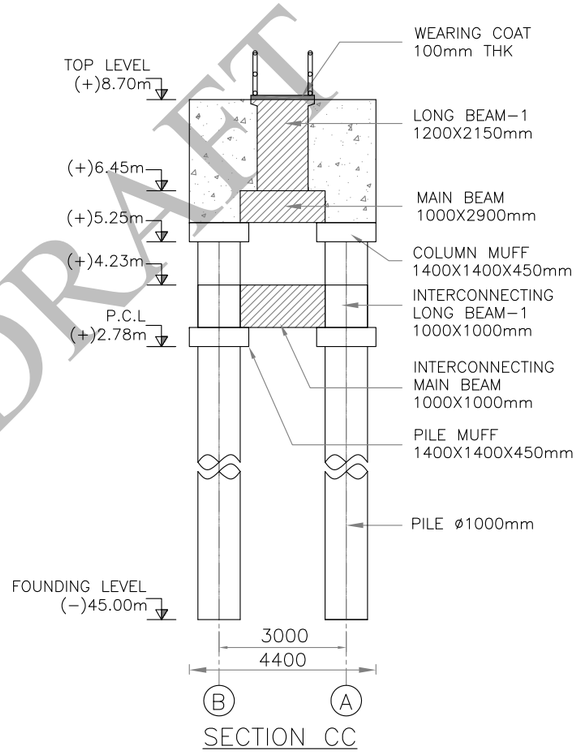
SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/6003-B



SECTION AA



SECTION BB



SECTION CC

DRAFT

SI.NO	DETAILS		SHAPE
1	LONG BEAM-1 (LB-1)	7000X1200X2150mm (PRECAST)	2150, 1200
2	LONG BEAM-2 (LB-2)	6000X1200X2150mm (PRECAST)	2150, 1200
3	INTERCONNECTING LONG BEAM-1 (ILB-1)	7000X1000X1000mm (PRECAST)	1000, 1000
4	INTERCONNECTING LONG BEAM-2 (ILB-2)	6000X1000X1000mm (PRECAST)	1000, 1000
5	MAIN BEAM	4400X1000X2900mm (INSITU+PRECAST)	2150, 2900, 750, 1000
6	INTERCONNECTING MAIN BEAM	2000X1000X1000mm (PRECAST)	1000, 1000

NOTES:
1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (-) 11m CD

	COMPONENTS OF 75m EMERGENCY EXIT	
SL.NO	DESCRIPTION	TOTAL
1	PILE	20 NOS
2	PILE MUFF	20 NOS
3	COLUMN	20 NOS
4	COLUMN MUFF	20 NOS
5	INTERCONNECTING LONG BEAM-1	16 NOS
6	INTERCONNECTING LONG BEAM-2	2 NOS
7	INTERCONNECTING MAIN BEAM	10 NOS
8	LONG BEAM-1	8 NOS
9	LONG BEAM-2	1 NOS
10	MAIN BEAM	10 NOS

TENDER DRAWINGS ☐
GOOD FOR CONSTRUCTION DRAWINGS ☑

REFERENCE DRAWINGS			
SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT-II/LCHJ/6002-A	00	PLAN OF EMERGENCY EXIT-I

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI - 36

SIGNATURE :

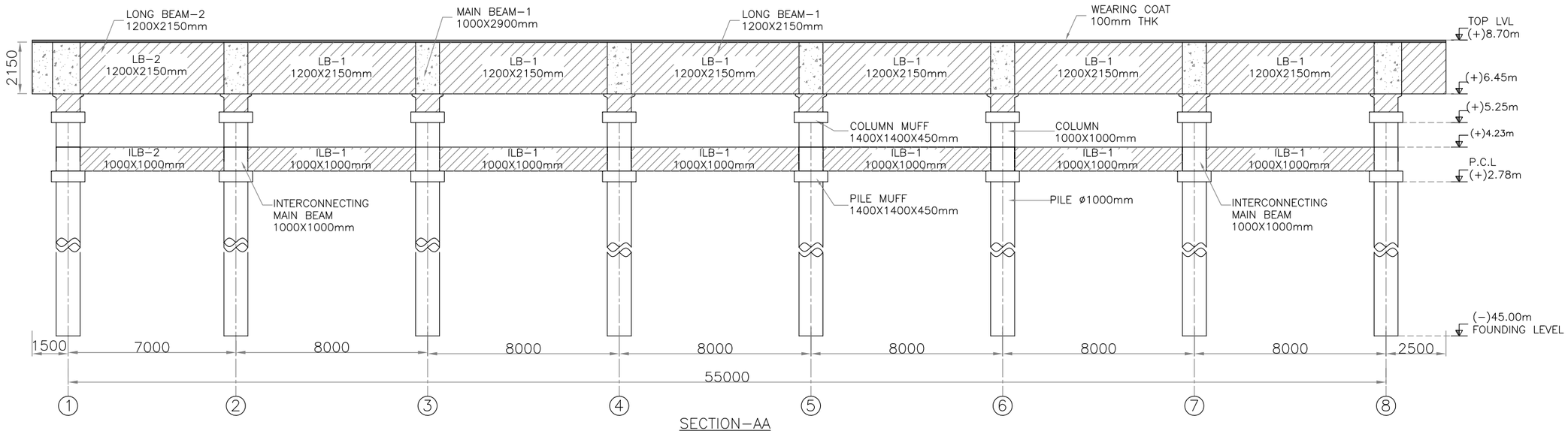
CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT-II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

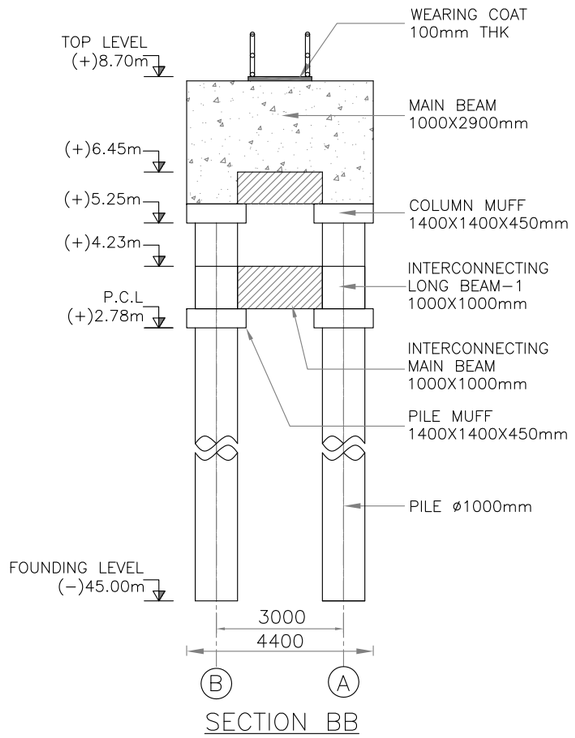
DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
SECTION AA,BB&CC OF EMERGENCY EXIT-I

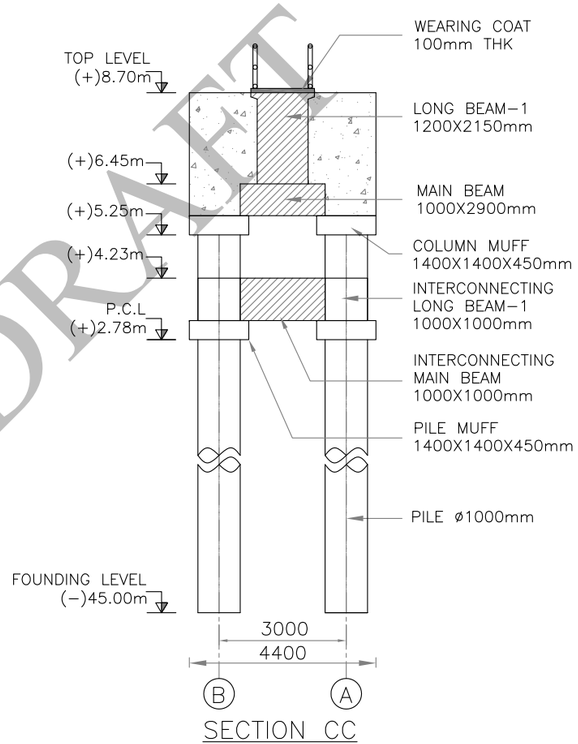
SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT-II/LCHJ/6004-A



SECTION–AA



SECTION BB



SECTION CC

SI.NO	DETAILS		SHAPE
1	LONG BEAM–1 (LB–1)	7000X1200X2150mm (PRECAST)	2150, 1200
2	LONG BEAM–2 (LB–2)	6000X1200X2150mm (PRECAST)	2150, 1200
3	INTERCONNECTING LONG BEAM–1 (ILB–1)	7000X1000X1000mm (PRECAST)	1000, 1000
4	INTERCONNECTING LONG BEAM–2 (ILB–2)	6000X1000X1000mm (PRECAST)	1000, 1000
5	MAIN BEAM	4400X1000X2900mm (INSITU+PRECAST)	2900, 2150, 750, 1000
6	INTERCONNECTING MAIN BEAM	2000X1000X1000mm (PRECAST)	1000, 1000

DRAFT

NOTES:
1. ALL DIMENSIONS ARE GIVEN IN "mm" UNLESS OTHERWISE SPECIFIED.
2. ALL LEVELS ARE IN "m" W.R.T CD
3. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE EXECUTION OF WORK.
4. FIGURED DIMENSIONS SHALL BE FOLLOWED.
5. EXECUTIVES SHALL CHECK THIS DRAWING BEFORE TAKING EXECUTION IN HAND.
6. GRADE OF CONCRETE : M40
   GRADE OF STEEL : Fe 500D
7. DREDGE LEVEL IS (–) 11m CD

	COMPONENTS OF 59m EMERGENCY EXIT	
SL.NO	DESCRIPTION	TOTAL
1	PILE	16 NOS
2	PILE MUFF	16 NOS
3	COLUMN	16 NOS
4	COLUMN MUFF	16 NOS
5	INTERCONNECTING LONG BEAM–1	12 NOS
6	INTERCONNECTING LONG BEAM–2	2 NOS
7	INTERCONNECTING MAIN BEAM	8 NOS
8	LONG BEAM–1	6 NOS
9	LONG BEAM–2	1 NOS
10	MAIN BEAM	8 NOS

	REFERENCE DRAWINGS		
SR.NO	DRG/DOC. NO.	REV NO.	TITLE
1	IITM/DOE/HDC/OT–II/LCHJ/6002–B	00	PLAN OF EMERGENCY EXIT–II

TENDER DRAWINGS ☐
GOOD FOR CONSTRUCTION DRAWINGS ☑

ENGINEERING FIRM:
Prof. R. SUNDARAVADIVELU., FNAE,
INSTITUTE CHAIR PROFESSOR,
MEMBER BOG IIT MADRAS,
DEPARTMENT OF OCEAN ENGINEERING
IIT MADRAS, CHENNAI – 36

SIGNATURE :

CLIENT :
HALDIA DOCK COMPLEX (HDC),
KOLKATA PORT TRUST (KoPT),
HALDIA.

PROJECT TITLE :
CONSTRUCTION OF LIQUID CARGO HANDLING JETTY (OT–II) NORTH OF LOCK ENTRANCE AT HALDIA DOCK COMPLEX

DRN.	CHK.	APP.	DATE	REV
SG	NS	RSUN	09/07/2018	00

DRAWING TITLE :
SECTION AA,BB&CC OF EMERGENCY EXIT–II

SH.SCALE	DRAWING NUMBER
AS SHOWN	IITM/DOE/HDC/OT–II/LCHJ/6004–B

Annexure-H

BANK GUARANTEE FORMAT
(Earnest Money Deposit)

To
The Board of Trustees,
For the Port of Kolkata.
BANK GUARANTEE NO..... DATE.....
Name of Issuing Bank.....
Name of Branch.....
Address.....

In consideration of the Board of Trustees of the Port of Kolkata, a Body Corporate, duly constituted under the Major Port Trust Act,1963 (Act 38 of 1963), having agreed to exempt M/s....., a Proprietary / Partnership / Limited / Registered Company, having its Registered office at .....(hereinafter referred to as "The Contractor") from cash payment of Earnest Money Deposit in connection with Tender No..... for..... ....(write the name of the work as per tender) for the due fulfilment by the contractor of all the terms and conditions contained in the said tender, on submission of a Bank Guarantee for Rs.....(Rupees.....
..), we..... Bank ..... Branch, Kolkata..... ...../Haldia, do, on the advice of the bidder, hereby undertake to indemnify and keep indemnified the Trustees to the extent of the said sum of Rs..... (Rupees.....
.....). We, ...
Bank.....Branch, Kolkata ..... / Haldia, further agree that if a written demand is made by the Trustees through any of its officials for honouring the Bank Guarantee constituted by these presents, We, ...
.....
Bank..... Branch, Kolkata ...../Haldia, shall have no right to decline to cash the same for any reason whatsoever and shall cash the same and pay the sum so demanded to the Trustees within a week from the date of such demand by an A/c Payee Banker's Cheque drawn in favour of "Kolkata Port Trust" without any demur. Even if there be any dispute between the contractor and the Trustees, this would be no ground for us.....(Name of Bank), ...Branch, Kolkata ...../Haldia, to decline to honour the Bank Guarantee in the manner aforesaid. The very fact that We..... Bank.....Branch, Kolkata ...../Haldia, decline or fail or neglect to honour the Bank Guarantee in the manner aforesaid shall constitute sufficient reason for the Trustees to enforce the Bank Guarantee unconditionally without any reference, whatsoever, to the bidder.

2. We..... Bank.....Branch, Kolkata / Haldia, further agree that a mere demand by the Trustees at any time and in the manner aforesaid is sufficient for us..... Bank..... Branch, Kolkata / Haldia, to pay the amount covered by this Bank Guarantee in full and in the manner

aforesaid and within the time aforesaid without reference to the bidder and no protest by the bidder, made either directly or indirectly or through Court, can be valid ground for us.....Bank ....Branch, Kolkata / Haldia, to decline or fail or neglect to make payment to the Trustees in the manner and within the time aforesaid.

3. We .....Bank.....Branch, further agree that the Bank Guarantee herein contained shall remain in full force and effect, during the period that is taken for finalization of the tender and that it shall continue to be enforceable till all the terms and conditions of the said tender have been fully honoured /fulfilled by the bidder and accordingly, the Trustees have discharged the Bank Guarantee, subject however, that this guarantee shall remain valid upto and inclusive of .....days of.....20--- and subject also to the provision that the Trustees shall have no right to demand payment against this guarantee after the expiry of 1 (one) calendar month from the expiry of the aforesaid validity period up to.....or any extension thereof made by us.....Bank.....Branch, Kolkata / Haldia, in further extending the said validity period of this Bank Guarantee on Non-Judicial Stamp paper of appropriate value, as required/determined by the Trustees, only on a written request by the Trustees to the bidder for such extension of validity of this Bank Guarantee.

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

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

SIGNATURE.....
NAME.....
DESIGNATION.....
(Only constituted attorney for and on behalf of)
BANK.....
BRANCH.....Kolkata/Haldia.