

लघु नविदा सूचना
SHORT TENDER NOTICE

हल्दिया गोदी परसिर में नमिनलखिति कार्य हेतु नविदा में दिए गए योग्यता मापदंड के अनुसार एक साथ दो भाग प्रक्रिया के तहत (तकनीकी-वाणज्यिक बडि एवं लागत बडि) ई-नविदा आमंत्रित की जाती है।

E-Tender under single stage two part system (Techno-Commercial Bid and Price Bid) are invited as per Prequalification criteria stipulated in Tender Document for the following work at Haldia Dock Complex.

➤ कार्य का नाम Name of work	:	हल्दिया टाउनशिप, एचडीसी के दो गेट- 1) जवाहर टॉवर से एचपीएसयू बिल्डिंग के समीप क्रॉसिंग पर एवं 2) बिल्डिंग न.- 5/123(i) के समीप से बिल्डिंग न.- 5/139 पर स्थानांतरण सहित रोड के साथ-साथ वषिणुरामचक की तरफ के बाउंडरी वाल की मरम्मत। Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC.
➤ ई-नविदा संख्या E-Tender No	:	आईएंडसीएफ/एसडीएम/आरजेड/ईटी/12/ I&CF/SDM/RZ/ET/12
➤ अनुमानित लागत Estimated Cost	:	रु. 30,06,638.84 [तीस लाख छः हजार छः सौ अड़तीस रुपये एवं चौरासी पैसे मात्र] Rs. 30,06,638.84 [Indian Rupees: Thirty Lakh Six Thousand Six Hundred Thirty Eight and Paisa Eight Four only]
➤ ई-नविदा जमा करने की अंतिम तिथि Last date of submission of e-tender	:	28.10.2021 अपरान्ह 15:00 बजे तक। Submission Up to 15:00 hrs.

नविदा और नविदा दस्तावेज की वसित जानकारी एसएमपी, कोलकाता के वेबसाइट (www.kolkataporttrust.gov.in) पर उपलब्ध है एवं उनके रेलटेल पोर्टल के वेबसाइट <https://KOLKATA.enivida.in> of RailTel Portal के माध्यम से ही बोली प्रक्रिया में भाग लिया जा सकता है। इच्छुक ठेकेदार bsengupta.hdc@kolkataporttrust.gov.in वेबसाइट पर सम्पर्क कर सकते हैं।

Details of the Tender & Tender Documents are available in SMP, KOLKATA website (www.kolkataporttrust.gov.in) and have to participate in bidding process through their website <https://KoPT.enivida.in> of RailTel Portal only. Interested bidders may contact at: bsengupta.hdc@kolkataporttrust.gov.in

वरिष्ठ प्रबंधक (आरजेड एंड स्पे. आरटी)
Sr. Dy. Manager (RZ & Spl RT)
आईएंडसीएफ प्रभाग/I & CF Division
हल्दिया गोदी परसिर/Haldia Dock Complex
श्यामा प्रसाद मुखर्जी पोर्ट, कोलकाता
Syama Prasad Mookerjee Port, Kolkata

सयमा प्रसाद मुखर्जी पोर्ट, कोलकाता
Syama Prasad Mookerjee Port, Kolkata
हल्दिया गोदि परिसर
HALDIA DOCK COMPLEX

BIDDING DOCUMENTS

(e-Tender)

[Tender No.: I&CF/SDM/RZ/ET/12]

FOR

E-Tender for Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC.



श्यामा प्रसाद मुखर्जी पोर्ट, कोलकाता
SYAMA PRASAD MOOKERJEE PORT, KOLKATA

Formerly Kolkata Port Trust

September – 2021

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1. SCHEDULE OF TENDER (SOT)

E-Tender under single stage two part system (Techno-Commercial Bid and Price Bid) are invited from reliable, bonafide & experienced agency with required experience as per Prequalification criteria stipulated in Tender Document for “**Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC** ” as per Bill Of Quantities to Haldia Dock Complex. Bid Document may be seen from SMP, KOLKATA website (www.kolkataporttrust.gov.in). Corrigenda or clarifications, if any, shall be hosted on the above mentioned website only. Bidders will have to participate in bidding process through website <https://KoPT.enivida.in> **of RailTel Portal** only.

a. TENDER NO.	I&CF/SDM/RZ/ET/12
b. MODE OF TENDER	e-tendering System
d. Date of NIT available to parties to download	07.10.2021 to 28.10.2021
e. i) Estimated Cost Of Work	Rs. 30,06,638.84 [Indian Rupees: Thirty Lakh Six Thousand Six Hundred Thirty Eight and Paisa Eight Four only].
ii) Bid Document fee	The intending bidders should submit Bid Document Fee of INR Rs. 1770.00 (Rupees One Thousand Seven Hundred Seventy only) including 18% GST.
iii) Earnest Money Deposit	No earnest money required but the bidders should submit a “Bid Security Declaration” accepting that if they withdraw or modify their bids during period of validity of the offer, they will be suspended for three years.
iv) Transaction Fee/ processing fee for bidding in RailTel Portal	Rs. 3,076.00 (Rupees Three Thousand and Seventy Six Only) (Including GST) (non-refundable) by net-banking / Debit / Credit card at RailTel Portal only.
g. Last date of submission of Bid Document fee.	28.10.2021 upto 15.00 Hrs.
h. Date of starting of online e-tender for submission of Techno-Commercial Bid & Price Bid.	07.10.2021
i. Date of closing of online e-tender for submission of Techno-Commercial Bid & Price Bid.	28.10.2021 (Up to 3:00 P.M.)
j. Date & time of opening of the subject tender	28.10.2021 (After 3:30 P.M.)

2. लघु निविदा सूचना **SHORT TENDER NOTICE**

हल्दिया गोदी परिसर में निम्नलिखित कार्य हेतु निविदा में दिए गए योग्यता मापदंड के अनुसार एक साथ दो भाग प्रक्रिया के तहत (तकनीकी-वाणिज्यिक बिड एवं लागत बिड) ई-निविदा आमंत्रित की जाती है।

E-Tender under single stage two part system (Techno-Commercial Bid and Price Bid) are invited as per Prequalification criteria stipulated in Tender Document for the following work at Haldia Dock Complex.

➤ कार्य का नाम Name of work	:	हल्दिया टाउनशिप, एचडीसी के दो गेट- 1) जवाहर टॉवर से एचपीएसयू बिल्डिंग के समीप क्रॉसिंग पर एवं 2) बिल्डिंग न.- 5/123(i) के समीप से बिल्डिंग न.- 5/139 पर स्थानांतरण सहित रोड के साथ-साथ विष्णुरामचक की तरफ के बाउंड्री वाल की मरम्मत। Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC.
➤ ई-निविदा संख्या E-Tender No	:	आईएंडसीएफ/एसडीएम/आरजेड/ईटी/12/ I&CF/SDM/RZ/ET/12
➤ अनुमानित लागत Estimated Cost	:	रु. 30,06,638.84 [तीस लाख छः हजार छः सौ अड़तीस रुपये एवं चौरासी पैसे मात्र] Rs. 30,06,638.84 [Indian Rupees: Thirty Lakh Six Thousand Six Hundred Thirty Eight and Paisa Eight Four only]
➤ ई-निविदा जमा करने की अंतिम तिथि Last date of submission of e-tender	:	28.10.2021 अपराह्न 15: 00 बजे तक। Submission Up to 15:00 hrs.

निविदा और निविदा दस्तावेज की विस्तृत जानकारी एसएमपी, कोलकाता के वेबसाइट (www.kolkataporttrust.gov.in) पर उपलब्ध है एवं उनके रेलटेल पोर्टल के वेबसाइट <https://KoPT.enivida.in> of RailTel Portal के माध्यम से ही बोली प्रक्रिया में भाग लिया जा सकता है। इच्छुक ठेकेदार bsengupta.hdc@kolkataporttrust.gov.in वेबसाइट पर सम्पर्क कर सकते हैं।

Details of the Tender & Tender Documents are available in SMP, KOLKATA website (www.kolkataporttrust.gov.in) and have to participate in bidding process through their website <https://KoPT.enivida.in> of RailTel Portal only. Interested bidders may contact at: bsengupta.hdc@kolkataporttrust.gov.in

Sd/-
वरि. उप प्रबंधक (आरजेड एंड स्पे. आरटी)
Sr. Dy. Manager (RZ & Spl RT)
आईएंडसीएफ प्रभाग/I & CF Division
हल्दिया गोदी परिसर/Haldia Dock Complex
श्यामा प्रसाद मुखर्जी पोर्ट, कोलकाता
Syama Prasad Mookerjee Port, Kolkata

3. NOTICE INVITING TENDER

WORK TITLE: - Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC.

3.1 E -TENDER NO.: I&CF/SDM/RZ/ET/12

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

3.2 PRE-QUALIFICATION CRITERIA FOR BIDDERS: -

- i) Average Annual Financial Turnover during the last three years, ending on **31-03-2021**, should be at least 30% of the estimated cost.
- ii) Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following: -
 - a. Three similar completed works costing not less than the amount equal to 40 % of the estimated cost.
Or
 - b. Two similar completed works costing not less than the amount equal to 50 % of the estimated cost.
Or
 - c. One similar completed works costing not less than the amount equal to 80 % of the estimated cost.
- iii) Similar works means: -

Construction and/or Maintenance of road/pathway or any combination.

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

TENDER AUTHORITY:-

Sr. Dy. Manager (RZ & Spl RT) (I & CF Divn.), Haldia Dock Complex; Syama Prasad Mookerjee Port, Kolkata.

Address:

Township Civil Maintenance Office, Cluster- 5; P.O.: Haldia Township; Dist.: Purba Medinipur ; PIN: -721607, West Bengal, India. **Telephone no. : 03224-263389**

Due Date	28.10.2021	Time	UPTO 15:00 hrs.	Date of Opening of Tender	28.10.2021	Time	15:30 hrs. onwards.
Bid document will be available on SMP, KOLKATA website (www.kolkataporttrust.gov.in) Bidders will have to participate in bidding process through website https:// KoPT.enivida.in of RailTel Portal only.							
Cost of Tender document (Non-refundable)	Rs. 1770.00 (Rupees One Thousand Seven Hundred Seventy only) including 18% GST.						
Earnest Money Deposit	No earnest money required but the bidders should submit a “Bid Security Declaration” accepting that if they withdraw or modify their bids during period of validity of the offer, they will be suspended for three years.						
Time Of Completion	04 (Four) Months.						
Estimated Cost Of Work	Rs. 30,06,638.84 [Indian Rupees: Thirty Lakh Six Thousand Six Hundred Thirty Eight and Paise Eight Four only]						

3.4 OTHER INSTRUCTIONS:-

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

3.4.2 Details of the Tender Documents and Notification of any Addendum / Corrigendum to the tender documents are available in web site from SMP, KOLKATA website (www.kolkataporttrust.gov.in) and have to participate in bidding process through their website <https://KoPT.enivida.in> of RailTel Portal only.

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

3.4.4 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.

3.4.5 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.

3.4.6 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.

3.4.7 E-Tenderers will be received through <https://KoPT.enivida.in> of RailTel Portal up to 15:00 hrs. on the last date of submission and opening of tender specified above.

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

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

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

3.4.11 It is stated here that the subject tender may not be extended further.

3.4.12 SMP, Kolkata 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.

Sr. Dy. Manager (RZ & Spl RT)
I & CF Division
Haldia Dock Complex
Syama Prasad Mookerjee Port, Kolkata

4. Important instructions for E-procurement

Bidders are requested to use internet Browsers Firefox version below 50 / Internet Explorer version 8 or above, and Java 8 Update 151 or 161.

Further, bidders are requested to go through the following information and instructions available on the <https://KoPT.enivida.in of RailTel Portal> before responding to this e-tender:

- Bidders Manual Kit
- Help for Contractors
- FAQ

Contact Persons (Syama Prasad Mookerjee Port, Haldia Dock Complex):

1. Shri B. Sengupta, Sr. Dy. Manager (I&CF), Mob: 9002784574, email: bsengupta.hdc@kolkataporttrust.gov.in

1	<p>Process of E-tender :</p> <p>THE TECHNICAL BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT https://KoPT.enivida.in of RailTel Portal 1). Vendors are required to register themselves online with https://KoPT.enivida.in of RailTel Portal</p> <p>Contact person (Haldia Dock Complex):</p> <p>1. Shri B. Sengupta Designation: Sr. Deputy Manager (I&CF Division) Mobile No.: + 91 9002784574; Landline: + 91-03224-263389 E-mail : bsengupta.hdc@kolkataporttrust.gov.in</p> <p><u>Contact persons (RailTel Portal):</u> Shri Siddharth Ghosh Mobile No.: + 91 9355030604 E-mail : ewizardsiddharth@gmail.com</p> <p>Shri Deepak Jha Mobile No.: +91 8448288981 E-mail : ewizarddipak@gmail.com</p>
2	<p>The Techno-commercial Bid and the Price Bid shall have to be submitted online at https://KoPT.enivida.in of RailTel Portal Tenders will be opened electronically on specified date and time as given in the Tender.</p>
3	<p>All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.</p>
4	<p>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 https://KoPT.enivida.in of RailTel Portal Vendors are also requested to ensure validity of their DSC (Digital Signature Certificate).</p>
5	<p>E-tender cannot be accessed after the due date and time mentioned in NIT.</p>
6	<p>Bidding in e-tender :</p> <p>a) Vendor(s) need to submit necessary EMD and Tender fees to be eligible to bid online in the e-tender. Tender fees are non refundable. No interest will be paid on EMD. EMD of the unsuccessful vendor(s) will be refunded by the tender inviting</p>

	<p>authority.</p> <p>b) The process involves Electronic Bidding for submission of Technical and Commercial Bid.</p> <p>c) In all cases, vendor should use their own ID and Password along with Digital Signature at the time of submission of their bid.</p> <p>d) During the entire e-tender process, the vendors will remain completely anonymous to one another and also to everybody else.</p> <p>e) The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.</p> <p>f) 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.</p> <p>g) It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.</p> <p>h) 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.</p> <p>i) No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any vendor confirms his acceptance of terms & conditions for the tender.</p>
7	Any order resulting from this tender shall be governed by the terms and conditions mentioned therein.
8	No deviation to the technical and commercial terms & conditions are allowed.
9	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.
10	Vendors are requested to read the vendor guide and see the video in the page https://KoPT.enivida.in of RailTel Portal to familiarize them with the system before bidding.

11	No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.
12	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.
13	The bid will be evaluated based on the filled-in technical & commercial formats.
14	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.
15	Necessary addendum/ corrigendum (if any) of tender would only be hosted in the e-tendering portal of CPP.
16	Due date of submission of tender will not be extended under any situation.

5. INSTRUCTIONS TO BIDDER

E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

5.0 PREFACE :

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 (if any) & detailed Bill Of Quantities. Location Plan of the place of work might be inspected at the office of the Sr. Dy. Manager (RZ & Spl. RT.), I&CF on any working day before quoting for the tender.

5.1 COST OF TENDER DOCUMENT:

Cost of tender document to be physically deposited at the office of Tendering Authority Sr. Dy. Manager [RZ & Spl. RT], I&CF Division, Township Civil Maintenance Office, Cluster- 5; P.O.: Haldia Township; Dist.: Purba Medinipur ; PIN: –721607, West Bengal, India. Telephone no. : 03224-263389, in a single sealed envelope, mentioning Tender no. with proper marking.

Demand Draft /Banker’s Cheque /Pay Order etc. against cost of tender document, should be submitted/deposited on any scheduled/ nationalized Bank, by the bidder in favour of SMP, Kolkata, payable at Haldia before opening of the tender, as specified in the Tender Document.

5.1.1 Details of cost of e-tender paper remitted should be entered by the participating bidder in the space provided in the e-tender as indicated hereunder:

- a) Name of remitting bidder :
- b) Tender No. :
- c) Amount remitted :
- d) Date of remittance :
- e) DD/BC No. :

Tender submitted without requisite tender document fee will be liable for rejection.

5.2 MODE OF SUBMISSION OF BID :

5.2.1 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.

5.2.2 Techno commercial part shall contain the following which are to be uploaded: -

I. Essential Document :-

- a) 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.
- b) Certified copies of audited balance sheet and Profit and Loss account / Trading account for the last 3 (three) financial years (i.e. 2018-2019, 2019-2020,2020-2021).

- c) “Bid Security Declaration” accepting that if they withdraw or modify their bids during period of validity of the offer, they will be suspended for three years.

II. Non-Essential Document :-

- 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) 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 and scan copy to be uploaded.
- 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 – IA’ that no conditions / deviations have been added in the price part of the Bid.
- f) Scan copy of the following documents to be uploaded:-
 - i) GSTIN / Provisional GST registration certificate.
 - ii) Valid Trade Licence.
 - iii) Valid Professional Tax Clearance Certificate / Up to date tax payment.
 - iv) Proof of possessing valid Employees’ Provident Fund (EPF) Account.
 - v) Proof of being registered with Employees’ State Insurance Corporation (ESIC).
- g) Details of the firm as per “BIDDER’S PROFILE” of the tender document.
- h) 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.

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

5.3 OPENING OF BIDS:

Techno Commercial Part and Price Part as stated above will be opened on the date and time as fixed in the e-tender document on line.

5.4 SECURITY DEPOSIT:

5.4.1 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.

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

5.6 VALIDITY OF OFFER:

The e-tender shall remain valid for a period of 120 [One Hundred Twenty] Days from the date of opening the same. 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.

5.7 DETAILED SCRUTINY OF E-TENDERERS:

5.7.1 During the course of examination of Techno Commercial Part 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 of those bidders who meet the qualifying criteria of NIT shall be opened.

5.7.2 During techno-Commercial Evaluation of tender, an offer shall be considered non-responsive in case :-

- (i) is not accompanied by requisite tender paper cost,
- (ii) validity of the offer is less than tender stipulation,
- (iii) It does not meet the Qualification Criteria as stipulated in the NIT.
- (iv) The bidder submits conditional offer / impose own terms and conditions / does not accept tender conditions completely.

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 SMP, Kolkata in this regard shall be final and binding on the Bidder.

5.8 For Micro & Small Enterprises (MSEs) :-

5.8.1 Micro & Small Enterprises (MSEs) shall submit the following documents for availing themselves waiver of cost of tender documents :-

5.8.2 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 for which copies of valid MSE's Certificate along with NSIC / DIC / any other certificate of the authority as mentioned in the Govt. gazette with list of items registered must be submitted with tender.

5.9 EVALUATION CRITERIA :

During evaluation of 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.

5.10 ACCEPTANCE OF TENDER :

5.10.1 SMP, Kolkata 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.

5.10.2 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.

5.10.3 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.

5.11 GOOD CONDUCT:

If a bidder has had previous history of “defined misconduct” (such as banning from by any government sector, premature termination of a contract solely on bidder’s fault, criminal case pending against the company or its owner / current director filed by a government entity etc.) his offer is liable to be ignored.

5.12 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 SMP, Kolkata. It is not the intention to debar the Contractors from working if their relatives are working in SMP, Kolkata, but such a declaration is necessary in the interest of Trustees against any possible lapses.

6. SPECIAL CONDITIONS OF CONTRACT

E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

6.0 PREFACE:

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, Particular 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.

6.1 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.
- Particular 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 (I&CF), Haldia Dock Complex, thereon shall be final and binding upon all parties.

6.2 SCOPE OF WORK:

The major scope of work shall be:-

- (i) Earth work in filling in foundation trenches.
- (ii) Dismantling the cement concrete.
- (iii) Dismantling cement brick work.
- (iv) Provide and lay cement concrete (1:3:6).
- (v) Provide and build brick work in foundation.
- (vi) Provide and building of brick work in cement and sand mortar 1:4.
- (vii) Provide and laying of artificial stone in floor.
- (viii) Provide and laying of cement plaster (1:4).
- (ix) Provide and applying two coats of protective decorative exterior.
- (x) Supplying, fitting and fixing medium quality G.I pipes.
- (xi) Supplying, fitting, fixing, chain link fencing.
- (xii) Supplying, fitting galvanised 3 ply 12 gauge.
- (xiii) Supplying, spreading and consolidation laterite chelly.
- (xiv) Provide, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam.

- (xv) Providing and laying bituminous macadam 80-100 mm thick.
- (xvi) Providing, laying and rolling of open-graded premix surfacing of 25 mm thickness.
- (xvii) Laying premixed seal coat (Type-B).
- (xviii) Construction of Hard Shoulders.

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).

6.3 LOCATION:

The construction and work is located near Jawahar Tower Haldia Township, Haldia Dock Complex.

6.4 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/Mecheda Railway Station.

6.5 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, RZ (I&CF), Cluster –V, P.O.: - Haldia Township, Dist.: Purba Medinipur, Pin: 721607 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.

6.6 SITE CONDITIONS & METHOD OF WORK:

The sequence of delivery of the materials shall have to be programmed by the successful bidder as per direction of the Engineer.

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.

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.

The Contractor shall take all possible care so that other construction and / or operational works around the area, if any, are not unduly hampered for this work. Any defect arising during construction work shall have to be rectified forthwith as directed, to the satisfaction of the Engineer, without charging

extra. 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 (information to be obtained from Engineer by the contractor beforehand) to avoid any damage.

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.

6.9 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.

6.10 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 **04 (Four) Months** including preliminary time from the date of placement of work order.

6.11 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)** years from the date of completion as certified by the Engineer or his representative in Form G.C. 1.

6.12 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. 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 SMP, Kolkata, Police, Customs, etc. would be complied with.

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.

6.13 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 will be recovered from Contractor's bill at prevailing rates of HDC plus applicable tax or any amendments thereof.

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 SMP, Kolkata'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.

6.14 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 make necessary arrangement to clear the rubbishes etc. from the buildings, at the end of day's work at his own cost & risk.

6.15 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, reinforcement steel, paver blocks (if procured), only from manufacturers approved by the Engineer.

Second hand rail, if required, will be supplied free of cost from the departmental store.

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.

6.16 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 or at the approved test laboratory.

During inspection of materials, the defective and non conforming (to the specifications mentioned on BOQ) materials will be rejected and returned.

Material test certificates including challans to be submitted for the materials to the Engineer in charge.

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.

6.18 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, mask 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.

Use of hoisting machines and tackles including their attachments, construction tools, machineries and equipments shall comply to the relevant safety codes.

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 vegetation's 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.

6.19 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 WBSEB as prevalent amended from time to time 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.

6.20 Working Period:

Normally the work will be carried out depending upon the tidal conditions. However the tenderer should note that he might be required to carry out the job on Sundays, holidays and after normal working hours and at night in addition to the normal working hours to expedite the progress of the work if permitted by Competent Authority. The tenderer should include in his rates the cost, if any, involved on those accounts.

Daily tidal variation of water level in the river can be obtained from the "tide tables".

Any delay or damage due to extreme tides or floods or due to unfavorable weather condition shall be deemed to have been taken into account while arriving at the rates to be quoted by the tenderer. The tenderer shall inspect the work sites at his own initiative and obtain relevant information about the site, river condition and any other related matter which may be relevant and necessary. No excuse or ignorance as to the site condition, storage space for materials and any other related local condition will be entertained after submission of the tender. All necessary charges in this regard shall have to be borne by the tenderer and the Trustees shall have no liability in this regard.

6.21 WATER:

The Contractor will arrange for supply of water both for drinking and for construction purposes. However, on written request from the Contractor, 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 for cementitious items only shall be progressively recovered from the running bill including final bill as applicable.

6.22 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, and Sanitary) Schedule of Rates, Govt. of West Bengal and analysed rate. For details of measurement not covered by the above S.P.-27 1987 of B.I.S. shall be referred to.

6.23 ON ACCOUNT PAYMENT:

Payment will be made to the Contractor on the basis of measurements at the quoted rates in the Bill of Quantities after completion of the work.

On Account payments may be made at the discretion of the Engineer or his representative at intervals deemed suitable and justified to him provided always that, subject to execution of work of substantial value in the context of contract price, the interval of such On Account payment shall be decided by the Engineer or his representative, which shall ordinarily be not less than one month in between two payments for on Account bills and/ or advance.

Any On Account payment made prior to issue of the certificate in Form GC-2 shall all be treated as mere advances, which shall stand recoverable in full or in part if the Engineer so decides in the context of Contractor's unfulfilled contract condition, if any.

The terms of payment shall be in accordance with General Conditions of Contract. The Bills should be submitted by the contractor in quadruplicate to the Sr. Dy. Manager (I&CF)'s Office with necessary documents in original.

Subject to the availability and feasibility of system, HDC may make payment directly to the contractor's designated bank account.

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.

6.24 WATCHING OF MATERIALS:

The successful Bidder will have to arrange for proper security of all materials and tools brought by him. 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 prior permission. No extra amount will, however, be paid separately for watching. The Contractor should quote his rates keeping this in view.

6.25. A. 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.

6.25 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 (I&CF).

6.25 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 (I&CF).

6.25 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.

6.26 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.

6.27 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 CONCILITATION (AMENDMENT) ACT,2015 and any statutory amendment thereof.

6.28 TAX :

The quoted rates should include all other Taxes excluding GST. GST as applicable shall be paid extra against proper invoice submitted by the successful contractor.

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

In case of any failure on the above account, GST amount even if paid by SMP, KOLKATA shall be recoverable from the contractor, along with applicable interest if any.

7. TECHNICAL SPECIFICATIONS

E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

TECHNICAL SPECIFICATION FOR BITUMINOUS ROAD WORKS

1.0 GENERAL

- 1.01 The specifications and mode of measurements for all the works mentioned in this tender shall be in accordance with P.W.D (Road & Bridges) 2018 specifications.

Unless otherwise specified in the nomenclature of individual item or in the specifications, the entire work shall be carried out as per the P.W.D specification with upto date correction slips upto the date of opening of tender.

- 1.02 For Items not covered under PWD specifications mentioned above, the work shall be executed as per “Specifications for Road & Bridge Work” published by Ministry of surface transport, “Hill Road Manual” (IRC:SP:48-1998) published by the Indian Road Congress, and as per relevant standards/codes published by BIS (formerly ISI) inclusive of all amendments issued thereto or revision thereof, if any, upto the date of opening Tender.
- 1.03 In case of BIS (formerly I.S.I) codes/specifications are not available, the decision of the Engineer based on acceptable sound engineering practice and local usage shall be final and binding on the contractor.
- 1.04 The rates for different items of work shall be for all heights, lifts, leads and depths except where otherwise specified in the item of work or in additional conditions appended with the tender.
- 1.05 The work shall be carried out in accordance with the approved drawings. The drawings shall have to be properly co-related before executing the work. In case of any difference noticed between the drawings, final decision, in writing of the Engineer shall be obtained by the contractor. For items, where so required, samples shall be prepared before starting the particular items of work for prior approval of the Engineer and nothing extra shall be payable on this account.
- 1.06 Unless otherwise specified in the bill of quantities, the rates for the items of work shall be considered as inclusive of pumping out or bailing out water if required for which no extra payment will be made. This will include water encountered from any source such as rains, floods, sub-soil water table being high due to any other cause whatsoever.
- 1.07 Any cement slurry added over base surface (or) for continuation of concreting for bond is added its cost is deemed to have in built in the item unless otherwise/explicitly stated and nothing extra shall be payable or extra cement considered with consumption on this account.
- 1.08 The rates for all items in which the use of cement is involved are inclusive of charges for curing.
- 1.09 The contractor shall clear the site thoroughly of all scaffolding materials and rubbish etc. left out of his work and dress the side to the satisfaction of the Engineer before the work is considered as complete.

- 1.10 The rate quoted for all brick /concrete work shall be deemed to include making openings and making good these with the same specifications as shown in drawings and / or as directed. No extra payment shall be made to the contractor on this account.
- 1.11 The drawing(s) attached with the tender documents are for the purpose of tender only, giving the tenderer a general idea of the nature and the extent of works to be executed. The rates quoted by the tenderer shall be deemed to be for the execution of works taking into account the “Design Aspect” of the items and in accordance with the “Construction Drawings” to be supplied to the Contractor during execution of the works.
- 1.12 The quoted rate shall be for finished items and shall be complete in all respects including the cost of all materials, labour, tools & plants, machinery etc., all taxes, duties, levies, octroi, royalty charges, statutory levies, cess etc. applicable from time to time and any, other item required but not mentioned here involved in the operations described above. EPI shall not be supplying any materials, labour, plant etc. unless explicitly mentioned so.
- 1.13 Gradient of road shall be as per approved drawing and as per direction of Engineer –in-Charge.

2.0 **MATERIALS**

2.01 **Stone Aggregate**

For WBM construction stone metal grade – I& II of hard granite or equivalent as approved by Engineer-in-Charge shall be used. River borne or weathered stone metal shall not be used for the work. The stone metal and aggregates shall not be obtained from the rock which has been exposed to atmosphere for a long time. They shall be clean, hard, durable of fairly cubical shape and free from excess flat, elongated, soft & disintegrated particles, fracture, cleavage, dirt & other deleterious materials and organic impurities. The aggregates shall preferable be hydrophobic and low porosity. The aggregates shall satisfy the physical requirements as set forth in Table I.

Table – I (Physical Requirement of Coarse Aggregate)				
<u>Sl. No.</u>	<u>Type of Construction</u>	<u>Type of Construction Test</u>	<u>Test Method</u>	<u>Requirement</u>
1.	Sub-Base	Los Angeles Abrasion Value	IS-2386 (Part-IV)	60%
(Maximum)		or Aggregate Impact Value	IS-2386 (Part-IV)	*50%
(Maximum)			IS-5640***	
2.	Base	Los Angeles Abrasion Value	IS-2386 (Part-IV)	50%
(Maximum)		or Aggregate Impact Value	IS-2386 (Part-IV)	*40%
(Maximum)			IS-5640***	
		Flakiness Index	IS-2386 (Part-I)	**15%
(Maximum)				
*	Aggregates may satisfy requirements of either of the two tests.			
**	The requirements of flakiness index shall be enforced only in case of crushed / broken stone ..			
***	Aggregates like brick metal, kankar and laterite which get softened in presence of water, shall be tested for impact value under wet conditions in accordance with IS:5640.			

2.02 Sand / Stone Dust

Sand/ Stone dust shall be clean, hard durable, uncoated, dry and free from injurious soft or flaky pieces and organic or deleterious substances. Quality of sand/ stone dust shall conform to IS: 383.

2.03 Supply and stacking of materials

Stone metal, boulder, sand, stone dust etc.

Ground where stacks are proposed to be made shall be cleared, leveled or dressed to a uniform slope and all lumps, depressions etc. shall be removed. The stacked material shall be free from vegetation and other undesirable material. All rejected materials shall be immediately removed from site.

Stone metal and boulder shall be stacked in convenient units of one metre top width, 2.2 m bottom width, 60 cm height and of length in multiples of 3 meter. Template of wood or steel shall be used for making the stack and shall always be kept at site for check measurements.

Sand or stone dust shall be stacked in convenient units of one cum. The stack shall be made with wooden boxes open at both ends and of 2 m x 2 m x 0.25 m dimensions. These boxes shall always be kept at site for stacking and check measurements. The stacks shall be uniformly distributed along the road side and shall be numbered serially. The number plate shall be planted on each stack which shall remain in position until the stack is used in the work.

Sample of materials shall be got approved from Engineer-in-Charge before the material in bulk is brought to the site.

2.03 Measurement for Payment

Length, breadth and height shall be measured correct to a cm and volume shall be calculated in cum correct to two places of decimal. The volume of stacks shall be reduced by percentage as shown below on account of voids to arrive at the net quantity for payment.

Earth

i)	In loose stacks such as cart loads, lorry etc.	-	20%
ii)	In consolidated fills	-	10%
iii)	In fills consolidated by heavy mechanical machinery but not under OMC	-	5%
iv)	In fills consolidated by heavy mechanical machinery at OMC	-	Nil
v)	Consolidated fills in confined situation such as under floors	-	Nil
vi)	Sand/ Stone dust	-	Nil
vii)	Moorum	-	Nil
viii)	Stone metal 40 mm nominal size and above	-	7.5%
ix)	Coarse Aggregate below 40 mm nominal size	-	Nil
x)	Soling Stone / Boulder – 100 mm nominal size and above	-	15%
xii)	Excavated Rock	-	50%

2.04 Bitumen

VG-30 Bitumen : VG-30 is primarily used to construct extra heavy duty Bitumen pavements that need to endure substantial traffic loads. It can be used in lieu of 60/70 Penetration grade.

Table 2 : Viscosity Grade (VG) Bitumen Specification As Per IS 73:2006

Characteristics	VG 30
Absolute Viscosity, 60oC, poises, min	2400
Kinematic Viscosity, 135oC, CST, min	350
Flash point, C, min	220
Solubility in trichloroethylene, %, min	99
Penetration at 25oC	50-70
Softening point, C, min	47
Tests on residue from thin film over test / RTFOT:	
i. Viscosity ratio at 60oC, max	4.0
ii. Ductility at 25oC, cm, min, after thin film over test	40

3.0 **ROLLING:**

- 3.01 Rolling shall be done by 80 / 100 KN smooth wheeled power roller (3 wheel or tandem) or vibratory roller of 80 – 100 KN static weight. Rolling shall start as soon as possible after the materials have been spread, deploying a set of rollers as the rolling is to be completed in limited time frame. Rolling shall be done with care to avoid unduly roughening of the pavement surface. The roller shall move at a speed not more than 5 km / hour.

Rolling of longitudinal joints shall be done immediately behind the paving operation. After this the rolling shall commence at the edges and progress towards the centre longitudinally, except that on super elevated and uni-directional cambered portions, where the rolling shall proceed from inner edge to the outer parallel to the centre line of the Pavement. First the edge / edges shall be compacted with roller running forward and backward. The roller shall then move inward parallel to the centre line of the road, in successive passes uniformly lapping preceedings tracks by at least one-half width of WBM.

When the roller has passed over the whole area once, any high spots or depressions which become apparent shall be corrected by removing or adding mix material. The rolling shall be continued till the entire surface has been rolled to 95% of the Proctor's density, there is no crushing of aggregates and all roller marks have been eliminated. Roller shall not stand on newly laid material while there is a risk that surface will be deformed thereby.

3.02 Time Schedule for Rolling Operations

The minimum duration for rolling shall be governed by the guidelines set forth in Table-3. However, Engineer-in-Charge shall have the full authority to increase the duration to an extent as he may deem necessary, to satisfy himself that the compaction must comply with the specifications.

Table-3

Sl. No.	Items	Duration	Surface Area / Volume
1.	Preparation of Sub-grade	1 hour	200 sqm
2.	75 mm thick WBM with Stone		
	Metal Grade – II	1 hour	50 sqm
3.	150 mm thick WBM with Stone		
	Metal Grade – I	1 hour	100 sqm

3.03 Rates

The contract unit rate for the work shall be payment in full for carrying out the required operations including full compensation for

- (i) Making arrangements for traffic to Clause 112 of 'Specifications for Road & Bridge Works' published by Ministry of Surface Transport except for initial treatment to verge, shoulders and construction of diversion.
- (ii) Preparation of base except for laying of profile corrective course but including filling of pot holes.
- (iii) Providing all materials to be incorporated in the work including the arrangements for stockyard, all royalties, octroi, fees, cess, rents where necessary and all leads and lifts.
- (iv) All labour, tools, equipment, power supply units and all machines incidental to complete the work to the specifications.
- (v) Carrying out the work in part widths of the road, wherever directed.
- (vi) Carrying out all tests for quality control.

4.0 **SURFACE FINISH**

4.01 CONTROL OF ALIGNMENT LEVEL & SURFACE REGULARITY

4.02 General

All works to be performed shall conform to the lines, grades, cross-sections and dimensions shown on the drawings or as directed by Engineer-in-Charge, subject to the permitted tolerances described hereinafter.

4.03 Horizontal Alignment

Horizontal alignment shall be reckoned with respect to the entire line of the carriageway as shown on the drawings. The edges of the carriageway as constructed shall be correct within a tolerance of +/- 10 mm there from. The corresponding tolerance for edges of the roadway and lower layers of pavement shall be +/- 25 mm.

4.04 Surface Levels

The levels of the sub-grade and different pavement courses as constructed, shall not vary from those calculated with reference to the longitudinal and cross-profile of the road shown on the drawings or as directed by the Engineer-in-Charge beyond the tolerances mentioned in Table-4.

Table-4

1.	Sub-grade	+ 20 mm / - 25 mm
2.	Sub-base	
a)	Flexible Pavement	+ 10 mm / - 20 mm

Provided, however, that the negative tolerance for wearing course shall not be permitted in conjunction with positive tolerance for basic course, if the thickness of the former is thereby reduced by more than 6 mm for flexible pavement and 5 mm for concrete pavements.

4.05 Surface Regularity

The longitudinal profile shall be checked with a 3 metre long straight-edge at the middle of each traffic lane along a line parallel to the centre line of the road.

The maximum allowable difference between the road surface and underside of a 3 m straight-edge when placed parallel with, or at right angles to the centre line of the road at points decided by the Engineer-in-Charge shall be as under:

For WBM Sub-base / Base Course - 8 mm

4.06 Rectification / Reconstruction of Defective Macadam

Where the surface regularity of sub-grade and the various pavement courses fall outside the specified tolerances, the contractor shall be liable to rectify these at their own cost in the manner described below and to the satisfaction of the Engineer-in-Charge.

4.07 Sub-Grade

Where the surface is high, it shall be trimmed and suitably compacted. Where the surface is low, the deficiency shall be corrected by scarifying the lower layer and adding fresh material and re-compacting to the required density.

4.08 WMM (Sub-base / Base Course)

Where the surface is either high or low, the course to its full thickness shall be scarified over the affected area, reshaped with added material or removed and replaced with fresh material and re-compacted to the required density. In no case shall depressions be filled up with screenings or binding material.

5.0 **EARTH WORK**

5.01a EARTH WORK IN FILLING

Earth work in filling in banks shall be done in layers, each layer not exceeding 20 cm in thickness and should be properly watered to maintain the optimum moisture content. Consolidation of every 3rd layer (alternate layer) and the top-most layer should be done with power roller of minimum 80-100 KN capacity and got approved by Engineer-in-Charge before compacting the next layer. Required quantity of earth should be obtained from borrow-pits, the sites of which should necessarily be approved by Engineer-in-Charge. No borrow-pits should be dug within 4.5 m of toe of the final section of the embankment. Necessary witness should be left for the purpose of measurement of quantity of earth excavated and used in embankment. Proper profiles of embankment shall be maintained. Requisite allowance in height varying from 25 – 50 mm as directed by Engineer-in-Charge shall be left for settlement. Side slopes shall be maintained strictly as per drawings.

5.01b Earthwork in filling shall be measured in compacted volume of finished work in cubic metres.

5.02 EARTH WORK IN EXCAVATION

General

All excavation shall be carried out in conformity with the lines, grades, side slopes and levels shown on the drawings or as directed by the Engineer-in-Charge. The contractor shall not excavate outside the limits of excavation. After excavation, the sides of excavated area shall be trimmed and the area contoured to minimize erosion and ponding, allowing for natural drainage to take place.

Rock, when encountered in road excavation, shall be removed upto the formation level. Rocks and large boulders which are likely to cause differential settlement and also local drainage problems should be removed to the extent of 500 mm below the formation level in full formation width.

5.03 Slope in cutting and filling at hill side and valley side shall be as per direction of Engineer-In-Charge.

5.04 Disposal of Excavated Materials

All the excavated materials shall be the property of the Employer. The materials obtained from excavation shall be used for filling in the adjacent embankments as directed by the Engineer-in-Charge. All hard rocks, not intended for use shall be stacked neatly on specified land as directed by the Engineer-in-Charge.

Unsuitable and surplus materials not intended for use shall be transported and disposed clear of the site as directed by the Engineer-in-Charge.

6.0 PREPARATION OF SUB-GRADE

The optimum moisture content should always be maintained by sprinkling requisite quantity of water in order to keep the sub-grade in established condition in accordance with the direction of Engineer-in-Charge. The sub-grade must not be allowed to become dry and break-up for want of cohesion. The final sectioning should be done to proper camber, gradient and super elevation with the help of template and strings. The rate of preparation and consolidation of sub-grade includes earth work in cutting and filling upto 22.5 cm thickness, if necessary, in order to achieve the desired profile. The dressed surface should be properly consolidated by rolling with power road roller of minimum 80-100 KN capacity.

7.0 WET MIX MACADAM SUB-BASE/BASE (cl. 406 of MORT&H)

7.0.1 Scope

This work shall consist of laying and compacting clean, crushed, graded aggregate and granular material, premixed with water, to a dense mass on a prepared sub-grade/sub- base/ base or existing pavement as the case may be in accordance with the requirements of these Specifications. The material shall be laid in one or more layers as necessary to lines, grades and cross-sections shown on the approved drawings or as directed by the Engineer.

The thickness of a single compacted Wet Mix Macadam layer shall not be less than 75 mm. When vibrating or other approved types of compacting equipment are used, the compacted depth of a single layer of the sub-base course may be upto 200 mm with the approval of the Engineer.

7.0.2 Materials

7.0.2.1 Aggregates

7.0.2.1.1 Physical Requirements

Coarse aggregates shall be crushed stone. If crushed gravel/shingle is used, not less than 90 percent by weight of the gravel/shingle pieces retained on 4.75 mm sieve shall have at least two fractured faces. The aggregates shall conform to the physical requirements set forth in Table

400-12. If the water absorption value of the coarse aggregate is greater than 2 percent, the soundness test shall be carried out on the material delivered to site as per IS:2386 (Part-5).

Table 1 : Physical Requirements of Coarse Aggregates for Wet Mix Macadam for Sub-base/Base Courses (Table 400-12 of MORT&H)

Sl. No.	Test	Test Method	Requirements
1)	Los Angeles Abrasion value or Aggregate Impact value	IS:2386 (Part-4) IS:2386 (Part-4) or IS:5640	40 percent (Max.) 30 percent (Max.)
2)	Combined Flakiness and Elongation indices (Total)) IS:2386(Part-1)	35 percent (Max.)*

* To determine this combined proportion, the flaky stone from a representative sample.

** should first be separated out. Flakiness index is weight of flaky stone metal divided by weight of stone sample. Only the elongated particles be separated out from the remaining (non-flaky) stone metal. Elongation index is weight of elongated particles divided by total non-flaky particles. The values of flakiness index and elongation index so found are added up.

7.0.2.1.2 Grading Requirements

The aggregates shall conform to the grading given in Table 400-13 of MORT&H.

Table 2 : Grading Requirements of Aggregates for Wet Mix Macadam (Table 400-13 of MORT&H)

IS Sieve Designation	Percent by weight passing the IS Sieve
53.00 mm	100
45.00 mm	95-100
26.50 mm	-
22.40 mm	60-80
11.20 mm	40-60
4.75 mm	25^0
2.36 mm	15-30
600.00 micron	8-22
75.00 micron	0-5

Material finer than 425 micron shall have Plasticity Index (PI) not exceeding 6.

The final gradation approved within these limits shall be graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve or vice versa.

7.0.3 Construction Operations

7.0.3.1 Provision of Lateral Confinement of Aggregates

While constructing wet mix macadam, arrangement shall be made for the lateral confinement of wet mix. This shall be done by laying materials in adjoining shoulders along with that of wet mix macadam layer and following the sequence of operations.

7.0.3.2 Preparation of Mix

Wet Mix Macadam shall be prepared in an approved mixing plant of suitable capacity having provision for controlled addition of water and forced/ positive mixing arrangement like pugmill or pan type mixer of concrete batching plant. The plant shall have following features:

- i) For feeding aggregates- three/ four bin feeders with variable speed motor
- ii) Vibrating screen for removal of oversize aggregates
- iii) Conveyor Belt
- iv) Controlled system for addition of water
- v) Forced/positive mixing arrangement like pug-mill or pan type mixer
- vi) Centralized control panel for sequential operation of various devices and precise process control
- vii) Safety devices

Optimum moisture for mixing shall be determined in accordance with IS: 2720 (Part-8) after replacing the aggregate fraction retained on 22.4 mm sieve with material of 4.75 mm to 22.4 mm size. While adding water, due allowance should be made for evaporation losses. However, at the time of compaction, water in the wet mix should not vary from the optimum value by more than agreed limits. The mixed material should be uniformly wet and no segregation should be permitted.

7.0.3.3 Spreading of Mix

Immediately after mixing, the aggregates shall be spread uniformly and evenly upon the prepared sub-grade/subbase/ base in required quantities. In no case shall these be dumped in heaps directly on the area where these are to be laid nor shall their hauling over a partly completed stretch be permitted. The mix may be spread by a paver finisher. The paver finisher shall be self-propelled of adequate capacity with following features:

- i) Loading hoppers and suitable distribution system, so as to provide a smooth uninterrupted material flow for different layer thicknesses from the tipper to the screed.
- ii) Hydraulically operated telescopic screed for paving width upto to 8.5 m and fixed screed beyond this. The screed shall have tamping and vibrating arrangement for initial compaction of the layer.
- iii) Automatic levelling control system with electronic sensing device to maintain mat thickness and cross slope of mat during laying procedure.

In exceptional cases where it is not possible for the paver to be utilized, mechanical means like motor grader may be used with the prior approval of the Engineer. The motor grader shall be capable of spreading the material uniformly all over the surface. The surface of the aggregate shall be carefully checked with templates and all high or low spots remedied by removing or adding aggregate as may be required. The layer may be tested by depth blocks during construction. No segregation of larger and fine particles should be allowed. The aggregates as spread should be of uniform gradation with no pockets of fine materials. The Engineer may permit manual mixing and /or laying of wet mix macadam where small quantity of wet mix macadam is to be executed. Manual mixing/laying in inaccessible/ remote locations and in situations where use of machinery is not feasible can also be permitted. Where manual mixing/laying is intended to be used, the same shall be done with the approval of the Engineer.

7.0.3.4 Compaction

After the mix has been laid to the required thickness, grade and cross fall/camber the same shall be uniformly compacted to the full depth with suitable roller. If the thickness of single compacted layer does not exceed 100 mm, a smooth wheel roller of 80 to 100kN weight may be

used. For a compacted single layer upto 200 mm, the compaction shall be done with the help of vibratory roller of minimum static weight of 80 to 100 kN with an arrangement for adjusting the frequency and amplitude. An appropriate frequency and amplitude may be selected. The speed of the roller shall not exceed 5 km/h.

In portions having unidirectional cross fall/super elevation, rolling shall commence from the lower edge and progress gradually towards the upper edge. Thereafter, roller should progress parallel to the center line of the road, uniformly overlapping each preceding track by at least one-third width until the entire surface has been rolled. Alternate trips of the roller shall be terminated in stops at least 1 m away from any preceding stop.

In portions in camber, rolling should begin at the edge with the roller running forward and backward until the edges have been firmly compacted. The roller shall then progress gradually towards the center parallel to the center line of the road uniformly overlapping each of the preceding tracks by at least one-third width until the entire surface has been rolled.

Any displacement occurring as a result of reversing of the direction of a roller or from any other cause shall be corrected at once as specified and/or removed and made good.

Along forms, kerbs, walls or other places not accessible to the roller, the mixture shall be thoroughly compacted with mechanical tampers or a plate compactor. Skin patching of an area without scarifying the surface to permit proper bonding of the added material shall not be permitted.

Rolling should not be done when the sub-grade is soft or yielding or when it causes a wavelike motion in the sub-base/base course or sub-grade. If irregularities develop during rolling which exceeds 12 mm when tested with a 3 m straight edge, the surface should be loosened and premixed material added or removed as required before rolling again so as to achieve a uniform surface conforming to the desired grade and cross fall. In no case shall the use of unmixed material be permitted to make up the depressions.

Rolling shall be continued till the density achieved is at least 98 percent of the maximum dry density for the material as determined by the method outlined in IS: 2720 (Part-8).

After completion, the surface of any finished layer shall be well-closed, free from movement under compaction equipment or any compaction planes, ridges, cracks and loose material. All loose, segregated or otherwise defective areas shall be made good to the full thickness of the layer and recompacted.

7.0.3.5 Setting and Drying

After final compaction of wet mix macadam course, the road shall be allowed to dry for 24 hours.

7.0.4 Opening to Traffic

No vehicular traffic shall be allowed on the finished wet mix macadam surface. Construction equipment may be allowed with the approval of the Engineer.

7.0.5 Rectification of Surface Irregularity

Where the surface irregularity of the wet mix macadam course exceeds the permissible tolerances or where the course is otherwise defective due to sub-grade soil getting mixed with the aggregates, the full thickness of the layer shall be scarified over the affected area, re-shaped with added premixed material or removed and replaced with fresh premixed material as applicable and re-compacted in accordance with Clause 406.3. The area treated in the aforesaid manner shall not be less than 5 m long and 2 m wide. In no case shall depressions be filled up with unmixed and ungraded material or fines.

7.038 Measurement for Payment

Water Mix Macadam shall be measured as finished work in cubic meters.

8.0 **TACK COAT**

8.1 SCOPE

The work shall consist of the application of a single coat of low viscosity liquid bituminous material to existing bituminous, cement concrete or primed granular surface preparatory to the superimposition of a bituminous mix, when specified in the Contract or as instructed by the Engineer. The work shall be carried out on a previously prepared surface in accordance with Clause 501.8.

8.2 MATERIALS

The binder used for tack coat shall be Cationic bitumen emulsion (RS 1) complying with IS:8887. The use of cutback bitumen RC:70 as per IS:217 shall be restricted only for sites at sub-zero temperatures or for emergency applications as directed by the Engineer. The type and grade of binder for tack coat shall be as specified in the Contract or as directed by the Engineer.

8.3 WEATHER AND SEASONAL LIMITATIONS

Bituminous material shall not be applied during a dust storm or when the weather is foggy, rainy or windy or when the temperature in the shade is less than 10°C. Where the tack coat consists of emulsion, the surface shall be slightly damp, but not wet. Where the tack coat is of cutback bitumen, the surface shall be dry.

8.4 CONSTRUCTION

8.4.1 Equipment

The tack coat shall be applied by a self-propelled or towed bitumen pressure sprayer, equipped for spraying the material uniformly at a specified rate. Hand spraying shall not be permitted except in small areas, inaccessible to the distributor, or narrow strips, shall be sprayed with a pressure hand sprayer, or as directed by the Engineer.

8.4.2 Preparation of Base

The surface on which the tack coat is to be applied shall be clean and free from dust, dirt, and any extraneous material, and be otherwise prepared in accordance with the requirements of Clause 501.8. The granular or stabilized surfaces shall be primed as per Clause 502. Immediately before the application of the tack coat, the surface shall be swept clean with a mechanical broom, and high pressure air jet, or by other means as directed by the Engineer.

8.4.3 Application of Tack Coat

The application of tack coat shall be at the rate specified in Table 500-5, and it shall be applied uniformly. If rate of application of Tack Coat is not specified in the contract, then it shall be the rate specified in Table 500-5. No dilution or heating at site of RS1 bitumen emulsion shall be permitted. Paving bitumen if used for tack coat shall be heated to appropriate temperature in bitumen boilers to achieve viscosity less than 2 poise. The normal range of spraying temperature for a bituminous emulsion shall be 20°C to 70°C and for cutback, 50°C to 80°C. The method of application of tack coat will depend on the type of equipment to be used, size of nozzles, pressure at the spray bar, and speed or forward movement. The Contractor shall demonstrate at a spraying

trial, that the equipment and method to be used is capable of producing a uniform spray, within the tolerances specified.

Rate of Application of Tack Coat (Table 500-5 of MORT&H)

Type of Surface	Rate of Spray of Binder in Kg per sq. m
Bituminous surfaces	0.20-0.30
Granular surfaces treated with primer	0.25-0.30

8.4.4 Curing of Tack Coat

The tack coat shall be left to cure until all the volatiles have evaporated before any subsequent construction is started. No plant or vehicles shall be allowed on the tack coat other than those essential for the construction.

9.0 BITUMINOUS MACADAM

9.01 SCOPE

This work shall consist of construction in a single course having 50 mm to 100 mm thickness or in multiple courses of compacted crushed aggregates premixed with a bituminous binder on a previously prepared base to the requirements of these Specifications. Since the bituminous macadam is an open-graded mix, there is a potential that it may trap water or moisture vapour within the pavement system. Therefore, adjacent layer (shoulders) should have proper drainage quality to prevent moisture-induced damage to the BM.

9.02 MATERIALS

9.02.1 Coarse Aggregate

The coarse aggregates shall consist of crushed rock, crushed gravel or other hard material retained on 2.36 mm sieve. It shall be clean, hard, durable and cubical shape, free from dust and soft organic and other deleterious substances. The aggregate shall satisfy the physical requirements specified in Table 500-6. Where crushed gravel is proposed for use as aggregate, not less than 90 percent by weight of the crushed material retained on 4.75 mm sieve shall have at least two fractured faces resulting from crushing operation. Before approval of the source, the aggregates shall be tested for stripping. Where the Contractor's selected source of aggregates have poor affinity for bitumen, as a condition for the approval of that source, the bitumen shall be treated with approved anti-stripping agents, as per the manufacturer's recommendations, without additional payment.

9.02.2 Fine Aggregates

Fine aggregates shall consist of crushed or naturally occurring mineral material, or a combination of two, passing 2.36 mm sieve and retained on 75 micron sieve. It shall be clean, hard, durable, free from dust and soft organic and other deleterious substances. Natural sand shall not be used in the binder course. The physical properties of the fine aggregates shall conform to Table 32 of PWD Schedule (Roads & Brigdes) 2018.

9.02.3 Aggregate Grading and Binder Content

The combined grading of the coarse aggregates and fine aggregates, when tested in accordance with IS:2386 Part 1, wet sieving method, shall conform to limits given in Table 500-8. The type and quantity of bitumen and appropriate thickness is also given in Table 500-7.

9.02.4 Proportioning of Material

The combined aggregate grading shall not vary from the lower limit on one sieve to the higher limit on the adjacent sieve to avoid gap grading. The aggregate may be proportioned and blended to produce a uniform mix complying with the requirements in Table 500-7. The binder content shall be within a tolerance of ± 0.3 percent by weight of total mix when individual specimens are taken for quality control tests in accordance with the provisions of Section 900.

9.03 CONSTRUCTION OPERATIONS

9.03.1 Preparation of Base

The base on which bituminous macadam is to be laid shall be prepared, shaped and compacted to the required profile in accordance with Clauses 501.8 and 902.3 as appropriate, and a prime coat, shall be applied in accordance with Clause 502 where specified, or as directed by the Engineer. The surface shall be thoroughly swept clean by a mechanical broom, and the dust removed by compressed air. In locations where mechanical broom cannot get access, other approved methods shall be used as directed by the Engineer.

9.03.2. Tack Coat

A tack coat in accordance with Clause 503 shall be applied as required under the Contract or as directed by the Engineer.

9.03.3 Preparation and Transportation of the Mix

The provisions of Clauses 501.3 and 501.4 of MORT&H shall apply.

9.03.4 Spreading

The provisions of Clause 501.5.3 of MORT&H shall apply.

9.03.5 Rolling

Compaction shall be carried out in accordance with the provisions of Clauses 501.6 and 501.7 of MORT&H. Rolling shall be continued until the specified density is achieved, or where no density is specified, until there is no further movement under the roller. The required frequency of testing is defined in Clause 903.

10.0 SURFACE DRESSING (cl. 509 of MORT&H)

10.0 Scope

This work shall consist of the application of one coat or two coats of surface dressing, each coat consisting of a layer of bituminous binder sprayed on a previously prepared, base, followed by a cover of stone chips rolled in to form a wearing course to the requirements of these Specifications.

10.0.1 Materials

10.0.1.1 Binder

The binder shall either be bitumen conforming to IS:73 or rapid setting cationic bitumen emulsion (RS-2) conforming to IS:8887. Grade of bitumen shall depend upon the climatic condition. For selection of grade of bitumen guidance may be taken from Table 500-1. The type of binder to be used shall be stated in the Contract, or as directed by the Engineer.

10.0.1.2 Aggregates

The stone chips (cover aggregate) shall conform to the requirements of Clause 505.2.2., except that their water absorption shall be restricted to a maximum of 1 percent and they shall have a Polished Stone Value of minimum 60. [in BS:812 (Part-114)], of not less than 60. The size of the aggregate shall depend upon the type of surface on which it is laid and the traffic intensity. The chips shall be single sized, clean, hard, durable, of cubical shape; and free from dust and soft or friable matter, organic or other deleterious matter and conform to one of the gradings given in Table 500-21. The size of the aggregate shall depend upon the type of surface on which it is laid and the traffic intensity. Table 500-20 may be used as guidance.

Pre-coated Chips : As an alternative to the use of an adhesion agent or wherever specified in the Contract, the chips may be pre-coated before they are spread except when the sprayed binder film is a bitumen emulsion. Pre-coating the chips may be carried out by mixing aggregates with 0.75 to 1.0 percent of bitumen by weight of chips in a suitable mixer. The chips shall be heated to 160°C and mixed with the binder heated to its application temperature. The pre-coated chips shall be allowed to cure for at least one week or until they become non sticky and can be spread easily.

:Recommended Nominal Size of Aggregates(mm)(Table 500-20 of MORT&H)

Type of Surface	Traffic Intensity in Terms of Number of Vehicles Per Day in the Lane Under Consideration		
	1000-2000	200-1000	20-200
Very hard	10	6	6
Hard	13	10	6
Normal	13	10	6
Soft	19	13	13
Very soft		19	13

Table : Grading requirements for Aggregates used for Surface Dressing (Table 500-21 of MORT&H)

IS Sieve Designation (mm)	Cumulative Percent by Weight of Total Aggregates Passing for the Following Nominal Sizes (mm)			
	19	13	10	6
26.5	100	-	-	-
19	85-100	100	-	-
13	0-40	85-100	100	-
9.5	0-7	0-40	85-100	100
6.3	-	0-7	0-35	85-100
4.75	-	-	0-10	-
3.35	-	-	-	0-35

2.36	0-2	0-2	0-2	0-10
0.60	-	-	-	0-2
0.075	0-1.5	0-1.5	0-1.5	0-1.5
Minimum 65% by weight of aggregate	Passing 19 and retained on 13.2	Passing 13.2 and retained on 9.5	Passing 9.5 and retained on 6.3	Passing 6.3 and retained on 3.35

10.0.1.3 Rates of Spread of Binder and Chips

The rate of spread of binder and chips will depend upon the nominal size of the aggregate and the extent of its embedment into the surface. The rate shall be determined as per the procedure given in Manual for Construction and Supervision of Bituminous Construction. Approximate rate of application of aggregates, and binder under average conditions are given in Table 500-22.

Table: Approximate Rate of Application of Binder and Aggregates (Table 500-22 of MORT&H)

Nominal Aggregate Size mm	Binder (Kg/m ²)			Aggregates Cu.m/m ²
	Uncoated Aggregates		Coated Aggregates	
	Bitumen	Emulsion	Bitumen	
19	1.2	1.8	1.0	0.014-0.015
13	1.0	1.5	0.8	0.009-0.011
10	0.9	1.3	0.7	0.007-0.009
6	0.75	1.1	0.6	0.003-0.005

Note : Bitumen for coated aggregates excludes quantity of bitumen required for coating.

10.0.1.4 Anti-Stripping Agent

Where the proposed aggregate fails to pass the stripping test then an approved anti-stripping agent (Appendix V for details) may be added to the binder in accordance with the manufacturer's instructions. The effectiveness of the proposed anti-stripping agent must be demonstrated by the Contractor, before approval by the Engineer.

10.0.2 Construction Operations

10.0.2.1 Preparation of Base

The base on which the surface dressing is to be laid shall be prepared, shaped and conditioned to the specified lines, grade and cross section in accordance with Clause 501 or as directed by the Engineer. Prime coat, where needed, shall be provided as per Clause 502 or as directed by the Engineer. Where the existing surface shows signs of fatting up, the excess bitumen shall be removed as directed by the Engineer. The bituminous surface to be dressed shall be thoroughly cleaned either by using a mechanical broom and/or compressed air, or any other approved equipment/method as specified in the Contract or directed by the Engineer. The prepared surface shall be dust free, clean and dry, (except in the case of cationic emulsion where the surface shall be slightly damp).

10.0.2.2 Application of Binder

After preparation of base, paving grade binder heated to an appropriate temperature or bitumen emulsion shall be sprayed uniformly using mechanical sprayers. During the operation the ratio between truck speed and pump revolution shall be maintained constant with the help of automatic control. When work resumes, the binder shall not be sprayed on the earlier completed surface. This can be done by covering the completed work with bitumen impregnated paper. Excessive deposit of bituminous material shall be immediately removed. The equipment described in IRC:SP:34 with synchronized spraying and compaction shall be preferred for better control and uniformity in construction.

The spraying temperatures for binder are given below:

Binder Grade	Whirling Spray Jets		Slot Jets	
	Min°C	Max°C	Min°C	Max°C
VG 10	180	200	165	175

10.0.2.3 Application of Stone Chips

Immediately after application of the binder, clean, dry chips (in the case of emulsion the chippings may be slightly damp) shall be spread uniformly by means of a mechanical chip spreader on the surface so as to cover the surface completely with a single layer of chips.

10.0.2.4 Rolling

Rolling of the chips should preferably be carried out by a pneumatic tyre roller in accordance with Clauses 501.6 and 501.7. Rolling shall commence at the edges and progress towards the centre except in super-elevated and uni-directional cambered portions where it shall proceed from the lower edge to the higher edge. Each pass of the roller shall uniformly overlap not less than one-third of the track made in the preceding pass. While rolling is in progress, additional chips shall be spread by hand in necessary quantities required to make up irregularities. Rolling shall continue until all aggregate particles are firmly embedded in the binder and present a uniform closed surface.

11.0 **SEAL COAT (cl. 511 of MORT&H)**

11.1 SCOPE

This work shall consist of the application of a seal coat for sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall (camber).

Seal coat shall be of either of the two types specified below:

- A. Liquid seal coat comprising of an application of a layer of bituminous binder followed by a cover of stone chips.
- B. Premixed seal coat comprising of a thin application of fine aggregate premixed with bituminous binder.

11.2 MATERIALS

11.2.1 Binder

The requirements of Clauses 510.1.2.1 and 510.2.2.1 shall apply.

The quantity of bitumen per 10 square metres, shall be 9.8 kg for Type A, and 6, 8 kg for Type B seal coat. Where bituminous emulsion is used as a binder, the quantities for Type A and Type B seal coats shall be 15 kg and 10.5 kg respectively.

11.2.2 Stone Chips for Type A Seal Coat

The stone chips shall consist of angular fragments of clean, hard, tough and durable rock of uniform quality throughout. They shall be free of soft or disintegrated stone, organic or other deleterious matter. Stone chips shall be of 6.7 mm size defined as 100 percent passing through 11.2 mm sieve and retained on 2.36 mm sieve. The quantity used for spreading shall be 0.09 cubic metre per 10 square metre area. The chips shall satisfy the quality requirements given in Table 500-8 except that the upper limit for water absorption value shall be 1 percent.

11.2.3 Aggregate for Type B Seal Coat

The aggregate shall be sand or grit and shall consist of clean, hard, durable, uncoated dry particles, and shall be free from dust, soft or flaky/elongated material, organic matter or other deleterious substances. The aggregate shall pass 2.36 mm sieve and be retained on 180 micron sieve. The quantity used for premixing shall be 0.06 cum per 10 sqm area.

11.3 CONSTRUCTION OPERATIONS

11.3.1 Weather and Seasonal Limitations

The requirements of Clause 501.5.1 shall apply.

11.3.2 Preparation of Surface

The seal coat shall be applied immediately after laying the bituminous course which is required to be sealed. Before application of seal coat materials, the surface shall be cleaned free of any dust or other extraneous matter.

11.3.3 Construction of Type A Seal Coat

The construction operations shall be the same as described in Clause 509.3.3 to 509.3.5.

11.3.4 **Construction Type B Seal Coat**

10.3.4.1 Using Paving Bitumen

The construction operations shall be the same as in Clause 510.1.3.

10.3.4.2 Using Emulsion

The construction operations shall be the same as in Clause 510.2.4.

11.3.5 Opening to Traffic

In the case of Type B seal coat, traffic may be allowed soon after final rolling when the premixed material has cooled down to the surrounding temperature. In the case of Type A seal coat, traffic shall not be permitted to run on any newly sealed area until the

following day. In special circumstances, however, the Engineer may open the road to traffic immediately after rolling, but in such cases traffic shall be rigorously limited to 20 km per hour until the following day.

Sequence of work:

Site Clearance:

This work shall consist of cutting, removing and disposing of all materials such as trees, bushes, shrubs, stumps, roots, grass, weeds, rubbish, top organic soil, etc. to an average depth of 150 mm in thickness, which in the opinion of the Engineer-in-Charge are unsuitable for incorporation in the works, from the area of road land containing road embankment, drains, cross-drainage structures and such other areas as may be specified on the drawings or by the Engineer-in-Charge. It shall include necessary excavation, backfilling of pits resulting from uprooting of trees and stumps to required compaction, handling, salvaging, and disposal of cleared materials with all leads and lifts. Clearing and grubbing shall be performed in advance of earthwork operations and in accordance with the requirements of Specifications for Road & Bridge Works of MoRT&H (5th Revision).

Excavation:

All excavation shall be carried out in conformity with the lines, grades, side slopes and levels shown on the drawings or as directed by the Engineer-in-Charge. The contractor shall not excavate outside the limits of excavation. After excavation, the sides of excavated area shall be trimmed and the area contoured to minimize erosion and ponding, allowing for natural drainage to take place.

Rock, when encountered in road excavation, shall be removed upto the formation level. Rocks and large boulders which are likely to cause differential settlement and also local drainage problems should be removed to the extent of 500 mm below the formation level in full formation width.

All the excavated materials shall be the property of the Employer. The materials obtained from excavation shall be used for filling in the adjacent embankments as directed by the Engineer-in-Charge. All hard rocks, not intended for use shall be stacked neatly on specified land as directed by the Engineer-in-Charge.

Unsuitable and surplus materials not intended for use shall be transported and disposed clear of the site as directed by the Engineer-in-Charge.

Preparation of Sub-grade by Sand Filling:

This work shall consist of spreading and filling of Zone-III brown sand as per drawing in layers of thickness not exceeding 200 mm including consolidation by sprinkling of water and rolling by mechanically operated Vibro- Roller of appropriate capacity ,all inclusive as directed by the Engineer. Payment is to be made on the basis of finished comacted volume measured by pre-work level and post-work level method.

Preparation of Sub-base by Laying of Boulders:

This work shall consist of laying laterite boulder as per drawing to requisite thickness in layers each of 150 mm (approx. finished thickness) including rough dressing, breaking, necessary hand packing and ramming down small pieces in the interstices including rolling and preparing the bed to proper level and camber with necessary cushioning over bed and ultimate filling the voids by providing and spreading moorum of requisite quantity, consolidation by power driven roller of 8 / 10 ton capacity for at least five passes including dry and wet blinding and admixed with slaked lime (with 5% of the volume of moorum) including cost of all materials. (Payment is to be made on the basis of finished comacted volume measured by pre-work level and post-work level method.)

WATER MIX MACADAM as BASE

This work shall consist of clean crushed aggregates mechanically interlocked by rolling and bonding together with screening, binding material where necessary and water laid on a properly prepared Sub-base, as the case may be and finished in accordance with the requirements of these Specifications and in close conformity with the lines, grades, cross-sections and thickness as per approved plans or as directed by the Engineer.

BITUMINOUS MACADAM as Binder Course

This work shall consist of construction in a single course having 100 mm thickness or in multiple courses of compacted crushed aggregates premixed with a bituminous binder on a previously prepared base to the requirements of these Specifications. Since the bituminous macadam is an open-graded mix, there is a potential that it may trap water or moisture vapour within the pavement system. Therefore, adjacent layer (shoulders) should have proper drainage quality to prevent moisture-induced damage to the BM.

Tack Coat:

The work shall consist of Providing and applying tack coat with Cationic Bitumen Emulsion of approved grade conforming to IS:8887-1978 on the prepared surface cleaned with Hydraulic broom, moistening the surface including cost and carriage of emulsion, hire charges of machinery and labour, cost of fuel and lubricants all complete as per Clause 503 of Specifications for Road & Bridge Works of MoRTH (5th Revision).

PREMIX SURFACING:

This work shall consist of preparation, laying and compaction of an open-graded premix surfacing material of 20 mm thickness composed of small-sized aggregate premixed with bituminous binder on a previously prepared base, in accordance with the requirements of these Specifications to serve as a wearing course.

This work shall consist of Providing & laying of 20 mm thick premix carpet (open graded using 1.80cum of 13.2mm size and 0.9 cum of 11.2mm size stone aggregates per 100 Sqm of surface including thorough cleaning of the surface by air jet, applying tack coat @ 2.25 kg / 10 sqm using Cationic bituminous emulsion of approved grade, screening, cleaning and preheating stone chips and fully precoating the same with hot matrix @54 kg of VG-30 grade per cum of aggregates(loose net) laying the premixed chips uniformly over the surface, hand packing, thoroughly rolling by power roller including the cost and carriage of stone chips and matrix, heating matrix and hire charges of machineries and equipments for construction and quality control as per IRC specification, cost of fuel, lubricants, wages of workmen etc. and all other charges in this connection in required slope and camber. [Payment will be made on the actual laid area.]

Seal Coat:

The work shall consist of Laying premixed seal coat (Type-B) using 0.6 cum of stone grit (passing 2.36mm sieve and retained on 180mm micron) per 100 sqm area including cleaning the surface, preheating the grit by Millar Mixer, mixing the preheated grit with hot matrix @113.50kg of VG-30 grade per cum of grit, laying the mixture uniformly over the surface and rolling with power roller including the cost and carriage of grit and matrix, heating matrix and grit and all other cost and charges in this connection including hire charges and cost of fuel and lubricants of machineries and equipments for construction and quality control complete Include for providing and applying tack coat @ 3 kg / 10 sqm using Cationic bituminous emulsion of approved grade over existing black topped surface [Payment will be made on the actual laid area.]

TECHNICAL SPECIFICATION FOR ELECTRICAL WORKS

A. Scope of Work:

6.1 Scope of Work includes-

- a) Electrical works (including Power Supply arrangement, internal wiring & electrical appliances) at New Gates and Security Rooms near HPSU Building & 5/139 Building in the Residential Zone of Haldia Dock Complex, SMP, Kolkata.
- b) Supply, laying, testing & commissioning (including end termination) of 1.1 kV grade, XLPE insulated, galvanised steel armoured, aluminium conductor, power cable.
- c) Supplying & laying of heavy, galvanized, mild steel tubes (including sockets).
- d) In connection with the instant work, the site & working areas need to be kept free from surplus materials, rubbish, offensive materials, etc. and the same are to be disposed of by the Contractor.

B. General Requirements :

- 6.2 The electrical works will be executed to comply with the General Specifications for Electrical works and conforming to the Indian Electricity Act & rules, BIS and direction of the Engineer.
- 6.3 The electrical work shall be carried out by a Contractor, having **valid Electrical Contractor's Licence** issued by the competent authority [under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date], under the direct supervision of a person having a valid **Supervisor's Certificate of Competency (SCC)**, issued by the appropriate statutory authority, against the relevant parts, for carrying out such type of job [i.e. Wiring for systems not-exceeding 650 V, Alternating Current (A.C.) Apparatus upto 650 V and Underground cables upto 1100 V]
- 6.4 The skilled workmen engaged by the Contractor for the electrical work must possess a valid Workman Permit (W.P.), issued or recognised by the competent authority [under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date], against the relevant parts, for carrying out such work.
- 6.5 The skilled workmen engaged by the Contractor for cable laying related electrical work [cable laying and jointing] must possess a valid Workman Permit (W.P.), issued or recognised by the competent authority [under relevant rules of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended upto date], against the relevant parts, for carrying out such work.
- 6.6 The Contractor shall be liable to submit the list of aforesaid Licence / Workman Permit holder, along with the attested copies of the of the Licence / Workman Permit, during execution.
- 6.7 The entire job should be executed in accordance with the requirements of following Acts and rules, including latest amendments:
 - a) Indian Electricity Rules – 1956

- b) Electricity Laws (Amendment) Ordinance, 1997
 - c) Central Electricity Authority Rules, 1977
 - d) Central Electricity Authority Regulations, 1979
 - e) Indian Electricity Act, 2003
 - f) Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010
- 6.8 The supply, installation and commissioning of all items required for this work should be complied with the above Acts & Rules and relevant Code of Practice of the **Bureau of Indian Standard**, including **National Electrical Code (NEC)** and **National Building Code (NBC)** of India, if not specified otherwise.
- 6.9 The Contractor shall engage qualified / experienced / skilled personnel to carry out the works in all respects at their own cost. The Contractor will engage suitable qualified / experienced & licensed engineering supervisor for the electrical work and suitable skilled personnel, with required permit, for doing the erection work.
- 6.10 All materials required for the entire work and apparatus used therein, shall conform to relevant specifications of the Bureau of Indian Standard (BIS) or International Electrotechnical Commission (IEC), as applicable, if not specified otherwise in this Bidding Document.
- All materials should be inspected before installation. Only accepted materials will be allowed for installation. Necessary consent should be obtained from the 'Engineer' or his representative, before using any material / equipment/ apparatus.
- Nothing in this specification shall be construed to relieve the Contractor of their responsibility for providing the equipment, with all accessories, in accordance with applicable statutory regulations and safety codes in force, from the safety angle.
- 6.11 The Contractor holds responsibility for executing the entire job as per relevant specifications. If any item is left out within the schedule of work but if it is considered essential for the completion of the job, the Contractor shall have to carry out the items as extra / substituted item.
- 6.12 The Contractor should use calibrated measuring & testing instruments [having Valid Calibration Certificate] and should also ensure revalidation of such calibration as and when required. In this regard, initially the Contractor shall have to submit a list of measuring and testing instruments (mentioning the period of validity of Calibration Certificates) to be used. The photocopies of the Calibration Certificates (including the revalidations) of the said measuring and testing instruments, shall have to be submitted to the 'Engineer'.
- Calibration Certificate of instruments / equipment, used for testing purpose, should be issued by an NABL accredited Laboratory. For testing equipment where NABL accreditation is not available, calibration certificate from educational institutions like IITs, NITs, J.U., C.U., B.H.U. only can be accepted, provided they demonstrate traceability.
- 6.13 In connection with aforesaid work, transportation and handling of all materials, should be done by the Contractor at their own risk, cost and arrangement.
- 6.14 In connection with the aforesaid work, all materials, will be under the custody of the Contractor, till installation / fixing / commissioning of the same.

- 6.15 The Contractor must make their own arrangements for delivery of all materials, as well as for careful and proper unloading at HDC's site. The responsibility for preventing damage / deterioration to the materials during transit, delivery, unloading at the designated point shall rest with the Contractor. All transit risk will be to Contractor's account.
- 6.16 The Contractor shall arrange all necessary labour, tools, tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport, equipment (with fuel & operator), etc., required for satisfactory execution of the entire work, at their own risk, cost and expense. Special tools, which would be required during execution of the work, shall also have to be arranged by the Contractor, at their own risk, cost and expense.
- 6.17 The Contractor shall have to make arrangements, at their own risk & cost, for transportation of materials from the point of issue of stores to site of work, if any.
- 6.18 Electricity and water, if required, will be provided free of cost for the purpose of execution of the work at site.
- 6.19 All practical steps shall be taken to prevent danger to persons employed from the risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris of materials as to render it unsafe.
- 6.20 The Contractor shall provide necessary barriers, warning signals and other safety measures, to avoid accidents. They shall also indemnify HDC, SMP, Kolkata, against claims for compensation arising out of negligence in this respect.
- 6.21 All necessary personnel safety equipment, as per relevant statutory provisions, should be kept available for the use of the persons employed (directly or indirectly on the instant work) on the site and the Contractor should take adequate steps to ensure proper use of safety equipment by those concerned.
- 6.22 The ordinary business and work of HDC, SMP, Kolkata & others, as being carried out on & in the vicinity of the site, shall be continued during installation, testing & commissioning and maintenance. The execution of the work shall be conducted in such a way as to avoid interference with traffic of every kind by land and with any other work in progress in the vicinity.
- 6.23 Inspection / acceptance, in no way shall absolve the Contractor from supplying material as per standards / codes and other obligations under the contract.
- 6.24 Any materials brought for work which is not matching with the relevant specification will be rejected and the rejected materials shall be removed from site on the same day.
- 6.25 A register (Site Work Register with Hindrance Record) is required to be maintained by the Contractor on daily basis with details of works carried out on that particular day, where details regarding engagement of labourers, equipment, receipt of materials and cause of hindrance, if any, shall be recorded jointly [by the representatives of the Engineer & the Contractor].

Representative(s) of the Contractor shall have to check the register for any instructions of 'Engineer' or his authorized representative and sign the same for compliance with the instructions recorded therein.

Any instruction issued by the 'Engineer' or his authorized representative, which has been entered in the Site Work Register, shall be deemed to have been legally issued.

This Site Work Register (s) shall be the property of HDC, SMP, Kolkata and shall be returned to the representative of the 'Engineer' in good condition, after

the completion of the work.

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

Any order or instruction issued by the 'Engineer' or his authorized representative, which has been entered in the Site Order Book, shall be deemed to have been legally issued.

This Site Order Book(s) shall be the property of HDC, SMP, Kolkata and shall be returned to the representative of the 'Engineer' in good condition, after the completion of the work. Photocopy of the same may be retained by the Contractor, for their record.

- 6.27 Relevant aspects of following Rules / Code of Practices should also be followed and complied with:

- a) Indian Factories Act
- b) Dock Workers (Safety, Health & Welfare) Act, 1987
- c) The Workmen's Compensation Act, 1923
- d) The Minimum Wages Act, 1948
- e) The Contract Labour (Regulation & Abolition) Act, 1970
- f) Other Local Regulations.

- 6.28 If during execution of work any damage takes place in the property of HDC, the same will have to be mended good by the contractor at their risk, cost and arrangement. Otherwise the same will be repaired / replaced by HDC, either departmentally or through outside agency and the cost of repairing / replacement will be recovered from the Contractor, along with overhead charges @19.25%.

- 6.29 No project surplus material will be taken over by HDC, SMP, Kolkata, after completion of the work.

C. Detailed Technical Specification:

- 6.30 The type / model of the fans / light fittings should be selected based on the following guidelines. However, Technical Specifications (minimum requirement) must be fulfilled. In case of non availability of a particular type / model, equivalent type / model (of approved Manufacturers, mentioned below) may be selected based on the Technical Specifications (minimum requirement) indicated against the relevant item. Prior written consent is to be obtained from the 'Engineer' or his representative, before supply of the selected type / model of fans / light fittings.

Sl. No.	Items	Type / Model	Technical Specifications (minimum requirement)
i)	Ceiling Fan [Sweep : 900 mm]	Summer Breeze (Orient)	Speed : 375 rpm – 425 rpm Air Delivery: $\geq 150 \text{ m}^3/\text{minute}$ Power input : $\leq 60 \text{ W}$
		SS-390 (Havells)	
		High Speed (Crompton)	

Sl. No.	Items	Type / Model	Technical Specifications (minimum requirement)
ii)	Exhaust Fan [Sweep: 300 mm]	Heavy Duty Exhaust (Orient)	Speed : 1375 rpm – 1425 rpm Air Delivery: $\geq 1800 \text{ m}^3/\text{hour}$ Power input : $\leq 80 \text{ W}$ Blade : Metallic (Four Blade)
		VENTILAIR DB (Havells)	
iii)	Exhaust Fan [Sweep: 200 mm]	Brisk Air (Crompton)	Speed : 1250 rpm – 1350 rpm Air Delivery : $\geq 450 \text{ m}^3/\text{hour}$ Power input : $\leq 40 \text{ W}$ Blade : Non-metallic
		Ventilator DX (Orient)	
		VENTILAIR DX (HAVELLS)	
iv)	1 X 4 ft (approx.) LED tube light fittings	Batten : IGP161LT8-16 (Crompton)	[Box Type]
		Batten : TMC 501 P 1 x T- LED 22W P3241 (Philips)	
		Batten : BLRB-DB 118 (Bajaj)	
		Batten : WIO921208 (Wipro)	
v)	1 X 2 ft (approx.) Integrated LED Batten System wattage of luminaire: $\leq 10 \text{ W}$	LCTLN-10-CDL (Crompton)	Integrated LED Batten (PC) with efficient Diffuser Material & in-built driver. Correlated Colour Temperature (CCT): 5700K - 6500 K
		Philips Astra Line 10W 2 Ft Straight Linear LED Tube Light (White) (Philips)	
		LL20-111-XXX-65-NE3 (Wipro)	
		BCLSB 10WH (Bajaj)	
vi)	10W-12W Bulkhead surface / wall mounted LED light fittings (IP 65).	BIBWP 10W LED (Bajaj)	Housing: Die Cast Aluminium alloy housing. Inbuilt driver, upto 5 kV surge protection. IP65 protected System Efficacy: 100LPW Correlated Colour Temperature (CCT): 5700K - 6500 K
		LBHE-10-CDL (Crompton)	
		LW07-141-XXX-57-XX (Wipro)	
vii)	40W - 45W Post Top LED	BGCL 40W LED (Bajaj)	Material: Die Cast Al with PMMA Diffuser Optics.

Sl. No.	Items	Type / Model	Technical Specifications (minimum requirement)
	Light fittings (IP 65).	LPTO-40-CDL-M (Crompton)	IP65 protected Correlated Colour Temperature (CCT): 5700K - 6500 K
		LP02-501-XXX-57-XX (Wipro)	
viii)	Outdoor / Street light type LED Light fittings. [IP 66] System wattage of luminaire: \leq 30 W	BRP046 LED 30 CW MR S1 PSU GR-(Philips)	Housing: Pressure die-cast Aluminium body. Drivers should have in-built protection against high voltage surge, open circuit & short circuit. Correlated Colour Temperature (CCT): 5000 - 6500 K Luminous flux: \geq 3000 lumen Power Factor: >0.95 Colour Rendering Index (CRI): 70 Side entry mounting for 38 mm - 50 mm OD pipe bracket.
		LSTS-30-CDL-M (Wipro)	
		A02557M0X0 (LT)	

6.31 Supply of 1.1 kV grade, Cross Linked Polyethylene (XLPE) Cable (FRLS) :

The cables should be generally compliance with IS 7098 (Part-1) [with latest amendment, if any] with following specifications:

- (i) Conductor materials: Aluminium.
- (ii) Shape: Stranded Compacted Shaped.
- (iii) Insulation: Cross Linked Polyethylene (XLPE).
- (iv) Armouring: Single layer, Galvanised steel flat strip.

6.32 Laying of 1.1 kV grade, XLPE Cable:

- 6.32.1 Before laying of Cables, cable routes should be checked properly to avoid interference with the existing cables, structures, heat sources, drains, pipelines, etc., as far as possible and minor adjustments to be done to suit the field conditions, wherever deemed necessary, without any extra cost. Considering above, cable routes should be carefully measured to ascertain the exact requirement of cable for a particular feeder. Sufficient lengths to be kept for the final connections of the cables to the terminal of the equipment.

- 6.32.2 Programme for Road Crossing, wherever required (for Casing Pipe laying etc.), shall have to be coordinated through the authorized representative of the Dy. Manager (P&E), TSEM, in advance, for having due clearance of Road Blockage. Such clearance will be given within 7 (seven) days from the date of receipt of request from the Contractor.
- 6.32.3 In case of Road or Rail Crossing, cable should be laid inside the pipes. Where cables enter into pipe sleeves, adequate beds of sand should be given so that the cables do not slack and get damaged by pipe ends.
- 6.32.4 When cables pass through foundation walls, or other underground structures, if necessary, ducts or opening shall have to be provided, by the Contractor. However, shall it become necessary to cut holes in the existing foundations or structures, the contractor should obtain permission from Dy. Manager (P&E), TSEM, before cutting is done. Cutting, if necessary and mending good of any cut portion should be done by contractor at his cost and risk.
- 6.32.5 Cables should be handled carefully during installation to prevent mechanical injury to the cables. During laying of cables, Cable Drum Lifting Jacks, sufficient number of Cable Rollers and other materials, etc. as necessary, should be used to avoid any mechanical injury to the cables. Ends of cables leaving trenches should be coiled and provided with a protective pipe or cover, until such times, the final terminations to the equipment are completed.
- 6.32.6 After laying of the cables in the trench and before placement of protective covering, an Insulation Test should be carried out for each length of cable in presence of the representative of Sr. Dy. Manager (P&E), HDC. After re-filling the trench with soil, rammed and levelled, Insulation Test of the cable should also be carried out in presence of the representative of Sr. Dy. Manager (P&E), HDC.
- 6.32.7 All cables should be identified close to their termination points by Cable Number / Equipment Number, which will be punched on Aluminium strip/ PVC Strip (approx. 2 mm thick) securely fastened to the cable and wrapped around it. Type and size of the cable also to be punched on the straps.
- 6.32.8 Each underground cable should be provided with Identification Tags (made of PVC) securely fastened every 30 m of its underground length, with at least one tag at each end before the cable enters the ground. Concrete Cable Markers are to be placed at cable joint locations and "L.T. Cable Joint" should be engraved on the said Cable Markers.
- 6.32.9 All temporary ends of cables must be protected against dirt and moisture to prevent damage to the insulation. For this purpose, ends of the cables should be covered with PVC insulating tape.
- 6.32.10 Where splices or terminations are required in circuit, it is required to measure insulation resistance of each length of cable before splicing and / or terminating. It is required to repeat measurement after splices and /

or terminations are completed. Before energizing, the insulation resistance of every cable shall have to be measured.

It is required to measure the Insulation Resistance of directly buried cables, before Cable Trenches are back-filled.

- 6.32.11 Directly buried cables should be laid in underground Cable Trenches to be excavated by the Contractor. Width of the Cable Trench should be such that all cables shall be correctly spaced and arranged. The 1.1 kV grade cables should be laid in trenches at a depth of 0.75 m.

- 6.32.12 **Placing & Protection of cables in trench:**

For 3 ½ C / 4C cable, upto 35 mm²

Before cables are placed, the bottom of the trenches should be filled with a layer (approx. 100 mm) of sand at the bottom of the trench, duly levelled. After laying of the cable on the sand bed the same is to be covered with sand and bricks should also be used as protective top covering [8 no. bricks would be used in 01 m cable laying work]. Rest of the trench should be re-filled with soil, rammed and levelled.

- 6.32.13 The bricks, to be used for protective top covering & side wall, should be of class designation 10.0 (as per latest version of IS: 1077, 1992). Dimensions [non-modular size (230 mm. x 110 mm. x 70 mm)] and tolerances of the bricks should be as per latest version of IS: 1077, 1992.

- 6.32.14 Cable Termination of 1.1 kV grade, XLPE Cable :

Termination of XLPE aluminium conductor power cables shall be by means of compression method using brass compression gland and aluminium lugs [including supply of materials, as required], tapes, anticorrosive paste & jointing materials.

- 6.32.15 Straight Through cable jointing of 1.1 kV grade, XLPE Cable:

Additional length (loop) of 5 m (approx.) cable should be kept at each end of the

cables near the straight through cable joints. It is required to measure the insulation resistances of the cables before and after straight through cable jointing. This scope includes supply of all required materials including complete straight through cable jointing kits, with ferrules and all other accessories.

Heat Shrinkable type straight through Cable Jointing Kits, suitable for XLPE insulated 1.1 kV grade LT cables, are to be used.

- 6.32.16 GI Pipe laying work:

Laying of Galvanized Mild Steel Tubes should be done wherever necessary, such as at Road Crossing, Railway Crossing, Drains, Culverts or any similar concrete structure, etc. The scope includes cutting of road, railway crossing, excavating of trenches, etc. Re-filling the trench after laying the Galvanized

Mild Steel Tubes to be done by the Contractor. The Galvanized Mild Steel Tubes may also be laid by boring process, as per site requirement.

The depth of the laying should be matched with the underground cable trench, as far as possible.

Cutting of Galvanized Pipe to required length and threading, bending, jointing by Socket as required, supply and fixing of support clamps / brackets should be under the scope of Contractor.

6.33 Earthing :

Earth Electrode/Spike should be made of 1.85 m long Galvanised rod. Two earth electrodes are to be interconnected to form one earth grid, which will provide a common ground for Busbar.

Earth Electrode to be driven in the Earth. Interconnection of earthing electrodes (with 8 SWG G.I. wire), with bolts, nuts, washers, etc shall be within the Scope of Work.

All connection of the G. I. Flats / G. I. Wire, with the Earth Electrode & Earth Grid, should be made by welding & welding point should be covered by black Bitumen Paint.

Entire earthing should be done in accordance with the relevant Indian Standard (IS) issued by Bureau of Indian Standard, Indian Electricity Rules & Act and Code of Practice. Colour of insulation of the copper wire, to be used for earthing purpose, will have to be preferably GREEN.

All necessary work (including supply of aforesaid cable & other required materials), for providing aforesaid earthing connection, is under the scope of the Contractor.

6.34 List of Approved Manufacturers /Makes /Brands:

Sl. No.	Items	Name of the Manufactures
i)	MCB, RCCB, MCB Type Isolator, MCCB, Contactor, Time Switch, Switch – Disconnecter – Fuse Unit	L&T / LEGRAND / SIEMENS / SCHNEIDER / ABB
ii)	MCCB / MCB Enclosure or Distribution Board	L&T / LEGRAND / SIEMENS / SCHNEIDER / ABB/HENSEL
iii)	PVC insulated (1.1 kV grade) single / multi-core copper flexible conductor.	FINOLEX / HAVELLS / RPG / UNIFLEX / MESCAB / RR KABLES/ POLYCAB
iv)	Telephone cable, LAN Cable	FINOLEX / HAVELLS / MESCAB / POLYCAB
v)	Indoor Light Fittings and Lamps	PHILIPS / WIPRO / BAJAJ / CROMPTON / LIGHTING

Sl. No.	Items	Name of the Manufactures
	(Excluding decorative Bracket Light)	TECHNOLOGY (LT)
vi)	Outdoor Light Fittings	PHILIPS / WIPRO / BAJAJ / CROMPTON / LIGHTING TECHNOLOGY (LT)/ SIMOCO
vii)	Piano Type / MODULAR type Switch, Socket, Ceiling Rose, Electronic Type Fan Regulator, etc.	ANCHOR / LEGRAND/ / PHILIPS/ PANASONIC/ ABB
viii)	Ceiling Fan, Exhaust Fan, Wall Fan, Pedestal Fan, etc.	CROMPTON / ORIENT / HAVELLS / ALMONARD
ix)	LT Cable (1.1 kV grade) PVC / XLPE .	HAVELLS / FINOLEX / GLOSTER / UNISTAR / RPG / APAR INDUSTRIES (UNIFLEX) / POLYCAB / KEI / RR Kable
x)	Cable Jointing Kit	BIRLA 3M / RAYCHEM / DENSON
xi)	Cable Lug & Cable Gland	DOWELLS / JHONSON / RAYCHEM
xii)	Digital Multifunction Meter, Energy Meter [ac Static Watthour Meters]	CONZERV / SECURE / L&T
xiii)	Outdoor Type PVC Box	HENSEL / SINTEX/ ABB
xiv)	Paints	ASIAN / BERGER / NEROLAC / SHALIMAR / DULUX

8. PREAMBLE TO THE BILL OF QUANTITIES

E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

8.1 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.

8.2 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.

8.3 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.

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

9. BILL OF QUANTITIES FOR CIVIL WORKS

E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

Section-A: Gate Goomty

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
1	Earth work in excavation in foundation in any soil including disposal of surplus excavated earth within a lead of 100 M include for bailing out subsoil or rain water, if required, all complete and as directed.	70.00	₹ 120.46	Cu.M.	₹ 8,432.39
2	Earthwork in filling in foundation trenches or plinth with good earth obtained from excavation of foundation in layers including watering and raming etc. complete.	40.00	₹ 78.32	Cu.M.	₹ 3,132.62
3	Dismantling/ cutting of bituminous road and disposal of dismantled materials upto a lead of 100 m, stacking serviceable and unserviceable materials separately include for bailing out subsoil or rain water, if required, all complete and as directed.	15.00	₹ 279.77	Cu.M.	₹ 4,196.55
4	Dismantling the cement concrete (of any thickness) by carefully chiseling out. Include for removing the debris within a lead of 75 m. etc., all complete and as directed.	0.50	₹ 948.39	Cu.M.	₹ 474.20
5	Dismantle cement brick work by carefully chiselling out as directed. Include for cleaning the serviceable bricks including stacking for reusing and disposal of unserviceable materials, within a lead of 75 m. etc. all complete and as directed. Extra rate for careful dismantling and recovering at least 150 no of useable bricks per cum.	15	₹ 451.47	Cu.M.	₹ 6,772.05
6	Filling in foundation trenches or plinth by silver sand in layers not exceeding 150mm as directed and consolidated the same by thorough saturation with water, ramming complete including the cost of supply of sand (payment to be made on measurement of finished quantity.)	4.00	₹ 548.95	Cu.M.	₹ 2,195.78

[BOQ-2]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
7	Supplying and laying Polythene Sheet (150 gm / sq.m.) below flooring or in foundation or in foundation trenches.	50.00	₹ 24.24	Sq.M.	₹ 1,212.00
8	Brick soling with picked jhama bricks including preparation of bed as necessary with brick joints properly filled in and packed with powdered earth and including necessary cushion of similar materials below the soling (and in between layers when more than one layer is used) completes sper direction. a) Single brick flat soling (thickness 75mm)	40.00	₹ 339.36	Sq. M.	₹ 13,574.40
9	25mm. thick damp proof course with cement concrete with stone chips (1:1.5:3) [with graded stone aggregate 10 mm nominal size] and admixture of water proofing compound as per manufacturer's specification followed by two coat of polymer based paint, (1st coat after 4 to 5 days of concrete laying and 2 nd coat just before brick masonry work) as directed.	7.00	₹ 187.86	Sq. M.	₹ 1,315.02
10	Provide and lay cement concrete (1:3:6) (with 20 mm down stone chips) in foundation and plinth protection etc. in proper line and level to superior finish, all complete and as directed.	6.00	₹ 4,483.39	Cu.M.	₹ 26,900.34
11	Provide and lay cement concrete (1:2:4) (with 20 mm down stone chips) on the top of boundary wall including fixing broken glass of required size @ 50mm c/c , all complete and as directed.	1.50	₹ 5,371.18	Cu.M.	₹ 8,056.77
12	Provide and build brick work in foundation and plinth etc. in cement and sand mortar 1:6 (1 cement : 6 coarse sand) with Ist class bricks, include for chiselling out/cutting teeth etc. in existing walls and floors for proper bonding, all complete and as directed.	19.00	₹ 5,249.98	Cu.M.	₹ 99,749.62

[BOQ-3]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
13	Providing and building of brick work in cement and sand mortar 1:4 (1 cement : 4 coarse sand) with 1st class bricks include for chiseling out/cutting teeth etc. in existing walls and floors for proper bonding etc. all complete and as directed.	22.00	₹ 5,745.89	Cu.M.	₹ 126,409.58
14	Provide and build 125 mm. thick brick work with 1st class bricks in cement mortar 4:1 (4 sand :1 cement) include for chiselling out / cutting teeth etc. in existing walls and floors for proper bonding, all complete and as directed.	8.00	₹ 719.12	Sq.M.	₹ 5,752.96
15	M.S./Tor reinforcement (TATA/SAIL/RINL or equivalent) including supply of rods, initial straightening and removal of loose rust, cutting to requisite length, bending, shaping and place in correct position, including welding if necy. for the above item etc., all complete & as directed.	525.00	₹ 56.07	Kg.	₹ 29,434.18
16	Providing and laying of ordinary cement concrete Mix (1:1.5:3) with graded stone chips including application of epoxy based reactive joining agent for joining the old concrete with fresh concrete to be applied within manufacturer's specified time as per manufacturer's specification (0.4 kg / sqm of concrete surface), cement slurry, rounding off edges etc. all complete and as directed.excluding shuttering and reinforcement, if any, as per relevant IS code with Pakur variety stone chips etc., all complete and as directed.	5.00	₹ 5,930.72	Cu.M.	₹ 29,653.60
17	Hire and labour charges for shuttering for building works for floor, beam, lintels, chajjas etc for the above item.	60.00	₹ 327.24	Sq.M.	₹ 19,634.40

[BOQ-4]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
18	Providing and laying of artificial stone in floor , dado, staircase etc. with cement concrete (1:2:4) with stonechips, laid in panels as directed with topping made with ordinary or white cement (as necessar) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including raking out joints or roughening of concrete surface and appolication of cement slurry before flooring works using cement @ 1.75 kg/sq.m. including all materials and labour upto 2nd. floor etc. all complete and as directed.				
	a) 25 mm thick.	16.00	266.64	Sq.M	₹ 4,266.24
19	Providing and laying of cement plaster (1:4) with medium coarse sand to interior surfaces of walls and columns etc. Include for necessary curing etc. all complete and as directed. avg. 20 mm. thick cement plaster(1:4) (to match with existing plastered surface) upto 2nd floor level etc., all complete and as directed.	70.00	₹ 180.79	Sq.M.	₹ 12,655.30
20	Providing and laying of 10 mm. thick cement plaster (1:4) with medium coarse sand at the ceiling surface Include for necessary scaffolding & curing upto 2nd floor level etc., all complete as directed.	15.00	₹ 126.25	Sq.M.	₹ 1,893.75
21	Providing and laying of cement plaster to exterior surfaces 15 mm to 20 mm thick with (1:4) cement plaster with approved water proofing compound. Include for making scaffolding for working up to 2nd floor level and necessary curing etc., all complete and as directed.	170.00	₹ 168.67	Sq.M.	₹ 28,673.90
22	Providing and laying of neat cement punning over the plastered surfaces of dado, skirting and floor surfaces upto 2nd floor level etc., all complete and as directed.	90.00	₹ 34.34	Sq.M.	₹ 3,090.60

[BOQ-5]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
23	Provide and apply primer of one coat on timber with synthetic oil bound primer of approved quality include for scrapping, brushing, sand papering and cleaning the surfaces smooth before application of paint all complete and as directed.	12	38.38	Sq.m.	₹ 460.56
24	Provide and apply Primer of one coat on steel or other metal surface with synthetic oil bound primer of approved quality include for scrapping, brushing, sand papering and cleaning the surfaces smooth before application of paint all complete and as directed.	110	29.29	Sq.m.	₹ 3,221.90
25	Provide and lay paint on old/new wood works with two coats of approved synthetic enamel paint (first quality) of any shed other than white. Include for scrapping and preparation of surface with brushing and cleaning before painting upto 4th floor level etc.,all complete and as directed.	12	81.81	Sq.m.	₹ 981.72
26	Provide and lay paint on old steel work with two coats of approved synthetic enamel paint of first quality of any shed other than white including scrapping, brushing and cleaning the surfaces if necessary all complete as directed.	110	79.79	Sq.m.	₹ 8,776.90
27	Provide and apply 2 (two) of white wash until white and bright on all interior surfaces (New and Old surfaces) by scrapping, sand papering including necessary repairs to scratches etc.all complete and as directed.				
	Two coats	125	18.32	Sq.m.	₹ 2,290.18
28	Providing and applying of 1 (one) coat of Asian / Berger/Nero lac/ ICI paint make primer suitable for exterior acrylic emulsion paint on old/new concrete/plastered surfaces to receive asian/ Bergr/ nero lac/ICI paint exterior acrylic emulsion paint including scaffolding scraping wire brushing and preparing the surfaces thoroughly as per manufacturers specification upto 2nd. floor level etc. all complete and as directed.	180	31.71	Sq.M	₹ 5,708.52

[BOQ-6]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
29	Providing and applying two coats of protective Decorative exterior premium 100% ACRYLIC EMULSION PAINT TWO COAT OF Asian/ Berger / Nero lkac / ICI paint make on old/ new concrete / plastered surfaces including scaffolding, scraping, wire bruising and preparing the surfaces thoroughly all complete as per manufactures specification.	180	84.84	Sq.M	₹ 15,271.20
30	Supply and fix M.S. steel window in framed gratings etc.made of round or square bars and frame work or M.S. flats (with the bars securely fixed to the flat bar frame) with or without intermediate flat bar stiffener and fixed with necessary screws etc. complete, as directed.	25	63.62	KG	₹ 1,590.50
31	Supplying best Indian sheet glass panes 3 mm thick (weighing 7.4 kg/Sq.m) set in putty and fitted and fixed with nails and putty complete. (In all floors for internal wall & upto 6 m height for external wall)	3	481.77	Sq.M	₹ 1,445.31
32	Providing and supplying Sal wood work in door ,window frame fitting and fixing in position complete including a protective coat of painting at contact surface of the frame	0.040	73683.54	Cum	₹ 2,947.34
33	Supplying & fixing solid flush type 35mm thick doors of commercial quality, the timber frame consisting of top and bottom rails and side styles of well seasoned timber 65mm wide each and the entire frame fitted with 37.5mm wide battens places both ways in order to make the door of solid core and internal lipping with Garjan or similar wood veneers using phenol formaldehyde as glue etc. complete, including fitting, fixing shutters in position but excluding the cost of hinges and other fittings in ground floor.	2	2,685.59	Sq.m.	₹ 5,371.18

[BOQ-7]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
34	Supplying, fitting & fixing factory made Plain Colour foam PVC (density shall not be less than 600 kg/cum) door frame (finished weight of 2.73 kg/mtr.) of size 100mm X 45mm made off with 5mm thick extruded foam PVC sheet, mitre cut at junction of horizontal and vertical member and joined them by heat welding. Entire door frame profiles to be reinforced with steel primer coated 19 SWG 40mm X 20mm M.S. tube. An additional 5mm thick PVC sheet with desired colour/shade to be provided at the exposed surface and three nos 5mm thick PVC sheet to be provided as gap insert.				
-	The door frame to be fixed with wall by using 8mm dia. and 100mm long stainless steel screws and PVC fasteners. A minimum of 4 nos. screws to be provided for each vertical member & 2 nos. for horizontal member all complete as per direction of Engineer-in-Charge.	10	521.16	Mtr.	₹ 5,211.60
35	Supplying, Fitting & Fixing 30 mm thick Factory made solid Panel PVC Door Shutter consisting of outer frame made out of M.S. tubes of 19 gauge thickness and size 19 mmx19 mm for styles, top and bottom rails, M.S. frame shall have cost of steel primers of approved make and manufacture, M.S. frame covered with 5 mm th. heat moulded PVC "C" channel of size 30 mm th, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on either sides forming styles; and 5 mm th. 95 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm tapered in 45 degree on the inner side to form top & bottom rail and 115 mm wide PVC sheet out of which 75mm shall be flat and 20 mm shall be tapered on both sides to form lock rail.				

[BOQ-8]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
35	Top, bottom and lock rails shall be provided either side of the panel with 10 mm (5 mmx2) th.,20 mm wide cross PVC sheet as gap insert for top rail and bottom rail. Paneling of 5 mm th. both side PVC sheet to be fitted in the M.S. frame welded/sealed to the styles & rails with 7 mm (5 mm+2 mm) th.x15 mm wide PVC sheet beading on inner side and joined together with solvent cement adhesive. An additional 5 mm th PVC strip of 20 mm which is to be stuck on the interior side of the "C" channel using PVC solvent adhesive etc. complete excluding all necessary hardwares as per direction of Engineer-in-Charge	3	1962.43	Sq.m.	₹ 5,887.29
36	Provide & fix MS clamp made of 40 mm x 6 mm x125 mm long ms flat or as required at site to the door, window, cupboard frame etc.,all complete & as directed.	6.00	₹ 38.38	Each	₹ 230.28
37	Supplying, fitting and fixing of anodised aluminium tower bolt of approved quality manufacture from extruded section confirming to IS 204/74 fitted and fixed with cadmium plated screw etc., all complete and as directed.				
	a) 150 mm long x 10 mm dia bolt .	8.00	₹ 63.63	Each	₹ 509.04
38	Anodised aluminium Sliding bolt/ Aldrop (250 mm X 16 mm dia.bolt) of approved quality manufactured from extrud section fitted and fixed complete.	4.00	₹ 235.33	Each	₹ 941.32
39	Anodised aluminum butt hinges of approved manufactured from extruded section conforming I:S 205/66 fitted and fixed with cadmium plated screw.				
(a)	100 x 75 x 33.5 mm (For Door)	6.00	₹ 66.66	Each	₹ 399.96

[BOQ-9]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
40	Supply, fit and fix anodised aluminium D - type handle of size 125 mm. X 12 mm. dia rod with continuous plate base (Hexagonal / Round rod) of approved quality manufactured from extruded section conforming to I.S. specification (IS 230/72) etc., all complete & as directed.	8.00	₹ 104.03	Each	₹ 832.24
41	Supplying, fitting and fixing 125mm long wooden buffer block position excluding the cost hinge and other fittings.	3.00	₹ 51.51	Each	₹ 154.53
42	Supplying, fitting and fixing 25 mm dia. brass ferrule including connection with G.I. pipes of TATA make of following dia. and upto 450 mm long with screw, jamnut, sockets etc., complete in all respect, including cutting trenches in all sorts of soil and filling up the trenches as per direction of the Engineer - in - Charge.	2	1,902.84	Each	₹ 3,805.68
43	Supplying fitting & fixing 10 litres PVC Low down cistern conforming to IS specification with PVC fittings complete, CI brackets including tow coat of painting to brackets, cutting & mending good damages all complete.	2	1,025.15	Each	₹ 2,050.30
44	Supplying, fitting and fixing E.W.C. With 'P' trap in white glazed vitreous chinaware of approved make complete in position with necessary bolts, nuts etc.	2	1,435.21	Each	₹ 2,870.42
45	Supplying fitting & fixing white vitreous china best quality approved make wash basin with C.I. brackets on 75mm.X 75mm. Wooden blocks, CP. Waste fittings of 32mm. Dia, one approved quality of CP. Pillar cock of 15mm. Dia., CP. Chain with rubber plug of 30mm. dia., approved quality PVC. waste pipe with CP. nut 32mm. dia., 900mm. long approved quality PVC. connection pipe with heavy brass CP. nut including mending good all damages and painting the brackets with two coats of approved paints.	2	1,998.79	Each	₹ 3,997.58
	450mm.X300mm. Size.				

[BOQ-10]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
46	Supply, fit and fix C.P over brass 25 mm dia. and 600 mm long towel rail with two brackete etc all complete & as directed.	2	434.30	Each	₹ 868.60
47	Supplying fitting & fixing approved brand glass shelf of size 450 mm X 125 mm Ordinary type with 5.5mm sheet glass & aluminium guard rails complete.	2	344.41	Each	₹ 688.82
48	Supplying fitting & fixing approved brand best quality indian make mirror 5.5mm thick with silvering as per IS specifications supported on fibre glass frame of any colour, frame size 550mm X 400mm complete.	2	619.13	Each	₹ 1,238.26
49	PTMT (Polytetra Bib Cock / Stop Cock (Prayag or equivalent) 15 mm / 20mm each	4	155.54	Each.	₹ 622.16
50	Supply fit & fix CI 100 mm dia gratings.	2	62.62	Each	₹ 125.24
51	Supplying, fitting and fixing for 25 mm dia / 32mm dia pipe high pressure polythene ball cock of approved quality with polythene ball and aluminium lever complete .	2	121.20	Each	₹ 242.40
52	Supply and fixing of 500 litre capacity Multilayer, anti beacterial, heat resistant, UV stabilized P.V.C. water storage tank of Sintex Pure or equivalent with closed top with lid upto 2nd floor level.	2.00	2609.84	Each	₹ 5,219.68

[BOQ-11]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
53	Supply,fit,fix PVC pipes of approved make (Oriplast / Supreme or equivalent) conforming to ASTM D- 1785 of medium duty (Schedule 80) including all necessary accessories specials i.e socket, band,tee, elbow , union, cross, nipple, long screw, reducing socket, reducing tee, short piece etc. fitted with holder bats clamp, including cutting pipes, making threads, fitting, fixing, taking out damaged pipe and returned to HDC Store etc. complete in all respect in any position above ground and upto 4 th. floor level. (Payment will be made on the centre line measurement of total pipe line including all specials, no separate payment will be made for accesories, specials as required to complete the work).				
a)	15 mm.dia medium quality (Schedule 80).	15	102.01	Mtr.	₹ 1,530.15
b)	20 mm.dia medium quality (Schedule 80).	25	130.29	Mtr.	₹ 3,257.25
c)	25 mm.dia medium quality (Schedule 80).	25	178.77	Mtr.	₹ 4,469.25
54	Supplying, fitting and fixing in position 25mm dia medium quality G.I. pipes of TATA make for underground works with all necessary accessories,specials viz.socket, bend, tee, union, cross, elbow, nipple, short piece etc.including cost of all materials,jointing materials ,cutting pipes,making threads,cutting trenches upto 1.5 metre below surface in all sorts of soil and through 50mm nominal dia bore from bottom of the road and refilling the same as directed with two coats of painting on G.I. pipes and specials with bituminous paint complete in all respect. (Payment will be made on the centre line measurement of the total pipe line including all specials No separate payment will be made for accessories, specials.Payment for painting will be made seperately)	15	322.19	Mtr.	₹ 4,832.85

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
55	Labour for making Horizontal Boring of 50mm dia. nominal bore by any standard method to any depth below ground level / bed level in all kinds of soil like clay, silt, sand, stiff clay, mixed soils etc. (for the purpose of laying of 25mm GI pipe through the hole) including digging a small starter trench complete as per the direction of Engineer-in-Charge. The rate includes hire charge of all tools and plants and labour required for the work including all incidental charges such as electricity charges, labour insurance charges etc.	12	699.38	Mtr.	₹ 8,392.56
56	Supply,fit and fix single socked 110 mm. dia. of 3.00 M long UPVC pipe (B-type) granules as specified in IS 13592-1992 as down pipe and fitted with all necessary fittings & clamps nails including making holes in walls.				
a)	110mm Dia. Pipe :	30	294.92	Mtr.	₹ 8,847.60
b)	bend /shoe 110 mm dia.	3	148.47	Each	₹ 445.41
c)	UPVC Door Bend 110 mm dia.	3	121.20	Each	₹ 363.60
d)	UPVC Cowl 110 mm dia.	3	33.33	Each	₹ 99.99
57	Supplying, fitting and fixing medium quality G.I. pipes of TATA make to prepare new gate by connecting one another with all necessary accessories, specials viz. socket, bend etc as per approved design, drawing & direction of Engineer-in-Charge complete including cutting to requisite shape & size, fabrication including metal arc welding conforming to IS: 816-1969 & IS: 9595 using electrodes of approved make and brand conforming to IS:814-2004, haulage, hoisting and erection, including cutting pipes, making threads, fitting, fixing etc. complete in all respect including cost of all necessary fittings as required. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for				

[BOQ-13]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
	accessories, specials.) . The rate includes the cost of all GI pipes, all consumables such as electrodes, gas and hire charges of all tools and plants and labour required for execution and all incidental chages (such as electricity, labour insurance) etc. complete.				
	a) 50mm GI pipe	15	599.94	Mtr	₹ 8,999.10
	b) 32mm GI pipe	14	390.50	Mtr	₹ 5,467.00
58	Supply M.S.flat, sq.bar, angle, tee etc. for M.S. grill, gate, chain link fencing etc.(Measurement will be given after fixing of supplied material).	200	100.84	Kg	₹ 20,167.68
59	Cutting requisite length or shape departmental R.S. joists, channels, angles, tees, plates etc., all complete and as directed.	350	8.08	Sq.Cm	₹ 2,828.00
60	Welding in M.S. structural work gas or electric etc., all complete and as directed. (Continuous weld)	450	9.09	Per Cm. Run	₹ 4,090.50
61	Labour for taking out, hoisting, carrying (up to 500.0 mtr distance) and refixing in proper position heavy gate made with GI pipes with locking arrangement after cutting out lugs from pillars including fitting and fixing same with bolts, nuts, plates				
	angles etc. as directed. (but excluding cost of such bolts, nuts, gas cutting, welding, necessary plates angles etc.)	7	416.12	Per Qntl	₹ 2,912.84
62	Constructing Inspection pit with Pakur variety. (SAIL/TATA/RINL) of inside measurement 600mm X 600mm X upto 600mm (depth) with 250 mm thick 1st. class brick work in cement mortar (1:4) on all sides, bottom of the pit consisting of 100 mm thick cement concrete (1:3:6) with stone chips over a layer of jhama brick flat soling, 15 mm thick (1:4) cement plaster to inside walls and out-side walls upto G.L. and 20 mm.thick (1:4) plaster to bottom of the pit, providing necessary invert with cement concrete (1:3:6) with stone chips as per direction, neat cement finishing to entire internal surfaces, top of the pit covered with 100 mm thick	2.00	₹ 7,056.87	Each	₹ 14,113.74

[BOQ-14]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
	R.C.C. slab (1:1.5:3) with stone chips and necessary reinforcements upto 1% and shuttering including 6 mm thick cement plaster (1:4) in all external surfaces of the slab and one 560 mm dia. R.C.C. manhole cover of approved make supplied, fitted and fixed in the slab with necessary fittings, necessary earthwork in excavation in all sorts of soil, filling sides of the pit with earth and removing spoils after work complete in all respect with all costs of labour and materials.				
63	Construction of septic tank For 10 users with Pakur variety. (SAIL/TATA/RINL) as per approved drawing with 1st class brick work in cement mortar (1:4) including two 560 mm dia. R.C.C. manhole cover(heavy type)of approved make supplied, fitted and fixed in the 100mm thick R.C.C (1:1.5:3) top slab with necessary fittings, 20mm thick cement plaster (4 : 1) with neat cement finish to the internal surfaces and 15 mm thick cement plaster (4 : 1) to outside wall upto 200 mm below G.L floor finished with 25 mm thick grey artificial stone over 100 mm thick R.C.C(1:1.5:3) bottom slab including supplying, fitting and fixing all necessary specials, fittings, S.W. tees, C.I. foot rest etc. including excavation earth in all sorts of soil, shoring, bailing out and pumping out water as necessary, ramming, dressing the bed and refilling the sides of the tanks with earth, removing spoils, filling up the chamber with clear water, removing foreign materials from the chamber and including constructing attached inspection pit as per approved drawing and connecting all necessary pipes, joints etc. with internal plaster work and artificial stone flooring is to be done with admixture of water proofing compound @ 0.5% by weight of cement with all costs of labour and	2.00	₹ 34,980.34	Each	₹ 69,960.68

[BOQ-15]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
	materials. Note:- (i) Finished level of Septic Tank should be 400 mm. from Ground Level. (ii) Height of 50 mm. Ventilation pipe & Mosquito proof mesh, should be followed as per IS:2470, Part- I. Payment will be made separately on the basis of actual height based on relevant I.S.Code.				
64	Supplying, fitting, fixing, Chain link fencing of approved quality with R.C.C posts wooden posts or iron posts by means of galvanised "C" clips to grid of horizontal strands of galvanised high tensile spring steel wire of 12 S.W.G which have to be tensioned and fixed to the vertical posts by means of galvanised special clips, bolts and nuts etc. (The rate is exclusive of the cost of posts)				
	75mm x 75 mm x 8 g.	50.000	₹ 338.35	Sqm	₹ 16,917.50
65	Supplying, fitting galvanised 3 ply 12 gauge / 4 points line of barbed wire in fencing (holes already made in the body of the post) or fixed by staples tightening and fixing the wires in taut condition with straining bolts including the cost of cutting and of lapping joints in the wire as necessary but excluding the cost of galvanised staples, straining bolt and binding wire where necessary.	50.00	₹ 27.96	Mtr.	₹ 1,398.00
66	Supplying galvanised straining bolts (with eye at one end with double nuts and washers) fitted and fixed complete. 10mm dia 150mm long	25.00	₹ 43.43	Each	₹ 1,085.75
67	Supplying, fitting, fixing 10 to 16 mm dia bolts with nuts , washer of Length above 75 mm and upto 150 mm at post of chain link fencing.	10.00	₹ 104.03	Kg	₹ 1,040.30
68	Remove debris / building rubbish / concrete lumps / earth etc.	20.00	₹ 167.66	Cu.M.	₹ 3,353.20
	SUB TOTAL (Section-A)				706009.91

Section-B: Road Work

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
1	Box cutting or filling in road embankment in all sorts of soil upto a maximum depth of 900 mm. including spreading the spoils properly over the flank as necessary or on berm to approximate grade & camber and rolling the sub-grade with power roller to proper camber and grade etc. all complete and as directed.	200	72.11	Sq.M.	₹ 14,422.80
2	Excavation & filling in any Soil from surrounding area by using Hydraulic Excavator CK 90 / manually where necessary and Tippers with disposal upto 1000 metres. Excavation in soil and loading in tippers, trimming bottom and side slopes, in accordance and transporting to the location including filling, spreading, grading to required slope as directed and compacting to meet requirement of Tables 300.1 and 300.2 as per Technical Specification Clause 301.5. including removing of dumped tree etc as necessary.	125	124.13	Cu.M.	₹ 15,516.13
3	Supplying, spreading and compacting Medium Sand to required thickness, in layers not exceeding 150 mm to proper gradient and camber, inundating each layer by water and packing and ramming layer by layer to achieve desired compaction, including lighting, guarding, barricading and making adequate earthen bundh where necessary, curing with water as per direction, mending cracks and depressions by ramming hereever necessary. (The payment is to be made on the basis of the finished compacted volume.)	60	1064.50	Cu.M.	₹ 63,870.00

[BOQ-17]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
4	Supplying, spreading and consolidating laterite chelly of 150 mm size in hard crust to requisite thickness (measured after compaction) in layers including filling the voids with lime mixed moorum / sand as necessary, hand packing, sweeping, watering and rolling in stages with power roller to proper line, grade and camber, lighting, guarding & barricading and making necessary earthen bundh of one metre width on each side where necessary to protect edges and preparing the bed by necessary cutting or filling and rolling all complete including the cost of all materials and hire and labour charges of all men and machineries etc. all complete and as directed. [Payment will be made on the actual compacted volume based on pre level and post level difference].	65	2075.90	Cu.M.	₹ 134,933.50
5	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including screening of aggregates and granular materials, premixing the material with water at OMC in Wet Mix Plant, carriage of mixed material by tipper to site, laying in uniform layers with Paver in Sub- base / Base course /pot holes on well prepared surface and compacting with Vibratory Roller to achieve the desired density, including supply of all materials, machinery, fuel and lubricants, including incidental costs for lighting, guarding, barricading, making earthen bundh to protect the edges including cost of	60	2993.00	Cu.M.	₹ 179,580.00
	quality control complete as per Clause 406 (5th Revision) of Specifications for Road & Bridge Works of MoRT&H etc. all complete and as directed. [Payment will be made on the actual compacted volume based on pre level and post level difference].				

[BOQ-18]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
6	Providing and laying surface dressing as wearing course in single coat using approved quality crushed stone aggregates of specified size and hot bituminous binder laid on prepared surface including thorough cleaning of the surface, screening and cleaning of stone chips, applying uniformly requisite quantity of hot bitumen, spreading uniformly dry stone aggregates and rolling with 8-10 tonne smooth wheeled steel roller with necessary hand packing or spreading of chips to obtain closed surface including the cost and carriage of bitumen and stone chips, heating the bitumen and all other cost and charges of fuel, lubricants in this connection including hire and operational charges of machinery and equipment for construction and quality control complete as per Clause 509 of Specifications for Road & Bridge Works of MoRT&H (5th Revision). (By Mechanical Means) Single coat or 1st coat over granular surface using bitumen @ 12 kg per 10 m2 and stone chips / bajree (100% passing through 22.4 mm sieve and 100% retained on 11.2 mm sieve) @ 0.15 m3 per 10 m2 surface.	250	88.10	Sq.M.	₹ 22,025.00
7	Brick edging 125 mm wide & 250 mm depth at both side of road with picked jhama bricks, laid true to line and level including cutting necessary trench in soil or in hard metalled surface, laying the bricks and repacking the trench (on both side of the edging) with spoils and ramming the same thoroughly complete as per direction.	180	148.50	M	₹ 26,730.00
8	Providing and laying bituminous macadam 80 -100 mm thick with mobile Hot Mix Plant (Light Duty) using approved crushed 40 mm nominal size, aggregates of specified grading as per table 500.4 premixed with bituminous binder, transported to site laid over a previously prepared surface at specified laying temperature by means	150	6919.88	Cu.M.	₹ 1,037,982.00

[BOQ-19]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
	of approved and suitable arrangements to the required grade, level and alignment and rolled with suitable power roller for break down, inter-mediate and finished rolling as per specification to achieve the desired compaction including cost and carriage of stone materials and bitumen, hire charges of machinery and equipment, cost of fuel and lubricants and wages of operational staff, quality control as per specifications for Road & Bridge works of MoRT&H (5th Revision) etc., all complete and as directed. [Payment will be made on the actual compacted volume based on pre level and post level difference].				
9	<p>Providing, laying and rolling of Open - graded premix surfacing of 25 mm thickness composed of 13.2 mm (@ 0.018 m³ per m²) and 11.2 mm (@ 0.009 m³ per m²) size stone aggregates, including thoroughly cleaning of the surface, screening, cleaning and pre-heating stone chips and fully pre-coating the same either using viscosity grade paving bitumen or cut-back or emulsion, carrying the mixture by tipper trucks or by any other suitable arrangements, laying the mixture uniformly over the surface with paver finisher, including manual operations as and when required for proper line, grade and level to serve as wearing course on a previously prepared base,</p> <p>including mixing in Hot Mix Plant and thoroughly rolling with a smooth wheeled roller 8-10 tonne capacity, finished to required level and grades including the cost and carriage of stone chips and matrix, heating the matrix, preheating the aggregates to required temperature and including the hire charges of Hot Mix Plant and other machinery, pay of operators, cost of fuel and lubricants etc. complete as per Clause 510 of Specifications for Road & Bridge Works of MoRT&H (5th Revision).</p>	1,750.00	140.15	Sq.M.	₹ 245,262.50

[BOQ-20]

It No	Description of work	Quantity	Rate	Unit	Amount (Rs. P.)
10	Laying premixed seal coat (Type-B) using 0.6 cum of stone grit (passing 2.36 mm sieve and retained on 180 mm micron) per 100 sqm area including cleaning the surface, preheating the grit, mixing the preheated grit with hot matrix of 60/70 grade @113.50 kg per cum of grit, laying the mixture uniformly over the surface and rolling with power roller including the cost and carriage of grit and matrix, heating matrix and grit and all other costs and charges and cost of fuel and lubricants of machineries and equipments for construction and quality control complete & also spreading of sand over the seal coat surface etc., all complete and as directed. [Payment will be made on the actual laid area].	1,750	44.60	Sq.M.	₹ 78,050.00
11	Construction of Hard Shoulders by compacting 1st class brick aggregates (40 mm down) and required quantity of sand , spreading in uniform layers with Motor grader on prepared surface, including screening the metal as necessary, mixing by mix in place method with Rotavator at OMC, and compacting with vibratory roller to achieve the desired density, lighting, guarding and barricading including cost and carriage of all materials and making necessary earthen bundh of one metre wide on each side to protect the edges complete as per Clause 401 of Specifications for Road & Bridge Works of MoRT&H (5th Revision) etc., all complete and as directed. [Payment will be made on the actual laid area].	45	1839.40	Cu.M.	₹ 82,773.00
	SUB TOTAL (Section - B)				19,01,144.93

9B. BILL OF QUANTITIES FOR ELECTRICAL WORKS**[Section – C]**

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
1	a)	Providing PVC pipe of following diameters [thickness not less than 2 mm] complete with fittings, as necessary, by cutting channel of suitable size on masonry wall / floor and fixing the pipe (approx. 18 mm below the top surface of the wall / floor) by means of iron hooks / binding wire, including mending good damages to building works.				
	i)	13 mm dia	2	RM	84.00	168.00
	ii)	19 mm dia	40	RM	99.00	3,960.00
	iii)	25 mm dia	6	RM	126.00	756.00
	b)	Providing PVC pipe of following diameters [thickness not less than 2 mm] complete with fittings, as necessary, under ceiling / beam, bound with 22 SWG GI binding wire, including supplying & drawing 1X18 SWG GI wire as fish wire inside the pipes synchronizing with roof / beam casting work of building construction).				
	i)	13 mm dia	15	RM	37.00	555.00
	ii)	19 mm dia	5	RM	41.00	205.00
	c)	Providing MS / CI Round box with cover , concealed in ceiling / beam / wall.				
	i)	one way	2	no.	35.00	70.00
	ii)	two way	2	no.	36.00	72.00
	d)	Providing 19 mm (nominal size) PVC Rigid Conduit [medium mechanical stresses, 'FR'] on surface of the wall / ceiling, with aluminium saddles and other accessories, as required and mending good damages to building works.	2	RM	58.00	116.00
	e)	Providing Steel wire reinforced Flexible uPVC Conduit pipes on surface of the wall / ceiling / floor /structure, with aluminium saddles and other accessories, as required and mending good damages to building woks.				

[BOQ-22]

Sl. No.	Description of item			Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
						Unit rate (in ₹)	Amount (in ₹)
	i)	Size (ID): 20 mm	2	RM		65.00	130.00
	f)	Providing Steel wire reinforced Flexible uPVC Conduit glands.					
	i)	Size (OD): 20 mm	4	no.		13.50	54.00
2	Providing 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of the following sizes, in the pre-laid PVC pipe / PVC casing-capping and making necessary connection, as required.						
	a)	2 X 1.5 mm ² (as phase & neutral wires)	5	RM		39.00	195.00
	b)	3 X 1.5 mm ² (as phase & neutral wires and as Earth Continuity Conductor)	70	RM		55.00	3,850.00
	c)	2 X 2.5 mm ² (as phase & neutral wires) and 1 X 1.5 mm ² (as Earth Continuity Conductor)	30	RM		74.00	2,220.00
	d)	2 X 4.0 mm ² (as phase & neutral wires) and 1 X 2.5 mm ² (as Earth Continuity Conductor)	10	RM		108.00	1,080.00
	e)	2 X 4.0 mm ² (as Earth Continuity Conductor)	4	RM		82.00	328.00
3	<u>Finishing Copper Wire ends</u> Finishing of the ends of 1.1 kV grade, copper (stranded) wire, by socketing with pin / ring type copper sockets , insulating tapes, etc., including supplying sockets, tapes, etc., as required.						
	a)	1.5 mm ²	40	set		7.00	280.00
	b)	2.5 mm ²	20	set		7.00	140.00
	c)	4 mm ²	10	set		8.00	80.00

[BOQ-23]

Sl. No.	Description of item	Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
				Unit rate (in ₹)	Amount (in ₹)
4	Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall, to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required], including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm ² (as phase & neutral wires) and 1 X 1.5 mm ² (as Earth Continuity Conductor), per point.				
	a) with Piano Key type switch fixed on CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) flushed on wall, (including supply & fixing of switch & switch board).	6	point	886.00	5,316.00
5	Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall and in suitable size (minimum 20 mm) PVC casing-capping for ceiling / beam portion only, to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required], including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm ² (as phase & neutral wires) and 1 X 1.5 mm ² (as Earth Continuity Conductor), per point.				

[BOQ-24]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
	a)	with Piano Key type switch fixed on CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) flushed on wall (including supply & fixing of switch & switch board).	2	point	957.00	1,914.00
6		Distribution wiring (alongwith earth wire) [average run 6 m], with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall and in suitable size pre-laid pipe for ceiling / beam portion only, to light / fan / exhaust fan / call bell point [including supply & fixing of 3 terminal Ceiling Rose / Batten Holder / Angle Holder / Connector, as required], including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm ² (as phase & neutral wires) and 1 X 1.5 mm ² (as Earth Continuity Conductor), per point.				
	a)	with Piano Key type switch fixed on CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) flushed on wall (including supply & fixing of switch & switch board).	2	point	809.00	1,618.00
7		Distribution wiring (alongwith earth wire), with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked), in suitable size [minimum 13 mm bore, 2 mm thick] PVC concealed pipe [complete with all accessories] embedded in wall, to 240 V, 6 A, 5 pin socket outlet (plug) point, including necessary connections & making earthing attachment and mending good damages to building works. 2 X 1.5 mm ² (as phase & neutral wires) and 1 X 1.5 mm ² (as Earth Continuity Conductor), per point.				

[BOQ-25]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
	a)	including supply & fixing of 240 V, 6 A, 5 pin socket outlet (plug) & Piano Key type switch on existing CRCA sheet metal (16 SWG) switch board with Perspex / Bakelite top cover (3 mm thick) {of light & fan} flushed on wall.	4	point	86.00	344.00
8		Providing (after cutting the brick wall) CRCA sheet metal (16 SWG) JB-cum-Switch Board (having earthing attachment) of the following sizes, flushed in wall, including painting and mending good damages to building works.				
	a)	100 mm X 100 mm X 50 mm	4	no.	119.00	476.00
	b)	150 mm X 100 mm X 50 mm	2	no.	162.00	324.00
	c)	175 mm X 100 mm X 50 mm	2	no.	178.00	356.00
	d)	200 mm X 100 mm X 50 mm	2	no.	178.00	356.00
	e)	300 mm X 250 mm X 50 mm	2	no.	323.00	646.00
9		Providing Bakelite / Perspex top cover (3 mm thick) on the existing sheet metal JB-cum-Switch Board of following sizes, fixing by Brass screws: <i>[The covers should be extended atleast 25 mm from the screw points]</i>				
	a)	100 mm X 100 mm X 50 mm	4	no.	40.00	160.00
	b)	150 mm X 100 mm X 50 mm	2	no.	48.00	96.00
	c)	175 mm X 100 mm X 50 mm	2	no.	53.00	106.00
	d)	200 mm X 100 mm X 50 mm	2	no.	53.00	106.00
	e)	300 mm X 250 mm X 50 mm	2	no.	103.00	206.00
10		Providing 240 V, 16 A Piano Key type switch on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for switch, by cutting Perspex / Bakelite top cover and making necessary connections [with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of size 4.0 mm ²], as required.	2	no.	83.00	166.00

[BOQ-26]

Sl. No.	Description of item	Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
				Unit rate (in ₹)	Amount (in ₹)
11	Providing 240 V, 16 A, 6 pin socket outlet (plug) [without switch & plug top] on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for socket outlet (plug), by cutting Perspex / Bakelite top cover and making necessary connections [with 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked) of sizes 4.0 mm ² (for phase & neutral wires) & 2.5 mm ² (as Earth Continuity Conductor)], as required.	2	no.	83.00	166.00
12	Providing 240 V, 6 A Piano Key type switch / bell push on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for switch, by cutting Perspex / Bakelite top cover and making necessary connections [with suitable size 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked)], as required.	6	no.	31.00	186.00
13	Providing 240 V, 6 A, 5 pin flush type socket outlet (plug) [without switch & plug top] on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for socket outlet (plug), by cutting Perspex / Bakelite top cover and making necessary connections [with suitable size 'FR' PVC insulated (unsheathed), single core, 1.1 kV grade, copper (stranded) wire (ISI marked)], as required.	6	no.	41.00	246.00
14	Providing Socket type fan regulator (Step type) on existing sheet metal switch board having Perspex / Bakelite top cover by screws, after making housing for regulator, by cutting Perspex / Bakelite top cover and making necessary connections , as required.	2	no.	268.00	536.00
15	Supply and delivery of Ceiling Fan, suitable for suitable for 230 AC, 50 Hz supply system, complete with capacitor, canopy & all accessories and as per the 'Technical Specification':				

[BOQ-27]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
	a)	1200 mm sweep.	1	no.	2,508.00	2,508.00
	b)	900 mm sweep.	1	no.	2,381.00	2,381.00
16	Fixing only ceiling fan complete with blades, canopy, rubber bush, etc. and making connection [by providing required length of 'FR' 3 C X 0.5 mm ² PVC insulated, PVC sheathed, copper conductor cable, conforming to IS: 694 , with latest amendment (if any)] , as required.		2	no.	168.00	336.00
17	Supply and delivery of Exhaust Fan [non-metallic blade] suitable for 230 V AC, 50 Hz supply system, complete with all accessories & louver (gravity shutter system) and as per the 'Technical Specification'.					
	a)	200 mm sweep.	1	no.	1,602.00	1,602.00
18	Installation of exhaust fan , wall cowl , etc.					
	a)	Making hole in wall for fixing exhaust fan & making good damages to building works.				
	i)	Exhaust fan of sweep 200 mm.	1	no.	176.00	176.00
	b)	Fixing only exhaust fan of sweep 150 mm / 200 mm / 300 mm / 450 mm and making connection [by providing required length of 'FR' 3 C X 0.5 mm ² PVC insulated, PVC sheathed, copper conductor cable (if required), conforming to IS: 694 , with latest amendment (if any)] , as required.	1	no.	104.00	104.00
19	Supply and delivery of tube light fittings [Surface Mounted, Box Type, suitable for 1 X 4 ft (approx.) LED tubular lamp], complete with all accessories & Lamp [LED tubular lamp, with Al body & PC Diffuser Material & in-built driver; System wattage of luminaire: ≤ 22 W; Luminous flux : ≥ 2100 lumen ; suitable for 230 V AC, 50 Hz supply system], as per the 'Technical Specification' .		2	no.	1,205.00	2,410.00

[BOQ-28]

Sl. No.	Description of item	Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
				Unit rate (in ₹)	Amount (in ₹)
20	Supply and delivery of 1 X 2 ft (approx.) tube light fittings [Integrated LED Batten, Surface Mounted; System wattage of luminaire: ≤ 10 W; Luminous flux : ≥ 1000 lumen], complete with all accessories, driver & Lamp , suitable for 230 V AC, 50 Hz supply system and as per the 'Technical Specification'.	2	no.	455.00	910.00
21	Supply & delivery of 10W-12W Bulkhead surface / wall mounted LED light fittings (IP 65), suitable for 230 V AC, 50 Hz supply system and as per the 'Technical Specification'.	4	no.	1,875.00	7,500.00
22	Supply and delivery of 40W - 45W Decorative Post Top LED Light fittings [Post-Top lantern], with IP 65 protection, complete with all accessories & lamp , suitable for 230 V AC, 50 Hz supply system and as per the 'Technical Specification'.	4	no.	10,714.00	42,856.00
23	Fixing only tube light fittings / post top light fittings / round light fittings / bracket lights / night lamp fittings / calling bell, complete with all accessories, directly on wall / ceiling / post top / PVC or HW Block by screws / MS fastener, including necessary connections [by providing required length of 'FR' 3 C X 0.5 mm ² PVC insulated, PVC sheathed, copper conductor cable, conforming to IS: 694 , with latest amendment (if any)] & mending good damages to the wall / ceiling / post .	12	no.	114.00	1,368.00
24	Supply and delivery of Outdoor / Street light type [IP 66] LED Light fittings [suitable for 230 V AC, 50 Hz supply system] , provided with suitable Driver & necessary safety protections [complete with all accessories] and as per "Technical Specification".				
	a) System wattage of luminaire: ≤ 30 W Luminous flux: ≥ 3000 lumen.	2	no.	2,768.00	5,536.00

[BOQ-29]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
25	Providing GI pipe (ISI- Medium) of 1.2 m average length [having suitable bend & fixed / projected from the wall of the building, for fixing outdoor / street light type light fitting), including making holes / clamping arrangement & mending good damages to wall .					
	a)	using 32 mm nominal bore GI pipe.	2	no.	606.00	1,212.00
26	Fixing only outdoor / street light type LED light fitting, complete with all accessories , on the existing GI Pipe (fixed / projected from the wall of the building), including making connections [by providing 'FR' 3 C X 0.5 mm ² PVC insulated, PVC sheathed, copper conductor cable {conforming to IS: 694 , with latest amendment (if any)} & flexible PVC conduit of length 1 m approx.]		2	no.	243.00	486.00
27	Supply and delivery of Outdoor type [IP 66] LED Flood Light fittings [suitable for 230 V AC, 50 Hz supply system] , provided with suitable Driver & necessary safety protections [complete with all accessories] and as per "Technical Specification".					
	a)	System wattage of luminaire: ≤ 150 W Luminous flux: ≥ 15000 lumen.	6	no.	13,393.00	80,358.00
28	Fixing only outdoor Flood Light LED fitting, complete with all accessories , on the existing roof top / GI Pipe / Pole, including making connections [by providing 'FR' 3 C X 0.5 mm ² PVC insulated, PVC sheathed, copper conductor cable {conforming to IS: 694 , with latest amendment (if any)} & flexible PVC conduit of length 1 m approx.]		6	no.	243.00	1,458.00
29	Providing LED bulb, suitable for 230 V AC, 50 Hz supply system .					
	a)	9 W	4	no.	161.00	644.00

[BOQ-30]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
30	Providing PVC Batten Type / Angle Type Lamp Holder, on PVC / HW Block , including mending good damages to the wall .		4	no.	89.00	356.00
31	Providing 3 terminal Ceiling Rose on PVC / HW Block , including mending good damages to the wall .		2	no.	64.00	128.00
32	Providing (after cutting the brick wall or fixing on wall surface) outdoor type PVC Junction Box [IP 66 with knockouts for cable entry] of following size [complete with 3 way terminals attached inside the box] and mending good damages to building works.					
	a)	125 mm X 115 mm X 60 mm (approx.)	4	no.	891.00	3,564.00
33	Providing sheet steel, duly painted, MCB Distribution Board on wall / iron structure & mending good the damages to original finish, including provision for earthing attachment. (Without MCB / RCCB / Isolator).					
	a)	4 way	2	no.	513.00	1,026.00
34	Providing double door, sheet steel, powder painted, SPN MCB Distribution Board [IP-43 protection and complete with tinned copper bus bar, copper connecting leads, neutral bar, earth bar & din bar] on masonry wall (concealed) / iron structure & mending good the damages to original finish, including inter-connection and provision for earthing attachment. (Without MCB / RCCB / Isolator)					
	a)	10 way (2+10 module)	1	no.	2,275.00	2,275.00
35	Providing Cable End Box [with IP-43 protection] on masonry wall (concealed) / iron structure & mending good the damages to original finish.					
	a)	For 4 way SPN DB	2	no.	503.00	1,006.00

[BOQ-31]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
36	Providing 240 V / 415 V, 50 Hz, MCB (C characteristics, 10 kA Breaking capacity) on din rail of existing DBs and necessary connection.					
	a)	Single Pole, 6 A - 32 A	10	no.	225.00	2,250.00
37	Supplying & laying of heavy, galvanized, mild steel tubes (including sockets) as per IS 1239 [with latest amendment].					
	a)	Supply				
	i)	150 mm (nominal bore)	30	m	1,864.00	55,920.00
	b)	Laying, including joining of tubes by sockets, if required.				
	I)	Over the culvert, canal, etc. (fixing on existing structural supports) or through walls, roads, etc. (through open excavation & refilling) or with vertical structure (fixing using clamps / supports). The scope includes supply of materials, as required (excepting main support structure for crossing the canal)], as per "Technical Specification".				
	i)	above 50 mm (nominal bore) & upto 150 mm (nominal bore)	6	m	350.00	2,100.00
	II)	Through boring process.				
	i)	above 50 mm (nominal bore) & upto 150 mm (nominal bore)	24	m	1,950.00	46,800.00
38	Supply & Laying of 1.1 kV grade, XLPE insulated, , power cable (FRLS), conforming to IS: 7098 (Part – I) , with latest amendment (if any), and as per "Technical Specification".					
	a)	Supply				
	I)	Galvanised steel armoured, stranded aluminium conductor.				
	i)	4 C X 06 mm ²	365	m	113.00	41,245.00
	b)	Laying, Testing & Commissioning				

[BOQ-32]

Sl. No.	Description of item		Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
					Unit rate (in ₹)	Amount (in ₹)
	I)	When laid in underground trench. The scope includes excavation, sand cushioning, protective top covering by bricks, tiles or slabs, refilling the trench, leveling up, restoring surface (duly rammed), etc. [including supply of materials, as required], as per "Technical Specification".				
	i)	01 no. 1C / 3C / 3 ½ C / 4C cable, upto 50 mm ² [with 08 nos. bricks per metre]	24 0	RM	184.00	44,160.00
	II)	When run through existing duct , trench, culvert , laid pipe, riser pipe, etc.				
	i)	01 no. 1C / 3C / 3 ½ C / 4C cable, upto 150 mm ² .	65	RM	109.00	7,085.00
	III)	After cutting floor / pavement / wall and making holes, including embedding the cable at an average depth (through suitable casing pipe) and mending good the damages to original finish including removal of the rubbish.				
	i)	01 no. 1 C / 3C / 3 ½ C / 4C cable, upto 35 mm ² , at an average depth of 75 mm.	25	RM	144.00	3,600.00
	IV)	When laid on existing Cable Tray and fixing by aluminium saddling (approx. 300 mm interval) [including supply of materials, as required].				
	i)	01 no. 1 C / 3C / 3 ½ C / 4C cable, upto 50 mm ² .	10	RM	12.00	120.00
	V)	When laid on wall and fixing by aluminium saddling (approx. 300 mm interval) , with earthing attachment in 10 SWG GI (Hot Dip) wire [including supply of materials, as required] , as necessary, including mending good damages to building works.				

[BOQ-33]

Sl. No.	Description of item			Estimated Quantity		Estimated Cost (in ₹) [excluding GST]	
						Unit rate (in ₹)	Amount (in ₹)
		ii	01 no. 3C / 3 ½ C / 4C cable, upto 25 mm².	30	RM	68.00	2,040.00
39	Connecting the leads of following PVC / XLPE armoured / unarmoured cables with MCCBs / MCBs / SDFU/ connectors [after finishing the ends by crimping method , including supplying & fixing solderless sockets , tapes, anticorrosive paste & jointing materials], at Distribution Board / Junction Box / SDFU:						
	a)	4 C X 6 mm², 1.1 kV grade, Aluminium Conductor Cable.		6	set	53.00	318.00
40	Providing double compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of following XLPE insulated, armoured cables as given below :						
	a)	4 C X 6 mm², 1.1 kV grade, Aluminium Conductor Cable.		6	set	131.00	786.00
41	Providing Earthing Stations, using spike of 1.85 m length, including bolts, nuts, washers, etc., as required and mending good damages, if any.						
	a)	Supply of 20 mm diameter, 1.85 m long GI spike.		4	no.	900.00	3,600.00
	b)	Installation of 20 mm diameter, 1.85 m long GI spike.		4	no.	250.00	1,000.00
42	Providing earthing, using GI (Hot Dip) wire of size 8 SWG and making connections with bolts, nuts, washers, etc., as required and mending good damages, if any.						
	a)	Supply of GI (Hot Dip) wire of size 8 SWG.		20	m	20.00	400.00
	b)	Laying & fixing of GI (Hot Dip) wire of size 8 SWG.		20	m	5.00	100.00
43	Providing earth busbar of galvanized (Hot Dip) MS flat 50 mm X 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc., as required			1	no.	177.00	177.00
Total =Rs.						₹ 3,99,484.00	

E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

ABSTRACT		
1	SECTION (A): Gate and Security goomty	7,06,009.91
2	SECTION (B) : Road Work	19,01,144.93
3	SECTION (C) : Electrical Work	3,99,484.00
	Total = Rs.	30,06,638.84

[Indian Rupees: Thirty Lakh Six Thousand Six Hundred Thirty Eight and Paisa Eight Four only]

DECLARATION BY THE BIDDER

(To be submitted on Company's Letter Head along with Techno Commercial Bid duly stamped and signed)

Sr. Dy. Manager (I&CF),
Haldia Dock Complex.
SMP, Kolkata

SUB:- E-tender for “Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC”.

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 Part-II of the bid does not contain any condition / deviation.

Signature of the Bidder with Office Seal.

Date:

Place:

DECLARATION BY THE BIDDER

(To be submitted on Company's Letter Head along with Techno Commercial Bid duly stamped and signed)

Sr. Dy. Manager (I&CF),
Haldia Dock Complex.
SMP, Kolkata

SUB:- Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC.

Dear Sir,

- 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.
- c) The bidding firm accepting that if they withdraw or modify their bids during period of validity of the offer , they will be suspended for three years.

Signature of the Bidder with Office Seal.

Date:

Place:

CONCURRENT COMMITMENT(S) OF THE BIDDER

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)			

BIDDER'S PROFILE

(To be submitted with Techno Commercial Bid)

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 :

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)

ABSTRACT FORM OF TENDER (UNPRICED)

(To be submitted with Techno Commercial Bid)

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.

(a) Name of Work. : Shifting of two nos of gates (1) from Jawahar Tower to the crossing near HPSU building and (2) from near the building no.-5/123(i) to 5/139 including renovation of the road along the boundary wall towards Bishnuramchak at Haldia Township, HDC.

(c) Earnest Money : No earnest money required but the bidders should submit a “Bid Security Declaration” accepting that if they withdraw or modify their bids during period of validity of the offer, they will be suspended for three years.

(e) Time allowed for completion of the work : 04 (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:-

(Signature of the Bidder)

Witness:

Address:

(Name in block letters)

Address:-

Occupation:-

FORM OF TENDER

(To be submitted with Techno Commercial Bid)

To

The Sr. Dy. Manager (I&CF),

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.

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' 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 :

CHECK LIST

(TO BE FILLED- UP BY THE BIDDER)

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
2	Application money towards cost of tender documents.	Deposited	Yes / No
3	Earnest Money	Deposited	Yes / No
4	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
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 Bidder's Profile	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 CA / FA	Yes / No

Signature of the bidder with seal

**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

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GC - 1
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	Estimate d 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 Registration	Amount Of Fixed Security	Financial Limit Of Each Tender	Class of Registration	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. Constructional Plant
- 1.13 “Site” means the land, waterways and other places, on, under, in or THOROUGH 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 | <p><i>The Engineer shall have full power and authority :</i></p> <p>(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.</p> <p>(b) to alter or modify the specification of any material and workmanship and to inspect the work at any time.</p> <p>(c) to order for any variation, alteration and modification of the work and for extra works.</p> <p>(d) to issue certificates as per contract.</p> <p>(e) to settle the claims & disputes of the Contractor and Trustees, as the first referee.</p> <p>(f) To grant extension of completion time.</p> | Engineer's
Power |
| 2.4 | <p><i>The Engineer's Representative shall :</i></p> <p>(i) watch and supervise the works.</p> <p>(ii) test and examine any material to be used or workmanship employed in connection with the work.</p> <p>(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.</p> <p>(iv) take measurements of work done by the contractor for the purpose of payment or otherwise.</p> <p>(v) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense.</p> <p>(vi) have powers to issue alteration order not implying modification of design and extension of completion time of the work and</p> <p>(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.</p> | Power of
Engineer's
Representative. |

- 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 :
- (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 THOROUGH 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 without 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 supplying 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/- + 7½% 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 document called Integrity Pact Agreement duly signed by their authorized representative. The Proforma 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 document to 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 be any discrepancy, ambiguity, omission or error in the various contract documents, the Engineer shall have the power to correct the same and his decision shall be final and binding on the parties to the Contract.
- Interpretation of contract documents –
Engineers’ Power

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| <p>4. Two copies of the Drawings referred to in the general and special
4 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.</p> | <p>All Drawings
are Trustees'
property.</p> |
| <p>4. The Contractor shall prove and make at his own expense any working or
5 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.</p> | <p>Contractor to
prepare
working /
progress
drawings</p> |
| <p>4. The Contractor shall not directly or indirectly transfer, assign or sublet
6 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.</p> | <p>Contractor
cannot sub-let
the work</p> |
| <p>4. Unless otherwise specified, the Contractor shall be deemed to have
7 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.</p> | <p>Contractors'
price is
inclusive of all
costs</p> |
| <p>4. The Contractor shall be solely responsible for the adequacy, stability and
8 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.</p> | <p>Contractor is
responsible for
all
construction
process,
except for
correctness of
design and
specification
formulated by
the Engineer</p> |
| <p>4. Whenever required by the Engineer or his representative, the Contractor
9 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.</p> | <p>Contractor to
submit his
programme of
work</p> |

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.

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| 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 his staff, workmen or official at site and the Contractor shall within 48 hours comply with such instruction without any demur whenever the Engineer shall feel that the deployment of the person concerned will not be conducive to the proper and timely completion of the work. | 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 |

- 4.1 The Contractor shall at his own cost protect support and take all Contractor is
4 precautions in regard to the personnel or structure or services or responsible
properties belonging to the Trustees or not which may be interfered for all
with or affected or disturbed or endangered and shall indemnify and damages to
keep indemnified the Trustees against claim for injury, loss or damage other
caused by the Contractor in connection with the execution and structures /
maintenance of the work to the aforesaid properties, structures and persons
services and/or to any person including the Contractor's workmen. caused by
Cost of Insurance Cover, if any, taken by the Contractor shall not be him in
reimbursed by the Trustees, unless otherwise stipulated in the executing the
Contract. work.
- 4.1 The Contractor shall immediately inform the Engineer's Fossils,
5 Representatives if any fossil, coins, articles of value or antiquity and Treasure
structures and other remains or things of geological or archaeological travois, etc.
importance be discovered at site which shall remain the property of the are Trustees'
Trustees and protect them from being damaged by his workmen and property
arrange for disposal of them at the Trustees' expense as per the
instruction of the Engineer's Representative.
- 4.1 The Contractor shall be deemed to have indemnified and shall Contractor to
6 indemnify the Trustees against all claims, demands, actions and Indemnify the
proceedings and all costs arising therefrom on account of : Trustees
against all
(a) Infringement of any patent right, design, trademark or name or claims for
other protected right in connection with the works or temporary loss, damage,
work. etc.
- (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.
- 4.1 Debris and materials, if obtained by demolishing any property, Dismantled
7 building or structure in terms of the Contract shall remain the property materials
of the Trustees. 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

- 4.2 The Contractor shall at the Trustees' cost to be decided by the Contractor to
1 Engineer render all reasonable facilities and Co-operation as per provide
direction of the Engineer or his representative to any other facilities to
Contractor engaged by the Trustees and their workmen to the outsiders
Trustees' own staff and to the men of other Public Body on or
near the site of work and in default the Contractor shall be liable
to the Trustees for any delay or expense incurred by reason of
such default.
- 4.2 The work has to be carried out by the Contractor causing the Work to cause
2 minimum of hindrance for any maritime traffic or surface traffic. minimum
possible
hindrance to
traffic
movement
- 4.2 All constructional plants, temporary works and materials when Trustees' lien
3 brought to the site by the Contractor shall be deemed to be the on
property of the Trustees who will have lien on the same until the Contractor's
satisfactory completion of the work and shall only be removed Plant &
from the site in part or in full with the written permission of the Equipment.
Engineer or his Representative.
- 5.0 COMMENCEMENT, EXECUTION AND COMPLETION OF WORK.
- 5.1 The Contractor shall commence the work within 7 days of the Preliminary
receipt of Engineer's letter informing acceptance of the time to
Contractor's tender/offer by the Trustees or within such commence
preliminary time as mentioned by the Contractor in the Form of work an
Tender or the time accepted by the Trustees. The Contractor maintenance of
shall then proceed with the work with due expedition and steady rate of
without delay, except as may be expressly sanctioned or ordered progress
by the Engineer or his Representatives, time being deemed the
essence of the contract on the part of the contractor.
- 5.2 The Contractor shall provide and maintain a suitable office at or Contractor's
near the site to which the Engineer's Representative may send site office
communications and instructions for use of the Contractor.
- 5.3 Unless specified otherwise in the contract or prior permission of Contractor to
the Engineer has been taken, the contractor shall not execute the observe
work beyond the working hours observed by the Engineer's Trustees'
Representative and on Sundays and Holidays observed in the working hours
Trustees' system, except in so far as it becomes essential on
account of tidal work or for safety of the work. If the progress of
the work lags behind schedule or the work has been endangered
by any act or neglect on the part of the contractor, then the
Engineer or his Representative shall order and the contractor at
his own expense shall work by day and by night and on Sundays
and Public Holidays. Any failure of the Engineer or his
Representative to pass such an order shall not relieve the
contractor from any of his obligations. The Engineer's decision
in this regard shall be final binding and conclusive.

- 5.4 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 circumstances
- (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 circumstances.

(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 THOROUGH the same as may be directed by the Engineer or his representative from time to time and shall reinstate or make good those part of works thus affected to the satisfaction of the Engineer, all at the cost of the contractor. The Trustees shall reimburse such cost as determined by the Engineer, if the initial covering up was with prior written order of the Engineer or his Representative. Contractor to seek approval of Engineer or his Representative before covering up any portion of work

- 5.11 On a written order of the Engineer or his Representative, the Contractor to suspend work on Order from Engineer or his Representative
- 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 –

- (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. 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.
- All interim payments are advances till issue of Certificate in Form G.C.2
- 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.
- 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 at the discretion of the Engineer or his Representative at intervals deemed suitable and justified by him. Provided always that subject to execution of work of substantial value in the context of the contract price, the interval of such on account payments shall be decided by the Engineer or his Representative, which shall ordinarily not be less than 1 month in between two payments for on account bill and/or advance.
- 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 end 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, Advance payment against Non-perishable materials
 - (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,

(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
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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
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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
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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
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- 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
- 7.3 No such variation shall in any way vitiate or invalidate the contract or be treated as revocation of the contract, but the value (if any) of all such variations evaluated in accordance with the Engineer's sole decision shall be taken into account and the contract price shall be varied accordingly. Variation by engineer do not vitiate the contract
- 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. Where written order for variation is not needed
- 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. Payment for extra or additional, or omitted work or substituted work, Engineer's powers
- (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 circumstances of any kind beyond the control of the Contractor, cause delay in completing the work, the contractor shall apply to the Engineer in writing for suitable extension of completion time within 7 days from the date of occurrence of the reason and the Engineer shall thereupon consider the stated reasons in the manner deemed necessary and shall either reject the application or determine and allow in writing the extension period as he would deem proper for completion of the work with or without the imposition of "Liquidated 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's or his Representative's 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 to any officer, servant or representative of the Trustees or to any person on his or their behalf in relation to the obtaining or to the execution of the contract.
- (vii) The Contractor is 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 THOROUGH 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 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 THOROUGH 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 or using thereof by the Trustees shall not relieve the Contractor of his obligations under the contract for full and final completion of the work. 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 to the Engineer (i) The Treasury Receipts granted for the amount of Security held by the Trustees, and (ii) his “No further claim” Certificate in 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 therefrom 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 thereunder, 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.

(TO BE SUBMITTED WITH COVER- I OFFER)

THE BOARD OF TRUSTEES FOR THE PORT OF KOLKATA
FORM OF TENDER (UNPRICED)

To
The Manager (I&CF),
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' 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 :
Seal)

(Signature of Bidder with

WITNESS :

Name of the Bidder :

Signature :

Name : (In
Block Letters)

Address :

Address :

Occupatio
n :

**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 _____ 2000 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 _____ 2000 to _____ day of _____ 2000 .

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 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 Manager (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)

Syama Prasad Mookerjee Port, Kolkata
PROFORMA OF FORM OF AGREEMENT

THIS AGREEMENT made _____ day of _____
_____20_____ between the "Board Of Trustees for the Syama Prasad Mookerjee Port, Kolkata", 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 be deemed to include his heirs, executors, administrators, representative, successor in office 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 covenants 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 as fixed (or have set their respective hands and seals) the day and year first above written.
have executed these presents on 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 Syama Prasad Mookerjee Port, Kolkata,
15, Strand Road
Kolkata – 700 001

Dear Sirs,

In consideration of the Board of Trustees For the Syama Prasad Mookerjee Port, 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 EMPLOYEE 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 _____, 2010
_____ at _____

WITNESSES

----- (Signature)	----- (Signature)
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----- (Name)	----- (Name)
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----- (Official address)	----- (Designation with Bank Stamp) + Attorney as per power of Attorney No.
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Dated

Integrity Pact

Between

Syama Prasad Mookerjee Port, Kolkata 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 THOROUGH 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 THOROUGH 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 THOROUGH 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 document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d. The Bidder(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 THOROUGH 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 Syama Prasad Mookerjee Port, Kolkata.

(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, SMP, KOLKATA.

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)

.....

.....

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 SMP, KOLKATA 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 SMP, KOLKATA.
- 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 SMP, KOLKATA 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 THOROUGH 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 SMP, KOLKATA 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 SMP, KOLKATA. Besides this there would be a penalty of banning business dealings with SMP, KOLKATA or damage or payment of a named sum.