



**WEST BENGAL MEDICAL SERVICES CORPORATION LTD.**  
(Wholly owned by the Government of West Bengal)  
**Swasthya Sathi, GN-29, Sector-V, Salt Lake, Kolkata-700 091.**

**NOTICE INVITING TENDER DOCUMENTS FOR**

***Comprehensive Maintenance Contract (including all Consumables, Spares, Accessories and Labor) for the Existing Water Treatment Plants (WTPs), Water Supply System (WSS), Water Purifiers (WPs) & Portable RO units installed at Deben Mahata Govt. Medical College and (G+9) Super Specialty Hospital, Hatuara Campus in the district of Purulia***

(NIT Reference No. :- WBMSCL/NIT-240/2022, Dated – 11 /06/2022)

# WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED

(Wholly Owned by the Government of West Bengal)

Registered Office: SwasthyaSathi, GN-29, Sector-V, Salt Lake, Kolkata-700091

Phone: 033-4034-0300 ♦ Email: info@wbmsc.gov.in ♦ website: www.wbmsc.gov.in

NIT Ref No. :WBMSCL/NIT- 240/2022

Dated : 11/06/2022

Managing Director, West Bengal Medical Services Corporation Limited, Swasthya Sathi, GN-29, Sector-V, Kolkata - 700 091, invites e-tender for the works detailed in the table below

(Submission of Bid through online)

Sl. No.	Name of the work	Earnest Money (Rs.)	Cost of Tender documents (Rs.)	Time of Completion	Name & address of the Office
01.	Comprehensive Maintenance Contract (including all Consumables, Spares, Accessories and Labor) for the Existing Water Treatment Plants (WTPs), Water Supply System (WSS), Water Purifiers (WPs) & Portable RO units installed at Deben Mahata Govt. Medical College and (G+9) Super Specialty Hospital, Hatuara Campus in the district of Purulia	15,000/-	NIL	01 (One) year	Managing Director, West Bengal Medical Services Corporation Limited, Swasthya Sathi Building, GN29, Sector –V, Saltlake, Kolkata -700091

## Eligibility of Contractor: For –1st call of NleT

(i) Intending tenderers should produce credentials of a similar nature of work of the minimum value of Rs.3,00,000/- (Rupees Three Lacks) during last 5(Five) years prior to the date of issue of this tender notice; or,

(ii) Intending tenderers should produce credentials of 2(Two) similar nature of work, each of the minimum value of Rs.2,25,000/- (Rupees Two Lacks twenty-five thousand) during last 5(Five) years prior to the date of issue of this tender notice; or

(iii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the extent of 80% or more and value of which is not less than the Rs.3,00,000/- (Rupees Three Lacks);

In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e., the tenderer.

[ For more details, please refer A. Terms & Conditions & ITB Section-1 of this NleT]

## A. Terms & Conditions

- For contract value exceeding 2.5 lakh deductions of TDS on GST is mandatory.
- Quoted rate must be inclusive of GST.
- Work Order and Completion certificate must be submitted as credential. Completion Certificate should contain i) Name of work, ii) Name of Agency, iii) Amount put to tender, iv) Tender No, v) Percentage of completion vi) Date of completion, vii) Gross value of the work done certified. Payment Certificate will not be treated as Credential. During Tender evaluation process bidder may be asked to produce original credential documents for verification.

- d) The prospective bidders must have the credential(s) of satisfactory completion as a prime agency during the last 5(five) years from the date of issue of this Notice as mentioned in Eligibility criteria under authority of State/ Central Govt., State /Central Govt. undertaking/ Statutory Bodies Constituted under the Statute of the Central / State Govt.
- e) Valid up to date clearance of Income Tax return / GST Registration Certificate/ Professional Tax Enrolment/latest Deposit Challan / P.T. (Deposit Challan) / Pan Card / License / Voter ID Card for self-identification to be accompanied with the Technical Bid Documents, Income Tax Acknowledgement Receipt to be submitted as per ITB Sec-1.
- f) The contractors who have been delisted of debarred by any government department shall not be eligible in anyway.
- g) Joint venture will not be allowed to participate in the above NIT.
- h) A prospective bidder participating in a single job either individually or as partner of a firm shall not be allowed to participate in the same job in any other form.
- i) A prospective bidder shall be allowed to participate in a single job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job, all his applications will be rejected for that job.
- j) Where there is a discrepancy between the unit rate & the line-item total resulting from multiplying the unit rate by the quantity, the unit rate quoted shall govern.
- k) Prevailing safety norms has to be followed so that LTI (Loss of time due to injury) is zero.
- l) No mobilization /secured advance will be allowed.
- m) Agencies shall have to arrange land for erection of Plant & Machineries, storing of materials, labour shed, laboratories. at their own cost and responsibility if required.
- n) Constructional Labour Welfare Cess @ 1 % (one percent) of the cost of construction will be deducted from every bill of the selected agency. GST, Royalty & all other Statutory Levy / Cess will have to be borne by the contractor as/if applicable. As the rates in the Schedule of rate are inclusive of GST & Cess as stated above.
- o) Payment will be made after getting the work done certificate & recommendation from the respective Site Engineer.
- p) In connection with the work, Arbitration will not be allowed. The Clause No. 25 of 2911(ii) is to be considered as deleted clause vide gazette notification no 558/SPW-13th December, 2011.
- q) The work is of URGENT in nature and agency entrusted for it shall have to complete the work within stipulated time without any failure.
- r) Refund of EMD: The Earnest Money of all the unsuccessful bidders, deposited online, shall be refunded in accordance with the Memorandum of the Finance Department vide No. 3975-F(Y) dated 28th July, 2016.
- s) Exemption of Payment of Earnest Money (EMD) for MSME is not applicable for Works Contracts as per Finance Dept. Notification no 4245-F(Y) dated 28/05/2013. EMD to be furnished in case of MSME for participating in this Tender.

- t) Penalty for suppression / distortion of fact. Submission of false document by tenderer is strictly prohibited & if found action may be referred to the appropriate authority for prosecution as per relevant IT Act with forfeiture of earnest money forthwith.
- u) The Earnest Money may be forfeited if ; -
  - i) If the Bidder withdraws the Bid during the period of Bid validity.
  - ii) In case of successful Bidder, if the Bidder fails to execute formal agreement within the stipulated time period.
  - iii) During scrutiny, if it is come to the notice of tender inviting authority that the credential or any other document which were uploaded & digitally signed by the Bidder are incorrect /manufactured / fabricated.
- v) The successful Bidder shall have to execute Formal Agreement with Managing Director, West Bengal Medical Services Corporation Limited within 7(Seven) days from the issuance of Provisional Work order.
- w) Bank guarantee shall be accepted for the purpose of the security.
- x) No additional claim will be entertained due to Government imposed restriction or for any other circumstances.

## **B. Tender Process**

1. In the event of e-filing, intending bidder may download the tender documents from the website: <http://https://wbtenders.gov.in> directly with the help of Digital Signature Certificate. Necessary Earnest Money will be deposited by the bidder electronically online through his net banking enabled bank account, maintained at any nationalized bank by generating NEFT/RTGS challan from the e-tendering portal and also to be documented through e-filing.

As per G.O. No. 1592 – F(Y) dated. 20.03.2014 of the Finance Deptt.of Govt. of West Bengal, in case of e-tendering, EMD/Bid security will have to be submitted as soft copy (scanned copies of the originals) along with the tender for instruments and in case of deposit of money it should compulsorily be deposited on – line by the bidders. The L1 bidder will submit the hard copy of the documents to the tender inviting authority with his acceptance letter of the LOI within specified time as mentioned in the letter of acceptance. Failure to submit the hard copy with the acceptance letter within the time period prescribed for the purpose may be construed as an attempt to disturb the tendering process and dealt with accordingly legally including blacklisting of the bidder.

2. Both Technical bid and Financial Bid are to be submitted concurrently duly signed digitally in the website <https://wbtenders.gov.in>
3. Dully filled in copies of Section – II (Forms I to V), Annex-A: Mandate Form for e-payment & WB Form 2911 in prescribed proforma with proper dated signature in the relevant spaces to be uploaded electronically.

**Documents in support of the information furnished in Forms I to IV mentioned at section-II & Form V at section-III &, must be attached/uploaded for evaluation and the file number & page number has to be indicated in the respective column of the Form.**

4.
  - i) On selection of RTGS/NEFT as the payment mode, the e-Procurement portal will show a pre-filled challan having the details to process RTGS/NEFT transaction.
  - ii) The bidder will print the challan and use the pre-filled information to make RTGS/NEFT payment using his Bank account.
  - iii) The EMD of the bidders disqualified at the technical evaluation will be refunded through an automated process to the respective bidders' bank accounts from which they made the payment transaction.



5. 4. The Financial Offer of the prospective Tenderer will be considered only if the Tenderer qualifies in the Technical Bid. The decision of the Managing Director, WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED will be final and binding on all concerned and no challenge against such decision will be entertained.
6. In case of inadvertent typographical mistake found in the Specific Price Schedule of Rates i.e., Bill of Quantity (BOQ), the same will be treated as to be so corrected as to conform with the prevailing relevant Schedule of Rates and/or Technically Sanctioned Estimate.
7. Running payment for work may be made to the executing agency as per availability of fund. The executing agency may not get a running payment unless the gross amount of Running Bill stands at least 15% (fifteen percent) of the tendered amount. Provisions in Clause(s) 7, 8 & 9 contained in W.B. Form No. 2911(ii) so far as they relate to quantum and frequency of payment is to be treated as superseded.
8. Bids shall remain valid for a period not less than 180 (one hundred twenty) days from the date of opening of the Financial Proposal. However, extension of bid validity may be suitably considered by the Tender Inviting Authority, if required, subject to obtaining a written confirmation of the contractor/bidder(s) to that effect

9. Important Information:

DATE AND TIME SCHEDULE:

Sl. No.	Particulars	Date & Time
1	Date of uploading of NleT Documents (online)(Publishing Date)	17.06.2022 at 10:00 am
2	Tender documents download start date (online)	17.06.2022 at 11:00 am
3	Bid proposal submission start date (online)	18.06.2022 at 11:00 am
4	Technical & Financial Bid proposal Submission end date(online)	30.06.2022 at 04:00 pm
5	Bid opening date of Technical evaluation (online)	04.07.2022 at 04:00 pm
6	Bid opening date of Financial proposal	To be notified later

10. Cost of Tender Documents: **NIL** (As per Notification of the Secretary, Public Works Department, CRC Branch, Government of West Bengal vide No. 199-CRC/2M-10/2012 dated: 21/12/2012 communicated by the Technical Secretary, Public Works Department, Government of West Bengal that the intending tenderers shall not have to pay the cost of tender documents for the purpose of participating in e-tendering.)
11. Earnest Money: The amount of Earnest Money is to be submitted Online through his net banking enabled bank account, maintained at any nationalized bank by generating NEFT/RTGS challan from the e-tendering portal and also to be documented through e-filing. The process of deposit of earnest money through offline instruments like Bank Draft, Pay Order etc. will be stopped for e-tender procurement of this office w.e.f. 01.09.2016.

Once the financial bid evaluation is electronically processed in the e-Procurement portal, EMD of the technically qualified bidders other than that of L1 and L2 bidders will be refunded through an automated process to the respective bidders' bank accounts from which they made the payment transaction. If the L1 bidder accepts the LOI and the same is processed electronically in the e-Procurement portal, EMD of the L2 bidder will be refunded through an automated process to his bank account from which he made the payment transaction.

The earnest money of the successful bidder (being converted to security deposit) deposited, will remain under the custody of the department till satisfactory completion of the work in full including extended quantity if ordered for. Besides this, necessary percentages shall be deducted from the progressive bids so as to make it **3% (Three percent) of the value of work billed for as per memorandum no. 201-F(Y) dated 18<sup>th</sup> January 2021.**

12. The Bidder, at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the work as mentioned in the Notice Inviting Tender, before submitting the offer with full satisfaction. The cost of visiting the site shall be at his own expense.
13. The intending Bidders should clearly understand that whatever may be the outcome of the present invitation of Bids, no cost of Bidding shall be reimbursable by the Department. The Managing Director, WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED reserves the right to reject any or all the application(s) for purchasing Bid Documents and/or to accept or reject any or all the offer(s) without assigning any reason whatsoever and is not liable for any cost that might have been incurred by any Tenderer at the stage of Bidding.
14. The intending bidders are required to quote the rate online only. No offline tender will be entertained.
15. If more than one Bidder quoted same rate and which are found lowest at the time of opening, such similar multiple rates will not be entertained / accepted. Lowest offer will be ascertained by sealed bid amongst the lowest bidders.
16. Contractor shall have to comply with the provisions of (a) the contract labour (Regulation Abolition) Act. 1970 (b) Apprentice Act. 1961 and (c) minimum wages Act. 1948 and any other notification thereof or any other laws relating thereto and the rules made and order issued there under from time to time.
17. During the scrutiny, if it comes to the notice of the tender inviting authority that the credential(s) and/or any other paper(s) of any bidder is / are incorrect/ manufactured/fabricated, that bidder(s) will not be allowed to participate in the tender and that application will be rejected outright.
18. The Managing Director, WBSMCL reserves the right to cancel the N.I.T. or issue corrigendum notices to the NIT due to unavoidable circumstances and no claim in this respect will be entertained.
19. List of "Technically Qualified Bidders" will be published in the web portal only. Financial Bid will be opened within a short period after such publication. Therefore, Bidders are requested to view the tender status on a regular basis.
20. In case of any objection regarding prequalifying an Agency, that should be lodged to the Managing Director, WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED within 1(one) day from the date of publication of the list of qualified agencies and beyond that time schedule no objection will be entertained.
21. Before issuance of the work order, the tender inviting authority may verify the credential(s) and/or other document(s) of the lowest tenderer, if found necessary. After verification, if it is found that the document(s) submitted by the lowest tenderer is/are either manufactured or false, the work order will not be issued in favour of the said Tenderer.
22. If any discrepancy arises between two similar clauses on different notifications, the clause as stated in later notification will supersede former one in following sequence; -
  - a) Notice Inviting Tender
  - b) Special Terms and Conditions
  - c) Financial Bid
  - d) Schedule of Works

All works covered in the clause appearing hereinafter shall be deemed to form a part of the appropriate item or items of works appearing in the work schedule whether specifically mentioned in any clause or not and the rates quoted shall include all such works unless it is otherwise mentioned that extra payment will be made for particular works.

23. Schedule of Rates applicable for execution of the work : **As mentioned in Form-V (at section-III)** with approved quoted rates.
24. As per memorandum no. 4608-F(Y) dated.18.07.2018 of Finance Department Govt. of West Bengal, the successful bidder will have to submit Additional Performance Security @10% of the tendered amount, if the accepted bid value is 80% or less of the estimated amount put to tender. The Additional Performance Security shall be submitted in the form of Bank Guarantee from any Scheduled Bank before issuance of the Work Order. If the bidder fails to submit the Additional Performance Security within seven working days from the date of issuance of Letter of Acceptance, his Earnest Money will be forfeited and other necessary actions as per NIT like blacklisting of the contractor, etc, may be taken. The Bank Guarantee shall have to be valid upto end of the Contract Period and shall be renewed accordingly, if required. The Bank Guarantee shall be returned immediately on successful completion of the Contract. If the bidder fails to complete the work successfully, the Additional Performance Security shall be forfeited at any time during the pendency of the contract period after serving proper notice to the contractor. Necessary provisions regarding deduction of security deposit from the progressive bills of the contractor as per relevant clauses of the contract shall in no way be altered/affected by provision of this Additional Performance Security.

Intending tenderers are required to submit online attested/self-attested photocopies of valid enlistment renewal certificate, valid partnership deed (in case of partnership firm), current Professional Tax Deposit Challan / Professional Tax Clearance Certificate, PAN Card, Trade License from the respective Municipality, Panchayet etc. (in case of S & P Contractors only), as per A. Terms & Conditions and ITB Section-1 of this NIT. [Non statutory documents]

In case of Registered Unemployed Engineers' Co-operative Societies and Registered Labour Cooperative Societies, attested photocopies of documents of credentials showing satisfactory completion of a single work in any Government Department commencing on or after 01.04.2009 of value not less than 40% of the Estimated Cost of the work applied for, 'Certificate of Registration' from the respective Assistant Registrar of Co-operative Societies, Professional Tax Deposit Challan / Professional Tax Clearance Certificate, PAN Card, must be submitted online. Payment certificates in lieu of credentials will not be accepted. Please refer A. Terms & Conditions and ITB Section-1 of this NIT. [Non statutory documents]

**The intending tenderer is required to quote the rate in figures as well as in words as per the FORM-V in Section-III.**

**Conditional / incomplete quotation will not be entertained.**

Issuance of work order as well as payment will depend on availability of fund and no claim whatsoever will be entertained for delay of Issuance of work order as well as payment, if any. Intending tenderers may consider this criterion while quoting their rates.

If any tenderer withdraws his offer before acceptance or refuse within a reasonable time without giving any satisfactory explanation for such withdrawals, he shall be disqualified from submitting tender to WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED for a minimum period of 1(one) year.

Tax and other deductions shall be made as below:

- i) GST will be deducted as applicable.
- ii) Cess @ 1% (One Percent) of the cost of construction works will be deducted from the bills of the contractors on all contracts awarded on or after 01.11.2006 in pursuance with G.O. No. 599A/4M-28/06 dated 27.09.2006.
- iii) 2% (Two percent) Income Tax of the cost of construction work will be deducted from the bill.
- iv) Security Money deposit @ 1% (One Percent) will be deducted from the progressive bills in addition to the earnest money to make a total deposit of 3%(Three Percent) of the value of work executed.

- Modification in the West Bengal Form No.: 2911/2911(i)/2911(ii) Clause 17 of CONDITIONS OF CONTRACT of the Printed Tender Form shall be substituted by the following vide Govt. Notification No 5784-PW/PW/L&A/2M-175/2017 dated 12.09.2017:

'Clause 17 - If the contractor or his workmen or servants or authorized representatives shall break, deface, injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent in it at any time whether during its execution or within a period of three months or one year or three years or five years, as the case may be (depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the Defect Liability Period, from the actual date of completion of work as per completion certificate issued by the Engineer-in-Charge, the contractor shall make the same good at his own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-Charge shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the Government or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of the Engineer-in-Charge (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Government to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.-

Provided further that the Engineer-in-Charge shall pass the "Final Bill" and certify thereon, within a period of thirty days with effect from the date of submission of the final bill in acceptable form by the contractor, the amount payable to the contractor under this contract and shall also issue a separate completion certificate mentioning the actual date of completion of the work to the contractor within the said period of thirty days. The certificate of the Engineer-in-Charge whether in respect of the amount payable to the contractor against the "Final Bill" or in respect of completion of work shall be final and conclusive against the contractor. However, the security deposit of the work held with the Government under the provision of clause 1 hereof shall be refundable to the contractor in the manner provided here under:-

- (a) For work with three months Defect Liability Period:
  - i) Full security deposit shall be refunded to the contractor on expiry of three months from the actual date of completion of the work.
- (b) For work with one-year Defect Liability Period:
  - i) Full security deposit shall be refunded to the contractor on expiry of one year from the actual date of completion of the work.
- (c) For work with three years Defect Liability Period:
  - i) 30% of the security deposit shall be refunded to the contractor on expiry of two years from the actual date of completion of the work;
  - ii) The balance 70% of the security deposit shall be refunded to the contractor on expiry of three years from the actual date of completion of the work;
- (d) For work with five years Defect Liability Period:
  - i) No security deposit shall be refunded to the contractor
  - ii) for 1st 3 years from the actual date of completion of the work;
  - iii) 30% of the security deposit shall be refunded to the contractor on expiry of four years from the actual date of completion of the work;
  - iv) The balance 70% of the security deposit shall be refunded to the contractor on expiry of five years from the actual date of completion of the work;

#### Explanation:

The word 'work' means and includes building work, road work, drain work, sanitary and plumbing work and/or any other work contemplated within the scope and ambit of this contract. For

- i) **The work of patch repair or patch maintenance in nature or AMC or a combination thereof, the Defect Liability Period of the work shall be three months from the actual date of completion of the work.**
- ii) Thorough Bituminous Surfacing work with bituminous thickness less than 40 mm, Repair & Rehabilitation of any road / bridge / culvert / building / Sanitary & Plumbing work, the Defect Liability Period of the work shall be one year from the actual date of completion of the work;
- iii) Extension of building / bridge / culvert, Construction of new flexible pavement up to bituminous level which has been designed for a period of 3 years or more, Widening and strengthening of flexible pavement designed for a period of 3 years or more, Improvement of riding quality / Strengthening of flexible pavement designed for a period of 3 years or more; Providing only mastic asphalt layer over existing bituminous surface without providing bituminous profile corrective course / bituminous base course, the Defect Liability Period of the work shall be three years from the actual date of completion of the work;
- iv) Construction of new building / new bridge / new culvert, Reconstruction of building / bridge / culvert including construction of approach roads for bridge / culvert, Construction of rigid pavement, Reconstruction of rigid pavement, Construction of new flexible pavement covered by mastic work which has been designed for a period of 5 years or more, Widening and strengthening of flexible pavement covered by mastic work which has been designed for a period of 5 years or more, Improvement of riding quality / Strengthening of flexible pavement covered by mastic work which has been designed for a period of 5 years or more, the Defect Liability Period of the work shall be five years from the actual date of completion of the work;

Successful Tenderers will be required to obtain valid Registration Certificate & Labour License from respective Regional Labour Offices where construction work by them is proposed to be carried out as per Clauses u/s 7 of West Bengal Building & other Construction Works' Act, 1996 and u/s 12 of Contract Labour Act.

Power of Attorney holders are not allowed to sign Tender Documents unless otherwise approved by the Government.

Clause-25 of the conditions of contract of the West Bengal Form No. 2911/2911(ii) may be treated to be omitted and there is no provision for arbitration for resolution of disputes that may arise out of the contracts to be entered into by the Department with the contractors for the purpose of carrying out execution of public works as per G.O No. 558/SPW dated 13-12-2011 of P.W.D.

#### **C. Successful tenderers will be required to observe the following conditions strictly:**

- a. Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and Employees State Insurance Act, 1948 should be strictly adhered to wherever such Acts become applicable.
- b. Minimum wages to the workers shall be paid according to the rates notified and/or revised by the State Government from time to time under the Minimum Wages Act, 1948 in respect of scheduled employments, within the specified time as per law. Payment of bonus, wherever applicable, has to be made.
- c. Adequate safety and welfare measures must be provided as per the provisions of the building and other Construction Workers' (Regulation of Employment & Conditions of Service) Act, 1996 read with West Bengal Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2004.

d. All liabilities arising out of engagement of workers are duly met before submission of bills for payment.

If there is any violation of any or all the relevant above criterion during execution of the job, it will render the concerned agencies ineligible for the work then and there or at any subsequent stage as may be found convenient.

**Sd/-**  
**Managing Director**  
**West Bengal Medical Services Corporation Limited**

# **INSTRUCTION TO BIDDERS**

## **SECTION – I**

### ***1. General guidance for e-Tendering***

Instructions/Guidelines for tenders for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.

#### **1. Registration of Contractor**

Any contractor willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system, through logging on to <https://wbtennders.gov.in> the contractor is to click on the link for e-Tendering site as given on the web portal.

#### **2. Digital Signature certificate (DSC)**

Each contractor is required to obtain a class-I, class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount details are available at the Website stated in Clause-2 of Guideline to Bidder DSC is given as a USB e- Token.

3. The contractor can search & download NIT & Tender Documents electronically from computer once he logs on to the website mentioned in Clause 2 using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

#### **4. Participation in more than one work**

A prospective bidder shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job all his applications will be rejected for that job.

#### **5. Submission of Tenders**

General process of submission: - Tenders are to be submitted through online to the website stated in Cl. 2 in two folders at a time for each work, one in Technical Proposal & the other is Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

#### **6. Eligibility to Participate**

- i. Bidders must have valid trade license without which no bidder will be allowed to participate.
- ii) Bidder must have valid PAN, ESI, EPF registration without which no bidder will be allowed to participate.
- iii) Bidders not fulfilling the eligibility criteria need not to participate and in the event of their participation without being fulfilling the eligibility criteria, their bids will summarily be rejected.

#### **A. Technical proposal**

The Technical proposal should contain scanned copies of the following in two covers (folders)

##### **A-1. Statutory Cover file Containing**

- i) Earnest money (EMD) as prescribed in the NIT against each of the serial of work in favour of the Managing Director, West Bengal Medical Services Corporation Limited.



- ii) Tender form No. 2911(ii) & NIT with all Forms (Properly upload the same Digitally Signed). The rate will be quoted in the BOQ. Quoted rate will be encrypted in the B.O.Q. under Financial Bid. In case of Quoting any rate in 2911(ii) the tender is liable to summarily rejected.

#### **A-2. Non statutory / Technical Documents**

- i) Valid Certificate of registration of GSTIN under GST Act & rules.; Valid PAN card in the name of Bidder/Organization; Latest professional tax payment certificate /P. Tax (Challan)
- ii) valid Trade License/ revalidation for Proprietorship Firm; or, Registered Partnership Deed of partnership Firm/ Article of Association & Memorandum, valid Trade License / revalidation for Partnership Firm; or, Registration Certificate and Clearance Certificate issued by the Assistant Register of Cooperative Society (ARCS) bye laws are to be submitted by the Registered labour Co-Operative Society/ Engineer's Co-operative Society, valid Trade License/ revalidation for Co-operative Society; or, Incorporation certificate, Memorandum of Articles of ROC, List of current Owners/ Directors/ Board Members, valid Trade License/ revalidation for Companies
- iii) Requisite Credential Certificate for completion of at least one similar nature of work as per Terms & Conditions of this NleT is to be furnished in applicable cases.
- iv) Valid Electrical Contractors' License with one full time engagement of an Electrical Supervisor Competency on the SCC parts 1, 2, 11. The MOU/engagement copy between the Contractor & the Electrical supervisor has to be submitted along with the credential documents as per Terms & Conditions of this NleT.
- v) IT returns of bidder for last Three years (FY 2018-2019, FY 2019-2020, FY 2020-2021) or, Audited Profit & Loss Accounts statement of Three Financial years (FY 2018-2019, FY 2019-2020, FY 2020-2021)

**Note:- Failure of submission of any of the above mentioned documents will render the tender liable to be rejected for both statutory & non statutory cover.**

THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGE IN THE FOLLOWING MANNER

Click the check boxes beside the necessary documents in the My Document list and then click the tab

"Submit Non Statutory Documents" to send the selected documents to Non-Statutory folder. Next Click the tab "Click to Encrypt and upload" and then click the "Technical" Folder to upload the Technical Documents.

Sl. No.	Category Name	Sub Category	Sub Category Description
A.	CERTIFICATES	1.CERTIFICATES pdf 2.GST_registration_certificates.pfd	1. Valid Trade License 2. Valid Certificate of GSTIN under GST Act & rules. 3. Valid PAN card in the name of Bidder/Organization 4. Latest professional tax payment certificate /P. Tax (Challan)
B.	Company Details	Company Details –1 pdf	1. Proprietorship Firm (valid Trade License/ revalidation) 2. Partnership Firm (Partnership Deed, valid Trade License revalidation) 3. Society (Valid Society Registration certificate, valid Trade License/ revalidation) 4. For Companies (Incorporation certificate, Memorandum of Articles of ROC, List of current Owners/ Directors/ Board Members, valid Trade License/ revalidation)
C.	Credential of	Credential 1 pdf	Documents of Credentials as per Notification No. 03-



	Work	Credential 2 pdf	<p>A/PW/O/10C-02/14 Dated :12.03.2015</p> <p><b>For –1st call of NleT</b></p> <p>(i) Intending tenderers should produce credentials of a similar nature of work of the minimum value of 40% of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or,</p> <p>(ii) Intending tenderers should produce credentials of 2(Two) similar nature of work, each of the minimum value of 30 % of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or</p> <p>(iii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the extent of 80% or more and value of which is not less than the desire value at (i) above;</p> <p>In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e., the tenderer.</p> <p><b>For – 2nd call of NleT</b></p> <p>(i) Intending tenderers should produce credentials of a similar nature of work of the minimum value of 30% of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or,</p> <p>(ii) Intending tenderers should produce credentials of 2(Two) similar nature of work, each of the minimum value of 25 % of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or</p> <p>(iii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the extent of 75% or more and value of which is not less than the desire value at (i) above;</p> <p>In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e., the tenderer.</p> <p><b>For – 3rd call of NleT</b></p> <p>(i) Intending tenderers should produce credentials of a</p>
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			<p>similar nature of work of the minimum value of 20% of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or,</p> <p>(ii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the extent of 70% or more and value of which is not less than the desire value at (i) above;</p> <p>In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work.</p> <p>[Work Order and Completion certificate must be submitted as credential. Refer Terms &amp; Conditions of NIT ]</p>
D.	Financial	Document 1 pdf Document 2 pdf	IT returns of bidder for last Three years (FY 2018-2019, FY 2019-2020, FY 2020-2021) or, Audited Profit & Loss Accounts statement of Three Financial years (FY 2018-2019, FY 2019-2020, FY 2020-2021)

**Opening of Technical proposal: -**

- i) Technical proposals will be opened by the **Managing Director, West Bengal Medical Services Corporation Limited** and his authorized representative electronically from the web site stated using their Digital Signature Certificate.
- ii) Intending tenderers may remain present if they so desire.

**Opening of Financial proposal: -**

- i) The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ): The contractor/Bidder is required to quote the financial offer/bid price or as item rate including all taxes (GST, Cess etc.) online through computer in the space marked for quoting rate in the BOQ of the quoted work.
- ii) Only the downloaded sheet of the above document in excel format is required to be uploaded (virus scanned & Digitally Signed) by the contractor/bidder.

**The eligibility of the Bidder will be ascertained on the basis of document submitted / uploaded &digitally signed in support of the minimum criterion as mentioned above. If any document submitted / uploaded by the Bidder is either manufactured or false, the eligibility of Bidder will be out rightly rejected at any stage without prejudice and action will be taken as per stipulation of IT Rules in force.**

**Sd/-**  
**Managing Director**  
**West Bengal Medical Services Corporation Limited**

## **SECTION-II**

### **FORM-I**

#### **B.1. PRE-QUALIFICATION APPLICATION.**

To  
Managing Director,  
West Bengal Medical Services Corporation Limited

**Ref:** -Tender for \_\_\_\_\_  
\_\_\_\_\_work\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

N.I.T. No: WBMSCL/NIT- 240/2022, Dated – 11/06/2022 of West Bengal Medical Services Corporation Limited

Dear Sir,

Having examined the Statutory, Non-statutory, Instruction to Bidders & NIT documents along with its Agenda & corrigendum, I /we hereby submit all the necessary information and relevant documents for evaluation

The application is made by me / us on behalf of\_\_\_\_\_

In the Capacity\_\_\_\_\_ duly authorized to submit the order.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith. We are interested in bidding for the work(s)given in Enclosure to this letter. **We understand that:**

- (a) Tender Inviting & Accepting Authority/Engineer-in-Charge can amend the scope & value of the contract bid under this project.
- (b) Tender Inviting & Accepting Authority/Engineer-in-Charge reserve the right to reject any application without assigning any reason.
- (c) **Enclo:- e-Filling:-**
- (d) 1. Statutory Documents.
- (e) 2. Non Statutory Documents.

**Date:-**

\_\_\_\_\_  
**Signature of applicant including title**  
and capacity in which application is made.

## **SECTION-III**

### **FORM-II**

#### **B.3. STRUCTURE AND ORGANISATION.**

**B.3.1. Name of applicant:**\_\_\_\_\_

**B.3.2. Office Address:** \_\_\_\_\_

\_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax No. :: \_\_\_\_\_

E-mail ID: \_\_\_\_\_

**B.3.3. Name & address of Bankers:**\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**B.3.4. Attach an organization chart showing the structure of the company with names of Key personnel and technical staff with Bio-data.**

**Note:** Application covers Proprietary Firm, Partnership, Limited Company or Corporation,

**Date:**

\_\_\_\_\_  
**Signature of applicant.**  
including title and capacity in which application is made.

## **SECTION-III**

### **FORM -III**

#### **B.4. EXPERIENCE PROFILE.**

**B.4.1. Name of the Firm:** \_\_\_\_\_  
\_\_\_\_\_

**B.4.2. LIST OF PROJECTS COMPLETED THAT ARE SIMILAR IN NATURE TO THE WORKS HAVING MORE THAN 40% OF THE PROJECT COST EXECUTED DURING THE LAST FIVE YEARS.**

Name, Location & nature of work	Deptt. Concern	Engineer-in-Charge	Contract price in Indian Rs.	% of Participation of company	Original Time Schedule		Actual Time Schedule		Reasons for delay in completion (if any)
					Start Date	Completion Date	Start Date	Completion Date	

Note: a) Certificate from the Employers to be attached

b) Non-disclosure of any information in the Schedule will result in disqualification of the firm.

**Date:**

\_\_\_\_\_  
**Signature of applicant**  
including title and capacity in which application is made.

## **SECTION-III**

### **FORM -IV**

*[Print out in Agency's Letter head & upload the filled proforma with digitally signed as stated below]*

#### **DECLARATIONBYTHETENDERER**

I/We have inspected the site of work and have made myself/ourselves fully acquainted with local conditions in and around the site of work. I /We have carefully gone through the Notice Inviting Tender and other tender documents mentioned therein along with the drawing attached. I/We have also carefully gone through the 'Priced schedule of Probable Items and Quantities'.

My/Our tender is offered taking due consideration of all factors regarding the local site conditions stated in this Detailed Notice Inviting Tender to complete the proposed work referred to above in all respects.

I/We promise to abide by all the stipulations of the contract documents and carry out and complete the work to the satisfaction of the department.

I/We declare that I/We in the capacity of individual/ as a partner of a firm not debarred in the last financial year.

I/We also agree to procure tools, plants and others as per requirement, at my/our cost required for the work.

Signature of Tenderer with Date :

Postal address of the Tenderer

**Name of the Firm with Seal**

## INSTRUCTION TO BIDDER

### SECTION–III

*Detailed Scope of work and other terms & condition for this “Comprehensive Maintenance Contract (including all Consumables, Spares, Accessories and Labor) for the Existing Water Treatment Plants (WTPs), Water Supply System (WSS), Water Purifiers (WPs) & Portable RO units installed at Deben Mahata Govt. Medical College and (G+9) Super Specialty Hospital, Hatuara Campus in the district of Purulia” are mentioned as below.*

*This tender is for ...*

- A. Comprehensive Operation & Maintenance (including all Consumables, Spares, Accessories and Labor) for the Water Treatment Plant (of capacity 30 KLPH) including the Treated Water Supply System from underground reservoir to all overhead tanks in different buildings at Deben Mahata Govt. Medical College, Hatuara, Purulia.*
- B. Comprehensive Operation & Maintenance (including all Consumables, Spares, Accessories and Labor) for the Water Treatment Plant (of capacity 21 KLPH) including the Treated Water Supply System from underground reservoir to all overhead tanks at (G+9) Super Speciality Hospital, Hatuara, Purulia.*
- C. Comprehensive Maintenance/Warranty Coverage (including all Spares, Accessories and Labour) for the all-installed Water Purifier Units [of Model “Puriline-4L”, of Make “ ZeroB” of Ion Exchange (India) Ltd.] at different buildings under medical college part at DMGMCH, Hatuara, Purulia.*
- D. Comprehensive Maintenance/Warranty Coverage (including all Spares, Accessories and Labour) for the all installed Reverse Osmosis Water Purifier Units [of Model “50 LPH RO SKID”, of Make “ ZeroB” of Ion Exchange (India) Ltd.] at Academic Building under medical college part at DMGMCH, Hatuara, Purulia.*

The intending bidders are requested to visit the sites at their own cost to ascertain the cost of Comprehensive Maintenance Contract considering the all aspects. No travelling charges will be given to the agency for their site visit. The bidders have to place the direct quotation for the comprehensive maintenance (including all Consumables, Spares, Accessories and Labor) for the **Water Treatment Plants & Water Supply Systems** and for all the **installed Water Purifiers & RO units**, as per the prescribed format (Section III, Form A). The summation of the final amount will be considered as the final quoted rate.

## 1. Over all Scope of Work & Periodic Maintenance & Wellness Check of the Systems/Plants/Units:

### A. WATER TREATMENT PLANTS:

- On day-to-day basis (24 X 7), the functionality and the governance of the entire existing Water Treatment Plants which includes all electrical & mechanical equipment and other parts under the said system has to be ensured by the agency.
- The contractor has to keep & maintain all the records for the quantity of the total intake water (from the installed water meters) and the running times of WTP pumps, dosing rate/schedule etc. on daily basis.
- The availability of water at the treated water tank has to be ensured by the operators all the time by the timely operation of the WTP. In case of any emergency/breakdown, makeshift arrangement should be done by the Contractor to maintain the uninterrupted treated water supply up to the Overhead Tanks as all the buildings are a part of Emergency health care system.
- Contractor has to provide all necessary consumables i.e., all spare parts (pumps, Motors, clarifier, chlorination system, electrical panels, pipe, fittings/fixtures etc.), chemicals (for example like: - Gear Oil, Alum, Liquid Chlorine, filters, carbon etc.) as required for the proper functioning of the plant as per requirements/guidelines of manufacturer during the AMC period. The requirement of consumables chemicals may differ from the mentioned above, thus need to be checked by themselves after inspecting the whole system.
- The Contractor has to Ensure the regular scavenging of the plant WTP room/rooms and the landscaping/gardening work at the surrounding area (at least up to 30m radius) and maintain the decorum of the plant.
- The firm/ agency/contractor will be responsible for proper treatment of water via WTP. Thus, the contractor must test the water from WTP as per relevant IS Codes from the PHED. (Public Health Engineering Dept.) approved Lab/test centers on **monthly basis**. The testing parameters and the results of the tested water should be within the range mentioned in the relevant IS Codes.
- The agency/firm/contractor shall provide highly skilled/highly technically expert person for routine visit at least once in a month to maintain wellness of the entire WTPs apart from the regular functionality & governance service.
- There must availability of special tools and tackles, testing apparatus (for temp, hardness, pH value, pipe pressure etc. as per the operation manual), measurement and inspection devices including diagnostics equipment etc. at the plant room.



## **B. WATER SUPPLY SYSTEM:**

- The scope for this comprehensive maintenance of the treated water supply system (WSS) starts from the underground reservoirs (UGR) of the treated water tanks to all the Overhead tanks (OHT) installed at different buildings.
- This treated water supply system from UGR to the Overhead tanks consist of the following components- Electrical Panels, Submersible Pumps (for lifting), Pressure Vessel, Pipeline, motorized valves, mechanical valves, actuators, level indicators inside the overhead tanks in case of pressurized automation system. There is also a scope of manual operations of the “treated water supply system”.
- On day-to-day basis (24 X 7), the operators must operate & maintain the water lifting pumps installed at the underground treated water tanks. The operators have to ensure the adequate water supply to all the Over Head Tanks at different buildings. Any inconvenience regarding the non-availability of water at the OHRs due to the delay or negligence of the operators leads to the penalty.
- In case of any emergency/breakdown, makeshift arrangement should be done by the Contractor to maintain the uninterrupted treated water supply up to the Overhead Tanks as all the buildings are a part of Emergency health care system.
- The contractor has to ensure the proper functionality & governance of the entire water supply system network from UGR to the OHTs at different building in order to ensure the adequate water supply to all the Over Head Tanks at different buildings.
- The contractor has to keep records for the running times of lifting pumps, water availability of the water at all the OHRs on hourly basis.
- The regular maintenance of the pipelines carrying the Treated Water from the UGRs of the Treated Water Tanks up to the Overhead Tanks at all buildings inside the campus is under the scope of this contract. Any damage/leakage in this network should be rectified immediately to avoid interruption in water supply. Any delay in these cases may lead to penalty for the contractor.
- Contractor has to provide all necessary consumables i.e., all spare parts (pumps, Motors, clarifier, automation system, electrical panels, pipe, fittings/fixtures etc.), chemicals (for example like: - Gear Oil etc.) as required for the proper functioning of the plant as per requirements/guidelines of manufacturer during the AMC period. The requirement of consumables chemicals may differ from the mentioned above, thus need to be checked by themselves after inspecting the whole system.

### **C. WATER PURIFIERS & RO WATER PURIFIER UNITS:**

- All the equipment/units of Water Purifiers installed at different building under Deben Mahata Govt. Medical College, Hatuara Campus and all the RO Water Purifiers installed at Academic Building at Deben Mahata Govt. Medical College will be covered under warranty for a period of 01 (one) year.
- The Scheduled Preventive Maintenance and cleaning of all the WP & RO units to avoid breakdown has to be carried out at least every after three months, i.e., quarterly(minimum) and as and when required. The service reports have to be submitted along with the bills.
- The breakdown/servicing of the equipment/units has to be attended and to be resolved throughout the year within 24 hours of breakdown/servicing call registration.
- The USER MANUAL& TECHNICAL SPECIFICATIONS is given in Section V and is to be followed during ACMC.
- Contractor has to provide all necessary consumables and all spare parts required for the proper functioning of the WPs & RO units during the AMC period.

### **D. GENERAL CRITERIA:**

- The firm/ agency/contractor will be responsible for the safety and wellness of the entire system/plant of the WTP-WSS and all installed portable WP & RO units.
- The agency/firm/contractor shall provide highly skilled/highly technically expert person for routine visit at least once in a month to maintain wellness of the entire system apart from the engaged regular operational manpower.
- The contractor shall keep the equipment well maintained, neat and clean and adhere to the Standard Procedure. Upon placement of work order, they will prepare the maintenance check schedule and dosing rate/schedule of required chemicals for WTP-WSS, WP & RO unit as per the manufacturer's specifications and approved the same from WBMSCL before implementation. This may be revised from time to time as per the requirement.
- Proper care shall be taken to avoid major breakdown at the plant. In the event of any breakdown, the same will be rectified/attended immediately within 24 hours from the time of reporting of the fault. Similarly, if any breakdown takes place due to negligence of contractor (except force measured), the whole component has to replaced/ rectified to bring it to the original condition immediately (within 24 hours) by the contractor.
- Any inconvenience caused so far as performance of WTP-WSS, WP & RO units System due to negligence in the part of the agency, if detected, will be liable to penalty. Quantum of penalty would be decided in EIC depending on the gravity of situation

- In case of any anomalies with the equipment/system, the contractor shall submit a brief report to the Site Engineer of WBMSCL immediately.
- The routine maintenance and periodical checking of all the equipment is under the scope of this tender and is to be done with proper care. Necessary preventive maintenance, breakdowns (if occurs any) are to be attended throughout the day, all 7 days a week, with experienced and qualified technical personnel.
- If any requirement arises for cleaning any tanks such as Raw water tanks, treated water tanks, overhead tanks etc., it has to be done by the agency with their own cost.
- Regular servicing, inspection and wellness checking of the system/equipment should be carried out by qualified technical personal at least once in a month by the contractor apart from the regular operational manpower. The contractor shall perform preventive maintenance to the system/equipment and its accessories as per service manual. The contractor shall also attend any breakdown & emergency call immediately (within 24 hour).
- Replacement of all spares and machineries attached with the WTP-WSS, WP & RO units/ System are under this comprehensive maintenance contract.
- Preliminary, these comprehensive AMC is prepared for a period of 01 (one) year and it may be extended depending on the performance of the contractor or till finalization of the next tender. The intending bidder who wishes to quote are required to visit and examine the whole systems and satisfy themselves before submitting their offer and to apprise themselves about the plant and equipment's, accessories and parts of the complete systems.
- The day-to-day basis proper functionality & governance of the WTP & WSS are to be done by the experienced personnel.
- In case any of any anomalies in the functionality & governance in the entire system/plan/units, the entrusted personals have to be replaced immediately as per the instruction of WBMSCL.
- The agency/firm/contractor shall provide highly skilled/highly technically expert person for routine visit at least once in a month to maintain wellness of the entire system apart from the day-to-day basis functionality & governance part.
- The contractor should provide escalation matrix to WBMSCL to lodge complaint of breakdown of WTP-WSS, WPs, RO units/Plant. In the escalation matrix the contractor has to provide at least 02 mobile no. and e-mail IDs. If any changes are made in mobile no. / e-mail ID the same should be notified to WBMSCL in written within 7 working days.

## 2. Documents to be Maintained:

- A. Printed & binded duplicate **LOG-BOOKs** must be maintained for recording of **parameters** related to WTP-WSS, WP & RO units for **maintenance activities, running status of all equipment, chemical dosing schedule & servicing**. The format of the log-book must be approved by WBMSCL prior to implementation. One copy of those log-sheets is to be submitted to WBMSCL as and when asked to.
- B. A **Register** should be maintained by the contractor for call login/site instructions and result/compliance thereafter. The Site Engineer/Technician should have common telephone no by which a user can communicate with him directly.
- C. **Quarterly Wellness Certificate or satisfactory performance certificate** of the WTP-WSS, and **quarterly service reports** for the WP & RO units/Plant should be submitted to the concerned AE/SAE and those has to be countersigned by the AE/SAE and to be submitted along with the RA bills.
- D. All the **water test reports** are to be submitted on quarterly basis (or as asked by the site-in charge) and also to be submitted along with the bills.

## 3. Payment Schedule:

- A. No advance payment will be made at any circumstances.
- B. On successful completion of every quarter, 3 (three) months (1st quarter, 2nd quarter, 3rd quarter and 4th quarter respectively), running account bills can be placed along with certified copies of monthly service reports/check lists, log sheets, compliance register copy, water test reports, or any other work done as per the scope of work mentioned in the tender/contract duly certified by the Concerned Site-in charge of WBMSCL.
- C. WBMSCL will make payment to the contractor within a reasonable period after receipt of the certified bills along with all supporting documents (as stated above) and after deduction of applicable taxes/TDS, Security deposit etc.
- D. Payment will be made according to the availability of fund from the concerned source. No claim, whatsoever, for delay in payment if any will be entertained.

## 4. Penalty:

- A. The contractor shall rectify/attend any breakdown/complains within 24 hours failing which penalty for non-performance for each incident @ Rs. 500/- of delay of the respective site/unit will be imposed and in the event of any damage to the property or life arising out of non-performance, contractor will be solely responsible.

B. Any inconvenience caused so far as performance of WTP-WSS, WP, RO Units/Plants due to negligence in the part of the agency, if detected, will be liable to penalty.

5. The services required are for a period of 01 (One) years. As per the willingness of the Contractor, the contract may be extended with same rate and terms & condition subsequently based on performance or till finalization of the next tender. The contract may be terminated at any stage solely at the option of WBMSCL with an advance notice of one month without assigning any reason.
6. WBMSCL authority reserves the right to terminate the contract against three months' notice for the non-satisfactory performance or other administrative reasons.
7. The rates shall be quoted as per the prescribed format of WBMSC (Section-III, Form V). The rates shall be all inclusive of all taxes, transportation charges and duties etc. No extra cost beyond the quoted rate will be admissible.
8. The rates at any stage once quoted shall not be withdrawn.
9. No addition / alteration / deletion in the tender document is allowed.
10. An agreement detailing the terms & conditions shall be executed with the service provider for entering into this contract.

## **SECTION-III**

### **FORM -V**

***Comprehensive Maintenance Contract (including all Consumables, Spares, Accessories and Labor) for the Existing Water Treatment Plants (WTPs), Water Supply System (WSS), Water Purifiers (WPs) & Portable RO units installed at Deben Mahata Govt. Medical College and (G+9) Super Specialty Hospital, Hatuara Campus in the district of Purulia***

<b>Sl No</b>	<b>Description of Item</b>	<b>No of Month</b>	<b>Unit</b>	<b>Rate (Rs/Unit)</b>	<b>Amount (Rs.)</b>
<b>1.0</b>	<b>Deben Mahata Govt. Medical College at Hatuara Campus, Purulia</b>				
1.1	Comprehensive Maintenance contract (including all Consumables, Spares, Accessories and Labor) for the Water Treatment Plant (of capacity 30 KLPH) including the Treated Water Supply System from underground reservoir to all overhead tanks in different buildings at Deben Mahata Govt. Medical College, Hatuara, Purulia.	12	Monthly		
1.2	Comprehensive Maintenance/Warranty Coverage (including all Spares, Accessories and Labour) for the all-installed Water Purifier Units [of Model "Puriline-4L", of Make " ZeroB" of Ion Exchange (India) Ltd.] at different buildings under medical college part at DMGMCH, Hatuara, Purulia	12	Monthly		
1.3	Comprehensive Maintenance/Warranty Coverage (including all Spares, Accessories and Labour) for the all installed Reverse Osmosis Water Purifier Units [of Model "50 LPH RO SKID", of Make " ZeroB" of Ion Exchange (India) Ltd.] at Academic Building under medical college part at DMGMCH, Hatuara, Purulia.	12	Monthly		
<b>2.0</b>	<b>(G+9) Super Speciality Hospital, Hatuara Campus, Purulia</b>				
2.1	Comprehensive Maintenance contract (including all Consumables, Spares, Accessories and Labor) for the Water Treatment Plant (of capacity 21 KLPH) including the Treated Water Supply System from underground reservoir to all overhead tanks at (G+9) Super Speciality Hospital,	12	Monthly		

	Hatuara, Purulia.				
<b>Total=</b>					
<b>In Figure:</b>					

**NOTE:**

1. Rate/Rates should be inclusive of all taxes.
2. Rate shall be quoted online through computer in the space marked for quoting rate in the BOQ.



# OPERATION & MAINTENANCE MANUAL

OF

**WATER TREATMENT PLANT**

**CAPACITY – 30 KLPH**

For

**PURULIA**

**(DEBEN MAHATA GOVT. MEDICAL COLLEGE )**

At

**WEST BENGAL**





## FOREWORD

This manual has been prepared mainly to serve as a technical guide to the personnel concerned with operation and maintenance of the Water Treatment Plant for **“M/S Purulia, West Bengal.”** It is intended to give the basic principles of equipment and process taking place in the various units of the system and the operating procedure in normal as well as abnormal conditions that are necessary to keep the plant in good working condition. It describes various problems that are likely to arise and various remedial measures to be taken along with periodical checks.

## CONTENT

<b>S. No.</b>	<b>Description</b>
1.0	INTRODUCTION
2.0	DESIGN BASIS
2.1	PROCESS FLOW DIAGRAM
2.2	TREATMENT PROCESS
2.3	DESIGN CRITERIA
3.0	PROCESS DESCRIPTION
3.1	PROCESS DETAILS
4.0	STRUCTURAL & CONSTRUCTION DETAILS
4.1	TREATMENT UNIT SIZES & VOLUME
5.0	EQUIPMENT DATASHEETS
6.0	TESTING & COMMISSIONING
6.1	TESTING / PRE-COMMISSIONING
6.2	COMMISSIONING
7.0	SHUT DOWN
8.0	RECORDS & REPORTS
9.0	SAMPLING, TESTING & INSPECTION
10.0	ESCALATION CHART
11.0	DO'S & DONT'S OF WTP
12.0	MAINTENANCE & SAFETY PROCEDURE
13.0	GENERAL HOUSE KEEPING
14.0	PROCEDURE FOR ENVIRONMENTAL CLEARANCE / ACTS
15.0	DRAWINGS



## 1.0. INTRODUCTION

**M/S Purulia, West Bengal** has decided to install Water Treatment Plant in order to make water suitable to use in domestic use.

**WAPP-Water, Air Pollution and Prevention** is committed to provide environmental solutions to urban/rural India. Since 1996, WAPP has been providing solutions for water, energy, waste and environment management to numerous hotels, hospitals, housing societies, industries and commercial complexes. Our prime objective is to provide innovative solutions to protect environment and we call it “Eco-Innovision”.

WAPP is specializing in the field of water and wastewater and offers customized solutions to its clients.

We are also continuously working to develop new user-friendly technologies in collaboration with various reputed Indian Institutions such as IIT's, CSIR, TERI and other Institutions/Foreign Companies.

## 2.0. DESIGN BASIS:

The design of WTP for Greater Noida is based on flow and characteristics of raw water. The raw water is extracted from bore well. It is proposed to pass the raw water through MGF and ACF, in order to make it suitable for use in domestic uses.

### 2.1. PROCESS FLOW DIAGRAM-

Attached here as **Annexure-1**

### 2.2. TREATMENT PROCESS-

The main components of the process adopted for the treatment includes the following:

- Pumping out of raw water from raw water storage tank (RWT) in the Multi Grade Filter (MGF), UV System and Activated Carbon Filter (ACF) using Filter Feed Pumps.
- Removal of suspended solids and turbidity through MGF.
- Polishing of water through Activated Carbon Filters (ACF).
- Collection of treated water in Treated Water Tank (TWT) for domestic uses.

### 2.3. DESIGN CRITERIA

**The major parameters towards designing of the treatments are as follow:**

1. Source of water : Borewell
2. Flow Rate : 30.0 m<sup>3</sup>/hr.
3. Treatment Process : MGF, ACF.



## **Act and Rules under which Designing should be done**

Permissible limit as prescribed Act & Rules -

1. Environment (Protection) Rules 1986.
2. Water (Prevention & Control of Pollution) Act- 1974
3. Hazardous Wastes (Management & Handling) Rules- 1989
4. Manufacturer, use import and storage and hazardous Micro-organizers, genetically Engineered Organizations or Cell Rules- 1989
5. The Public Liability Insurance Act- 1991
6. Indian Standard for Drinking water 10500
7. All standard as laid down by Central Pollution Control Board and any other relevant statutory authority.

### **3.0. PROCESS DESCRIPTION-**

In order to make water suitable to use in domestic use and in fire use, water treatment plant has been designed to ensure that the treated water is below the desired permissible limits, under the varying flow conditions which are typical for such systems and can be used in domestic purposes and in case of fire.

#### **3.1. PROCESS DETAILS-**

The main components of the process adopted for the WTP include the following:

The water from Bore well will be collected in Raw Water Tank (RWT).

Raw water from RWT is feed to MGF and ACF by means of Filter Feed Pumps (FFP) 2Nos. (1W+1S) having capacity of 30m<sup>3</sup>/hr @35m head for treatment. Multi grade filter is used to remove the turbidity & suspended solids. ACF is for removal of excessive chlorine, odor and color. After a 12 hours period of working, MGF & ACF are given backwash and rinsing for cleaning any clog formed in the filters.

Treated Water is then collected into the Treated Water Tank to make it available for domestic & fire uses.

### **4.0. STRUCTURAL & CONSTRUCTION DETAILS:**

The plant has been designed with the most optimum utilization of space and sufficient space availability for the ease of maintenance of the plant.

#### **4.1 Treatment unit sizes and volume**

List of Unit Size, Volume and Quantity:

S. No.	Unit	Quantity	Volume (m <sup>3</sup> )
1	Raw Water Tank	1	115
2	Treated Water Tank	1	345
4	MGF	1	1400 DIA X 1800 HOS
5	ACF	1	1400 DIA X 1800 HOS

## 5.0. EQUIPMENTS DATA SHEETS-

ATTACHED HERE DATA SHEET -As Annexure-2

## 6.0. TESTING & COMMISSIONING

Commissioning is initial stage of any treatment plant. Plant should be properly commissioned so that they operate correctly and within the design parameters. It is essential that the commissioning process is carried out in a logical and defined manner. The responsibilities of the staff carrying out the commissioning process should be clearly defined with adequate time and resources allocated to allow the integrated parts of the installation to be commissioned correctly.

### 6.1 Testing/Pre-Commissioning

Before the commissioning starts, firstly we go for the pre-commissioning the plant, in which, we check all the equipments individually as per their specification and also check individual units performance.

After successful completion of construction and installation of all electrometrical equipment and instrument, plant need to be commissioned to check the working, efficiency and performance of all units and equipment as per the data considered during designing stage.

For commissioning of water treatment plant following five steps are taken under consideration:

1. Panel Test
2. Dry Run Test
3. Wet Run / Hydraulic Test
4. Automation Test
5. Performance Test

### 6.2. Commissioning:

During commissioning of any panel, we have to check and ensure the following points:

**Physical Test:** In physical test, following points must be checked.

- Dimension of panel as per design and drawing
- Electrical continuity of each conductor



- Size of busbar as per the drawing
- Bill of material and rating of components

**Electrical Test:** In Electrical test, following points must be checked.

Insulation resistance test must be conducted with 500v meggar and the following results should be obtained:

- Between phase (RY,YB,BR) should be more than 200Mega ohms
- Between phase & Neutral (RN,YN,BN) should be more than 200Mega ohms
- Between phase & earth should be more than 200Mega ohms
- Between Neutral & Earth should be more than 200Mega ohms

In Dry run, all electro mechanical equipment must run without any load to ensure the smooth running and working of all equipment, during dry run we check the equipment for any abnormal sound, vibration, heat etc.

After Dry run, wet run test is conducted to test the leakage/ dampness in civil units. In wet run test all civil unit are filled with water and left for 24 hour to ensure the leakage and dampness in civil structure. During wet run test, we also check the discharge capacity of pumps.

Automation testing must be done to ensure the working of sensors and programming logic to control the equipment automatically.

The pre-commissioning process can be broadly divided into three phases-

**a. Inventory check of equipment, manuals, tools required and consumables available prior to start up as:**

1. Operation and maintenance manual.
2. A complete set of drawings.
3. A manufacturer's literature on operation and maintenance of its equipment.
4. Manual and literature deemed appropriate for plant operation and efficiency.
5. Desired laboratory glassware, equipment and chemicals needed for analytical work process control.
6. Grease and oil needed for maintenance and operation of the equipment.

**b. Visual Inspection**

The visual inspection should be attended by the commissioning expert, the site in charge and if possible by the equipment manufacturers representatives. The in charge should record the action that take place during the inspection.



During this inspection equipment should be checked for proper mounting, direction of rotation and proper lubrication procedure during the inspection and also all valves for their proper installation and functioning etc.

### **c. Wet Run Inspection**

The wet run inspection should be carried out after the hydraulic testing of Raw Water Tank and before starting process. The equipment manufacturer instruction should be followed when inspecting and pretesting the equipment. The wet run inspection should include:

- Checking all the piping and valves for leaks.
- Inspection or Operation of all the valves.
- Inspecting all pumps.
- Checking all the Electrical instrumentation for proper operation.
- Inspecting overflow weirs and their levels, adjusting it for startup if necessary.
- All deficiency found during the inspection and testing should be corrected.

## **Electrical Control**

### **Checks and Maintenance Instructions for Electrical Equipment**

#### **A. Mechanical Checks**

- Check alignment of driving and driven equipment set right.
- Check for any damaged / loose bearing, replace it.
- Check condition of grease after opening/ removing grease covers, if it has hardened, dirty or has a skin over it, clean it, replace it and repack it with the recommended grade of grease. Do not mix grease of various grade and makes.
- Check gap between rotor and starter, record for further comparison. It varies from 0.15 mm for small motors to 1.5 mm for larger motors. The motor should be free rotating by means of a hand and no unfamiliar sound of bearing etc. should be there.
- Check equipment's valves and NRV working properly & direction of valves & NRV (shut & open).

#### **B. Electrical Checks**

- Check all the connections and contacts for tightness. If any wire or lead shows discoloration, cause of heating be rectified and lead replaced.
- Check earth connections and measure earth resistance and keep a record for further comparison. Replace any damaged / rusty earth wire clamp or fastening.
- Check fuses and setting of over current/ load devices.

- Check voltage on all phases for being equal. If significantly unequal, remedy the cause.

### **C. Maintenance**

- The motor should be cleaned for any dust. Dust which enters and deposited in various parts by blowing with dry air in a direction opposite to that of cooling air. Deposited dust should be cleaned and after drying out varnish be applied. The motor shall be mechanically and electrically isolated.
- Insulation resistance of motor should be measured at regular intervals by means of a 675 meggar tester or electric insulation tester and record kept for comparison. If found decreasing, the resistance should be improved. The IR values as a guide are 0.2 ohms for low voltage and 0.4 ohm for medium voltage supplies.
- Damaged, broken or loosen motor bars be replaced /repaired. A jarring noise at starting gives an indication of this defect.
- Motor distress will show up an unusual noise and odor from the winding. The cause i.e. faulty bearing or damaged insulation/winding should be replaced if not repairable.
- The performance of a motor should be checked from the full load current, from the starting current and from no load current, viz. A viz. any unusual vibration noise.

#### **a) Multi-grade Sand Filter (MGF)**

- Check the inlet, outlet and drain connections and their supports.
- Ensure that an isolation valve should be provided on the inlet of the filter.
- Set the valve on by pass to drain position, open the isolation valve and start the FFP (Filter Feed Pump)
- Be sure that the operator is handling the opening & closure of the valves according to the service, backwash, and rinse requirements.
- Check all the outlet water and its capacity for required plant.
- Check the discharge of the filter feed pump.
- After a prolonged backwash close the isolation valve and shift filter valves to Service position and open the isolation check the outlet.
- Check the service position of the plant.
- After a prolonged backwash close the isolation valve and shift filter valves on backwash position and open the isolation valve.
- Set the valve on by pass to drain position, open the isolation valve and start the FFP (Filter feed pump).





### **Backwash**

- After a backwash of 10-15 minutes close the isolation valve and shift valves to the RINSE position and open the isolation valve.
- After rinse 10-15 minutes close the isolation valve and shift filter valves to the SERVICE position and open the isolation valve.

### **b) Activated Carbon Filter (ACF)**

Before the commissioning day fill fresh water in the filter and keep it for 24 hours and drained out before the commissioning start.

- Check the inlet, outlet and drain connections and their supports.
- Ensure that an isolation valve should be provided on the inlet of the filter.
- Set the filter valves on by pass to drain position, open the isolation valve and start the FFP (Filter Feed Pump).
- Check the discharge of the filter feed pump.
- Close the isolation valve and shift the filter valves on BACKWASH position and open the isolation valve.
- After a prolonged backwash (check that the outlet water is colorless & without any suspended carbon particles) close the isolation valve and shift filter valves to the RINSE position and open the isolation valve slightly. Increase the inlet flow of the feed water slowly.
- After a prolonged rinse, close the isolation valve and shift filter valves to the SERVICE position and open the isolation valve.

### **Backwash**

- Close the isolation valve and shift the filter valves on BACKWASH position and open the isolation valve.
- After a backwash of 10-15 minutes close the isolation valve and shift filter valves to the RINSE position and open the isolation valve.
- After rinse 10-15 minutes close the isolation valve and shift filter valves to the SERVICE position and open the isolation valve.

## **7.0. SHUTDOWN PROCEDURE**

### **A) Shutdown procedure for few hours or a day**



Before shutdown the plant for few hours or a day, following measures should be taken for shut down of plant:

- a) Backwash the filters
- b) Shutdown all the pumps,

### **B) Shutdown procedure for long time**

Before shutdown the plant, we have to take care of plant, so that it does not cause any problem during startup the plant. For shut down of plant following measures should be taken:

- i) Drain out the waste water present in different units.
- ii) Wash all the units with fresh water.
- iii) Pumps should be properly cleaned.
- iv) Oil and greasing of pumps should be properly done after cleaning of pump.
- v) If the process equipment is opened, then it should be properly covered.

### **C) Plant Monitoring**

- o Check to see that all mechanical equipment is operating.
- o Check the dosing tank and pumps.

### **D) Equipment does not work automatically**

- 1. Failure of time clock, if any. Have electrician check.
- 2. Overload may be released. Push reset button.

## **PLANT MAINTENANCE PROCEDURE**

### **A. Daily Procedure**

- a) Check to see that all mechanical equipments are operating.
- b) Check the raw water tank & pumps for proper operation.

### **B. Weekly Procedure**

- a) Check lubrication of comminatory gear box (if any).
- b) The Multi-grade filter should be alternated on a regular basis. Clean surface sand filters, approximately every two weeks. During bed cleaning, all solids materials and weeds should be disposed of in an approved landfill.

### **C. Monthly Procedure**

- a) If difficulties are encountered which cannot be handled by your maintenance personnel



following this manual, service should be obtained from a qualified person such as the manufacturer's representative.

#### **D. Annually**

- a) Wire brush and paint any rusted metal at least annually or when indicated.
- b) Check grading for structural integrity

### **8.0. RECORDS& REPORTS**

#### **Total Report of plant**

Proper records are to be maintained for the sampling and testing and daily report is to be made for the operation of the plant. The report should carry the following details.

1. The total flow into the WTP in the last 24 hrs.
2. Reports and results of various samples and abnormality seen if any.
3. Status of MGF and ACF.
4. Hourly pressure gauge reading before and after the filters.
5. Status of various pumps and equipments.
6. Backwash frequency of filters.
7. Energy consumption.

### **9.0. SAMPLING, TESTING & INSPECTION**

Proper sampling, testing, recording of data and inspection is a must to be able to operate the plant continuously at a good efficiency and maintain the water quality at the outlet. Sampling points have been provided in the plant room which is as follows:

1. Before MGF and ACF.
2. After ACF.

#### **Testing**

All the analysis should be done as per APHA standard. The testing parameters are:

- pH
- TDS
- Hardness

## **10.0.**

## **11.0. DO'S & DON`TS OF WATER TREATMENT PLANT**

### **Do's:**

- Keep all the plant room area neat & clean.
- Maintain log book on daily basis and record
- Draw the water sample and show it to the engineer in charge daily.
- Test the treated water for pH at regular intervals.
- Regular backwash followed by rinse of MGF and ACF as per requirement.
- Always wear helmet and ear plugs while entering the plant room.
- Always use hand gloves during chemicals handling.
- Keep all the equipment neat & clean.
- Maintain necessary tools in the tool kit.



- Maintain the first aid box in the plant room.
- See that the lighting, ventilation and exhaust systems are working in the plant room.

**Don'ts:**

- Don't operate the filter valves in running mode of filter feed pump.
- Whenever operator does cleaning activities, there should be one more person outside the tank to take care.
- Don't close the over flow line of tanks at any time.
- Don't touch electrical panel without safety gadgets and without wearing rubber shoes.
- Keep the rubber mat dry and clean.
- Don't leave the plant room unattended.
- Don't be panic in case of any break down or failure.

**12.0. MAINTENANCE & SAFETY PROCEDURE**

1. All grating sand fencing should be locked when unattended.
2. All gratings should be kept painted and inspected regularly for structural integrity.
3. Turn the power off when doing electrical work.
4. Be friendly with the safety and storage requirements for any chemicals at the plant (i.e. granular and tablet chlorine).
5. Do not smoke or eat until your hands are thoroughly washed. When possible gloves should be worn.
6. Do not enter a confined space without proper training in these potential hazards. Never enter a wet well or deep manhole without adequate ventilation. Do not enter a manhole while working alone.
7. Avoid wearing loose clothing around moving mechanical equipment. Do not get near motor blower belts when the blower is running or on automatic timer.

**SPECIFIC SAFETY PRECAUTION:**

**ELECTRICAL**

Potential electrical hazard exists when servicing the local control panels, pumps, and tank mixers, skid-mounted instrumentation.

**MOVING PARTS**

Potential moving parts hazards exists during the following circumstances:



- Opening the ion exchange vessels' manhole without relieving the pressure from the tanks.

### **LIFTING LOADS**

The potential of injury when lifting heavy loads widely exists. You are advised to make a note of the following hazards for necessary precautions:

- Lifting and handling bags or drums of chemicals.

### **FALLING HAZARD**

Potential falling hazard exists when using a ladder to replace the media or servicing any components associated with the water storage tanks, filters, which are located near or on top of the vessels.

### **CONFINED SPACE HAZARDS**

Potential confined space hazard exists when servicing any internal components of media filters or when servicing internal components of storage tanks.

### **Safety-**

Safety precautions are to be observed by the plant operating staff while operating, maintenance, sampling and inspection. Employee hazards in such plants include exposure to:

1. Physical injuries
2. Body infections
3. Oxygen deficiency
4. Noxious gases and vapors.

These occupational hazards are largely avoided by the execution of safe practices and the use of safety equipment.

- Prevention of physical injuries :
  - Lift objects safely.
  - Prevent falls
  - Be cautious while climbing the ladders or steep, narrow stairs. Keep manholes in place.
  - Avoid body injuries due to tools. Have sufficient lighting arrangement.
  - Avoid Electrical shocks and injuries.
- Prevention of body infection  
Provide safe drinking water and proper first aid.
- Noxious gases and vapors
  - Avoid long exposures.

## **Maintenance**

**A.** The backbone of a successful plant is the regular preventive maintenance by the supervisory and operating staff. The following are the general points to be noted and kept in mind for maintenance.

- i) The major greasing points to be checked once in a week are listed below:-
  - Hand wheel operated spindle/ valves
  - Motors
  - Pumps
- ii) Only recommended grade of grease should be used.

## **B. Common Instructions For Operation And Maintenance**

- Ensure that adequate quantities of the appropriate lubricant oil and grease are available in the stock.
- Check and ensure that the pump set, motors, valves, piping etc. are secured and in proper alignment.
- Remove all construction materials and tools lying in and around units.
- Ensure that the drainage is clear and in working order.
- Fill up the bearing, gear box and moving parts with the correct grade and quantity of lubricants.
- Turn unit by hand to ensure free movement of pump and drive shafts.
- Ensure that the voltage is correct and power supply is sufficient to run all equipments at full load.

## **C. Maintenance of Gear Boxes**

- Check the oil level by means of the dipstick or oil level plug and if necessary, top up with the recommended grade of lubricant.
- Ensure that breathers are clean and operating properly
- On units having grease lubricated bearing, add two shots of grease from a grease gun or where screw in type lubricators are fitted, screw in the lubricator two turns and refill when necessary with recommended grease.

## **D. Oil Changes**

Regular oil changes are essential to ensure the unit gives long and trouble free service. The frequency at which the oil should be changed is determined by following factors:-

- Oil temperature: unit operating under load



- Type of oil: plain or containing additives
- Environment: humidity, dust etc.
- Operating conditions: shock loading etc.

At elevated temperature, the effective life of the oil is very much reduced. This is most pronounced with oil containing fatty and E.P. additives.

### **13.0. GENERAL HOUSE KEEPING**

Good housekeeping for any treatment plant is mandatory for obtaining a satisfactory performance. It calls for the establishment of systematic approach. A single individual should be responsible for conducting various functions.

The plant operators should be regular employee, well versed and experienced to handle the sophisticated electrical and mechanical equipment.

Good housekeeping makes it possible for each worker to devote full attention to their assigned job. Tools and material are readily available and always in the same place, there is adequate working space, and the workers efforts are not obstructed by irrelevant objects.

Housekeeping with respect to chemicals is critical as we are exposed to their hazards in four ways:

- Inhalation (Breathing in)
- Absorption (Skin contact)
- Ingestion (Swallowing)
- Injection (By needle or other sharp object)

### **FACTORS GOVERNING HOUSEKEEPING**

There are three main requirements needed for good housekeeping:

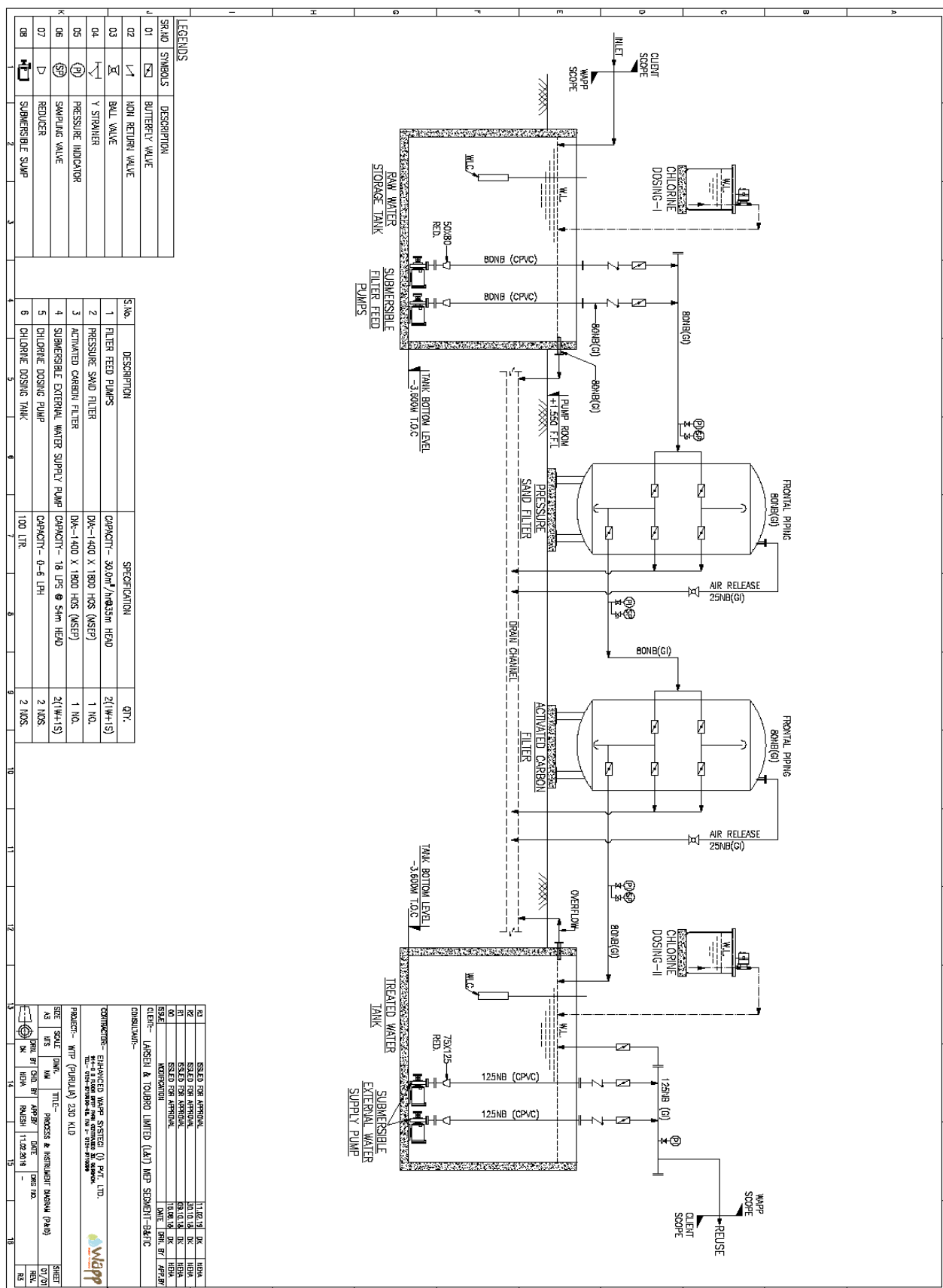
- Proper layout and well set up equipments and facilities
- Correct material handling and storage
- Cleanliness and orderliness

### **14.0. PROCEDURE FOR ENVIRONMENTAL CLEARENCE/ACT**

- Water (Prevention and Control of Pollution) Act, 1974
- Air (Prevention and Control of Pollution) Act, 1981
- Cess Act, 1977, - Environment (Protection) Act, 1986 and Rules there under
- Public Liability Insurance Act, 1981
- National Environmental Tribunal Act, 1995
- National Environment Appellate Authority Act, 1997



## 15.0 Drawing



**Drawings & Other Technical**  
**Data Sheets**

**For**

**DEBEN MAHATA GOVT.**  
**MEDICAL COLLEGE, HATUARA,**  
**PURULIA**

APPROVED

*06/03/19*  
**Pradip Kumar Nag**  
 Chief Consultant Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.

*06/03/19*  
**(Joydip Ojha)**  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.

*07/03/19*  
**Pranab Kumar**  
 Consultant Electrical Engineer (VCH)  
 West Bengal Medical Services Corporation Ltd.

16.08.18	0	RELEASED FOR CONSTRUCTION	RG	RAPK	RGA
DATE	REV. NO.	DESCRIPTION	Designed	Checked	Approved

REVISIONS



**LARSEN & TOUBRO LIMITED, CONSTRUCTION, BUILDINGS & FACTORIES  
 ENGINEERING DESIGN AND RESEARCH CENTRE**

CLIENT :	CONSULTANT :
WBMSCL	ENGINEERING DESIGN AND RESEARCH CENTRE (EDRC), L&T CONSTRUCTION - BUILDINGS & FACTORIES

PROJECT :  
**PLANNING, DESIGN & CONSTRUCTION OF GOVERNMENT MEDICAL COLLEGES AT 5 LOCATIONS (PACKAGE- B) WEST BENGAL**

SUPPLIER / CONTRACTOR:  
**L&T CONSTRUCTION - B&F IC**

JOB No. O17001 & O17105

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CHKD	RAPK		20.08.18	
APPD	RGA		20.08.18	
				<b>TECHNICAL SUBMITTAL OF PHE Water treatment Plant Purulia site</b>

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**TECHNICAL DATASHEETS**

**Rev-02**

**PROJECT**

**WATER TREATMENT PLANT**

**CAPACITY: 230 KLD**

**Place: Purulia - West bengal**

**CLIENT**

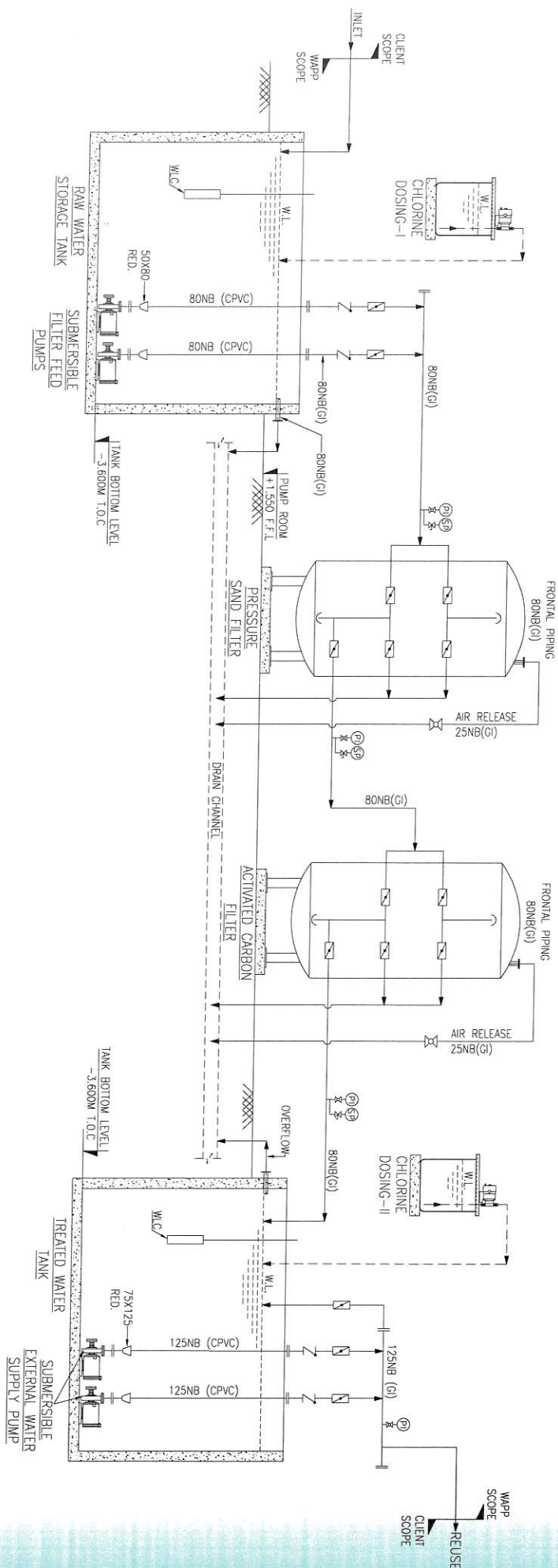
**LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC**

**ENHANCED WAPP SYSTEMS(I) INDIA PVT LTD.**

**PARK CENTRA, 914-B ,9th FLOOR,Sector-30, GURGAON-122001**

**TEL- 91-124-6710000 , FAX - 91-124-6710099**





SR.NO	SYMBOLS	DESCRIPTION
01		BUTTERFLY VALVE
02		NON RETURN VALVE
03		BALL VALVE
04		Y STRAINER
05		PRESSURE INDICATOR
06-		SAMPLING VALVE
07		REDUCER
08		SUBMERSIBLE PUMP

S.No.	DESCRIPTION	SPECIFICATION	QTY.
1	FILTER FEED PUMPS	CAPACITY- 30.0m <sup>3</sup> /hr@35m HEAD	2(1W+1S)
2	PRESSURE SAND FILTER	DM-1400 X 1800 HOS (MSEP)	1 NO.
3	ACTIVATED CARBON FILTER	DM-1400 X 1800 HOS (MSEP)	1 NO.
4	SUBMERSIBLE EXTERNAL WATER SUPPLY PUMP	CAPACITY- 18 LPS @ 54m HEAD	2(1W+1S)
5	CHLORINE DOSING PUMP	CAPACITY- 0-6 LPH	2 NOS.
6	CHLORINE DOSING TANK	100 LTR	2 NOS.


01/03/19

(Joydip Ojha)  
Executive Engineer (Civil)  
General Medical Services Corporation Ltd


CLINIC	ISSUE	DATE	DRN BY	APR BY
LARSEN & TOUBRO LIMITED (L&T) MEP SECTOR - B&C	R2	11.02.19	DK	MEHA
	R3	30.10.18	DK	MEHA
	R1	ISSUED FOR APPROVAL	DK	MEHA
	00	ISSUED FOR APPROVAL	DK	MEHA
	00	MODIFICATION	16.08.18	DK

**CONTRACTOR—**  
**ENHANCED WARP SYSTEMS (I) PVT. LTD.**  
914-B 9 FLOOR BRP PARK CENTRAL SEC 30, GURGAON,  
TEL:- 0124-6710900-98, FAX :- 0124-6710099

**Wapp**

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DK	NEHA	RALSH	11.02.2019	-	
		REV			
		R2			

<b>PROJECT</b>	WATER TREATMENT PLANT FOR PURULIA		
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC		
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.		
<b>S.No.</b>	<b>List of Equipments</b>	<b>Make Offered</b>	<b>Qty.</b>
1	Filter Feed Pump	Wilco	2 Nos
2	Pressure Sand Filter	Wapp	1 No.
3	Activated Carbon Filter	Wapp	1 No.
4	Chlorine Dosing System	Edose/Focus	2 Nos.
5	Electrical & Automation	Wapp (SNG)/Eq.	1 Nos.

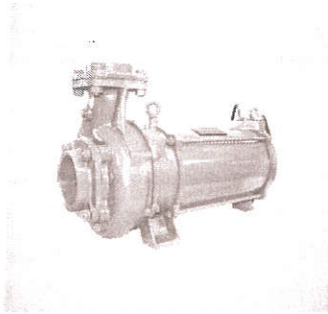
  
 01/03/19  
 (Joydip Chatterjee)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.

<b>PROJECT</b>		WATER TREATMENT PLANT FOR PURULIA			
<b>OWNER</b>		LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC			
<b>SUPPLIER</b>		ENHANCED WAPP SYSTEMS (I) PVT. LTD.			
<b>Document Title</b>		OPENWELL SUBMERSIBLE TYPE FILTER FEED PUMP			
<b>A</b>	<b>Technical Details</b>	<b>Units</b>	<b>Required</b>	<b>Final Specs</b>	<b>Deviations</b>
	Quantity	Nos.	2	2(1w+ 1s)	-
	Fluid		-	Clear Water	-
	Temperature	°C	-	Ambient	-
	Capacity	m3/hr	30	30.0	-
	Total Offered Head	m	-	35.0	-
	Type		Submersible	Submersible	-
<b>B</b>	<b>PUMP DESCRIPTION</b>				
	Make		Grundfos/ Xylem/ Wilo	Wilo	-
	Pump set Model		-	MPO 079	-
	Discharge Nozzle	mm		50.0	-
	Pump Casing			CI	-
	Impeller			CI	-
	Shaft			SS	-
<b>C</b>	<b>DRIVE SPECIFICATION</b>				
	Rating	V, $\Phi$ , HZ	-	415,3,50	-
	Power Rating	HP	-	7.5	-
	Type of Starter		-	DOL	-
	Degree of protection		-	IP68	-
	Insulation Class		-	F	-

  
 (Joydip Ojha)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.



## MPO Openwell submersible



**Technical Data:**  
**Flow:** 1460 LPM  
**Head:** upto 62 mts  
**Power:** upto 10 hp  
**Voltage:** available in 3 phase

**Application:**  
 Water transfer in:  
 → Bungalows  
 → Farm houses  
 → Apartments  
 → Agriculture

### Standard Features:

- No need of foundation and foot wall as installed under water
- SS shaft for long and trouble free life
- Energy efficient motor design
- Motor designed to operate in wide voltage range
- Motor filled with anti corrosive liquid to increase life of internal parts
- Strong carbon v/s stainless steel thrust bearing for longer life

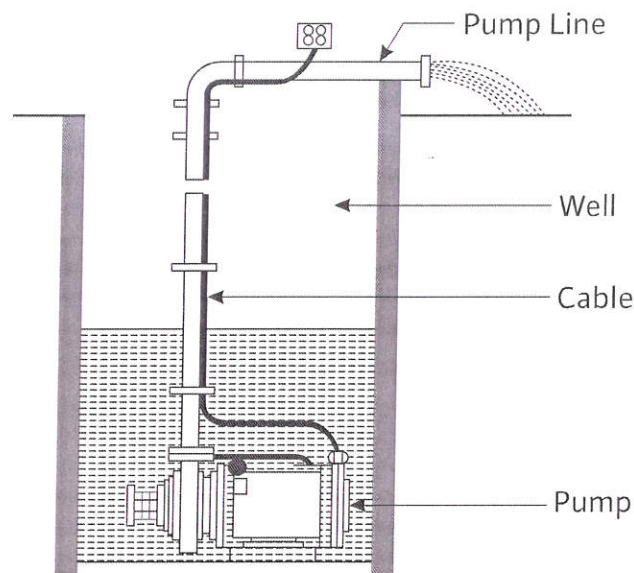
**“ We take care for your  
everyday water needs.”**

  
 (Joydip Ojha)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.





## Typical Submerged Installation



## Selection Table

### Openwell 3 Phase

Pump Model	HP	kW	Outlet Size (mm)	Head (m)																	
				8	11	12	15	16	18	19	21	22	24	25	26	28	30	32	33	35	39
MPO020	2.00	1.50	40					250	235	220	195	180	150	130	115	50					
MPO020L	2.00	1.50	50	640	550	500	410	350													
MPO031	3.00	2.20	40										250	240	235	220	205	190	180		
MPO032	3.00	2.20	40							350	330	320	290	275	250	180				150	
MPO033	3.00	2.20	50	680	660	585	550	485	435	300											
MPO034	3.00	2.20	65	930	810	775	600	400													
MPO055	5.00	3.70	40											500	490	470	445	425	410		
MPO055H	5.00	3.70	50														450	425	410	380	300
MPO056	5.00	3.70	50						690	650	635	600	575	550	500	450	325			375	150
MPO057	5.00	3.70	65			1150	1020	960	860	805	690	600	430								
MPO078	7.50	5.50	40																		
MPO079	7.50	5.50	50											720	685	655	620	590		330	240
MPO0710	7.50	5.50	65						1040	1000	980	920	900	870	785	730	640	590	530	340	250
MPO0711	7.50	5.50	75					1450	1320	1270	1100	1030	850	780	620				420		

Pump Model	HP	Outlet Size (mm)	Head (m)																							
			19	21	24	27	30	32	33	34	35	36	42	48	50	53	56	59	60	62	65	68	71	74	78	
MPO1012	10.0	40											470	420	405	370	325	250	230	100						
MPO1013	10.0	50						820	810	790	770	730	650	420	300											
MPO1014	10.0	65			1250	1150	1050	970	925	900	810	400														
MPO1015	10.0	75			1540	1390	1210	990	750	600																
MPO1016	10.0	75	1400	1200	500																					
MPO1217	12.5	50			1000	920	900	880	870	850	800	740	600	550	400											
MPO1218	12.5	65			1200	1140	1090	1050	1040	1000	910	650														
MPO1219	12.5	75	1770	1640	1470	1300	1060	920	780																	
MPO1520	15.0	50											900	780	735	660	550	440	400							
MPO1521	15.0	50												880	840	785	710	670	625	480	300					
MPO1522	15.0	65										1250	1160	1050	800	600										
MPO1523	15.0	75	1980	1860	1760	1640	1520	1475	1380	1290	800															
MPO2024	20.0	50														850	810	800	740	690	630	550	460	300		
MPO2025	20.0	65											1280	1230	1150	1045	900	800	650							
MPO2026	20.0	75											1650	1620	1580	1540	1420	1200	600							
MPO2527	25.0	75											1860	1760	1550	1450	1300	1100								
MPO3028	30.0	75											2250	2080	2000	1830	1710	1550	1500	1350						

Conversion Table: 1 m = 3.281 ft and 1 m<sup>3</sup>/hr = 16.67 LPM = 3.67 GPM

01/03/19  
 (Joydip Ojha)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.

<b>PROJECT</b>	WATER TREATMENT PLANT FOR PURULIA				
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC				
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.				
<b>Document Title</b>	MULTI GRADE FILTER				
<b>A</b>	<b>Technical Details</b>	<b>Units</b>	<b>Required</b>	<b>Final Specs</b>	<b>Deviations</b>
	Make		WAPP	WAPP	-
	Quantity		1	1.0	-
	Filter dimensions (Diameter)	mm		1400.0	-
	Height on Straight	mm		1800.0	-
	Flowrate	m <sup>3</sup> /hr	30	30.0	-
	Surface Loading Rate	m <sup>3</sup> /m <sup>2</sup> /hr		20.0	
	M.O.C of Shell and Dish		MS	MSEP	-
	Shell Thickness	mm	-	6.0	-
	Dish Thickness	mm	-	8.0	-
	Internal Coding		-	Epoxy Paint	-
	Bolts and Nuts		-	GI	-
	Gaskets		-	Neoprene Rubber	-
<b>B</b>	<b>Media Details</b>				
	Fine Sand	Kgs	-	1200	-
	Coarse Sand	Kgs	-	700	-
	Crushed Gravel	Kgs	-	250	-
	Gravel	Kgs	-	250	-
	Pebbel	Kgs	-	950	-
<b>C</b>	<b>Frontal Piping</b>				
	Pipe Size	mm	-	80.0	-
	MOC		-	MS	-
	Bolts & Nut Internal			SS 304	
<b>D</b>	<b>Design Standard</b>				
	Design Temperature	Deg C		50.0	
	Design Code			IS 2825	
	Operating Pressure	kg/cm <sup>2</sup>		3.5	
	Design Pressure	kg/cm <sup>2</sup>		7.0	
	Flanges			ANSI Class 150	
	Shell/Dish End			IS 2062 Gr. B	
	Supporting Pads & Plates			IS 2062 Gr. B	
	Stay Bars			IS 1239 Part-1 Heavy	

  
 04/03/19  
 (Joydip Ojha)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.



<b>PROJECT</b>	WATER TREATMENT PLANT FOR PURULIA				
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC				
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.				
<b>Document Title</b>	ACTIVATED CARBON FILTER				
<b>A</b>	<b>Technical Details</b>	<b>Units</b>	<b>Required</b>	<b>Final Specs</b>	<b>Deviations</b>
	Make		WAPP	WAPP	-
	Quantity		1	1.0	-
	Filter dimensions (Diameter)	mm		1400.0	-
	Height on Straight	mm	-	1800.0	-
	Flowrate	m <sup>3</sup> /hr	30	30.0	-
	Surface Loading Rate	m <sup>3</sup> /m <sup>2</sup> /hr		20.0	
	M.O.C of Shell and Dish		MS	MSEP	-
	Shell Thickness	mm	-	6.0	-
	Dish Thickness	mm	-	8.0	-
	Internal Coding		-	Epoxy Paint	-
	Bolts and Nuts		-	GI	-
	Gaskets		-	Neoprene Rubber	-
<b>B</b>	<b>Media Details</b>				
	Activated Carbon	Kgs	-	500	-
	Crushed Gravel	Kgs	-	500	-
	Gravel	Kgs	-	250	-
	Fine Pebbel	Kgs	-	250	-
	Pebbel	Kgs	-	950	-
<b>C</b>	<b>Frontal</b>				
	Pipe Size	mm	-	80.0	-
	MOC		-	MS	-
	Bolts & Nut Internal			SS 304	
<b>D</b>	<b>Design Standard</b>				
	Design Temperature	Deg C		50.0	
	Design Code			IS 2825	
	Operating Pressure	kg/cm <sup>2</sup>		3.5	
	Design Pressure	kg/cm <sup>2</sup>		7.0	
	Flanges			ANSI Class 150	
	Shell/Dish End			IS 2062 Gr. B	
	Supporting Pads & Plates			IS 2062 Gr. B	
	Stay Bars			IS 1239 Part-1 Heavy	

  
 (Joydip Ojha)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.

# FOCUS

## ENGINEERS

(Mfrs of: Dosing Pumps, Agitators & Dosing Systems).

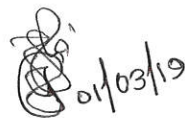
NO: 10, Ganesh Nagar, 1st Street,  
G K Industrial Estate,  
Alapakkam,  
Porur, Chennai.  
Pin : 600 116

### 1. SPECIFICATION FOR METERING PUMP

MODEL	: FEA 104
MAKE	: FOCUS
CAPACITY	: 0 TO 6.0 LPH
PRESSURE	: 4.0 KG/CM <sup>2</sup>
FLOW CONTROL	: 0 TO 100% BY MANUAL CONTROL
INPUT SUPPLY	: SINGLE PHASE, 230 V/AC

### M.O.C :

HEAD	: PP
DIAPHRAGM	: TEFLON FACED HYPOLAN
HOUSING	: GFPP
FITTINGS	: PVC
BALL SEAL	: TEFLON
BALL	: CERAMIC



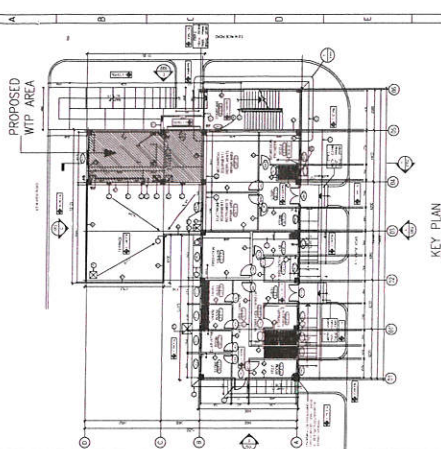
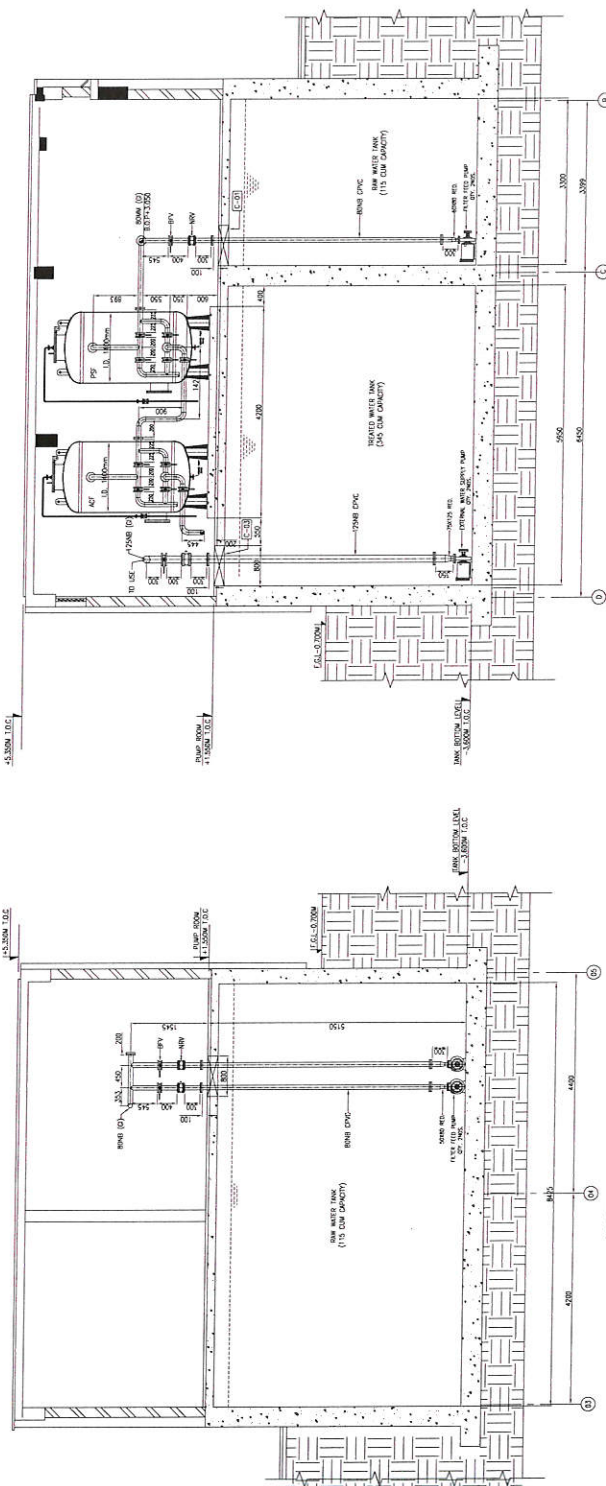
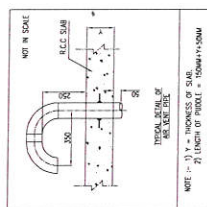
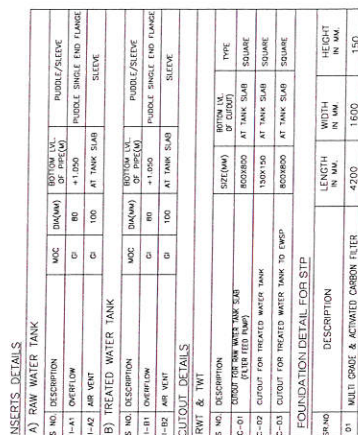
(Joydip Ojha)  
Executive Engineer (Civil)  
West Bengal Medical Services Corporation Ltd.







<b>PROJECT</b>	WATER TREATMENT PLANT FOR PURULIA				
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC				
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.				
<b>Document Title</b>	CHLORINE DOSING SYSTEM				
<b>A</b>	<b>Dosing System</b>	<b>Units</b>	<b>Approved R-O Specs</b>	<b>Final Specs</b>	<b>Devitions</b>
	Quantity	nos	-	2.0	-
	Pump Capacity( Chlorine Dosing )	LPH	-	6.0	-
	Fluid to be Dosed		-	Sodium Hypo Chlorite	-
<b>B</b>	<b>Pump &amp; Tank Details</b>				
	Quantity	nos	-	2.0	-
	Pump Make		-	Edose/Focus	-
	Dosing Tank Make		-	Sintex	-
	Dosing Tank Capacity	Ltr	-	100.0	-

  
 (Joydip Ojha)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.



PROJECT: WATER TREATMENT PLANT FOR PURULIA							
DOCUMENT: DESIGN CLACULATION SHEET							
Technology		WTP			Prepared By: Neha Jha		
Plant capacity		230 KLD			Date of Preparation :- 11/02/19		
Running Hrs.		8			Rev-03		
Streams		1					
Plant Flow		30 m3/hr					
WATER CHARACTERISTIC		INFLUENT			TREATED WATER		
pH		6.5-7.5			6.5-8.5		
TSS (mg/l)		200-300			<10		
Average Flow(m3/hr)		30.0					
1	Filter feed pump	Pump Required		30.0	M³/hrs.		
		Pump Head		35	meter		
		Pump proposed		2	nos.	1w+1s	
2	Multi Grade Filter	surface loading rate	MS	20	M³/M²/Hr	Ref: Matcalf & Eddy ,Inc. IV edition. Chapter-11	
		Filtration rate proposed		30.0	M³/Hr		
		Nos. of filter		1.0			
		filtration rate of each filter		30.0	M³/Hr		
		Area Required		1.50	M²		
		Dia Required		1382.3	mm		
		Dia Adopted		1400	mm		1
		HOS		1800	mm		
3	Activated Carbon Filter	surface loading rate	MS	20	M³/M²/Hr	Ref: Matcalf & Eddy ,Inc. IV edition. Chapter-11	
		Filtration rate proposed		30.0	M³/Hr		
		Nos. of filter		1.0			
		filtration rate of each filter		30.0	M³/Hr		
		Area Required		1.50	M²		
		Dia Required		1382.3	mm		
		Dia Adopted		1400	mm		1
		HOS		1800	mm		
4	Chlorine Dosing pump	Flow		30.00	m3/h	2 No.	
		Dosing rate		5.00	mg/lit		
		Capacity		3.00	lph		
		Capacity adopted		6.00	lph		
		Pump head		25.00	m		
		Dosing tank capacity		100.00	lit.		



	BUTTERFLY VALVE
	BALL VALVE
	FLANGE
	UNION
	REDUCER
	FOOT VALVE

**LEGENDS:-**

NOTE :-

NOTE: 1) ALL DIMENSIONS ARE IN MM. & LEVEL ARE IN METER.

81	DATE	REVISED FOR APPROVAL	15.02.19	DATE	15.02.19	DATE	15.02.19	DATE	15.02.19
80	DATE	SUBMITTED FOR APPROVAL		DATE		DATE		DATE	
79	DATE	NOTIFICATION		DATE		DATE		DATE	
78	DATE			DATE		DATE		DATE	
77	DATE			DATE		DATE		DATE	
76	DATE			DATE		DATE		DATE	
75	DATE			DATE		DATE		DATE	
74	DATE			DATE		DATE		DATE	
73	DATE			DATE		DATE		DATE	
72	DATE			DATE		DATE		DATE	
71	DATE			DATE		DATE		DATE	
70	DATE			DATE		DATE		DATE	
69	DATE			DATE		DATE		DATE	
68	DATE			DATE		DATE		DATE	
67	DATE			DATE		DATE		DATE	
66	DATE			DATE		DATE		DATE	
65	DATE			DATE		DATE		DATE	
64	DATE			DATE		DATE		DATE	
63	DATE			DATE		DATE		DATE	
62	DATE			DATE		DATE		DATE	
61	DATE			DATE		DATE		DATE	
60	DATE			DATE		DATE		DATE	
59	DATE			DATE		DATE		DATE	
58	DATE			DATE		DATE		DATE	
57	DATE			DATE		DATE		DATE	
56	DATE			DATE		DATE		DATE	
55	DATE			DATE		DATE		DATE	
54	DATE			DATE		DATE		DATE	
53	DATE			DATE		DATE		DATE	
52	DATE			DATE		DATE		DATE	

CONSULTANT:-

CONTRACTOR:- ENHANCED WAPP SYSTEMS (I) PVT. LTD.

ENHANCED WAPP SYSTEGI (I) PVT. LTD.  
914-B 9 FLOOR 9TH PARK CENTRAL SEC 30, GURGAON.  
TEL:- 0124-6710900-98, FAX :- 0124-6710099

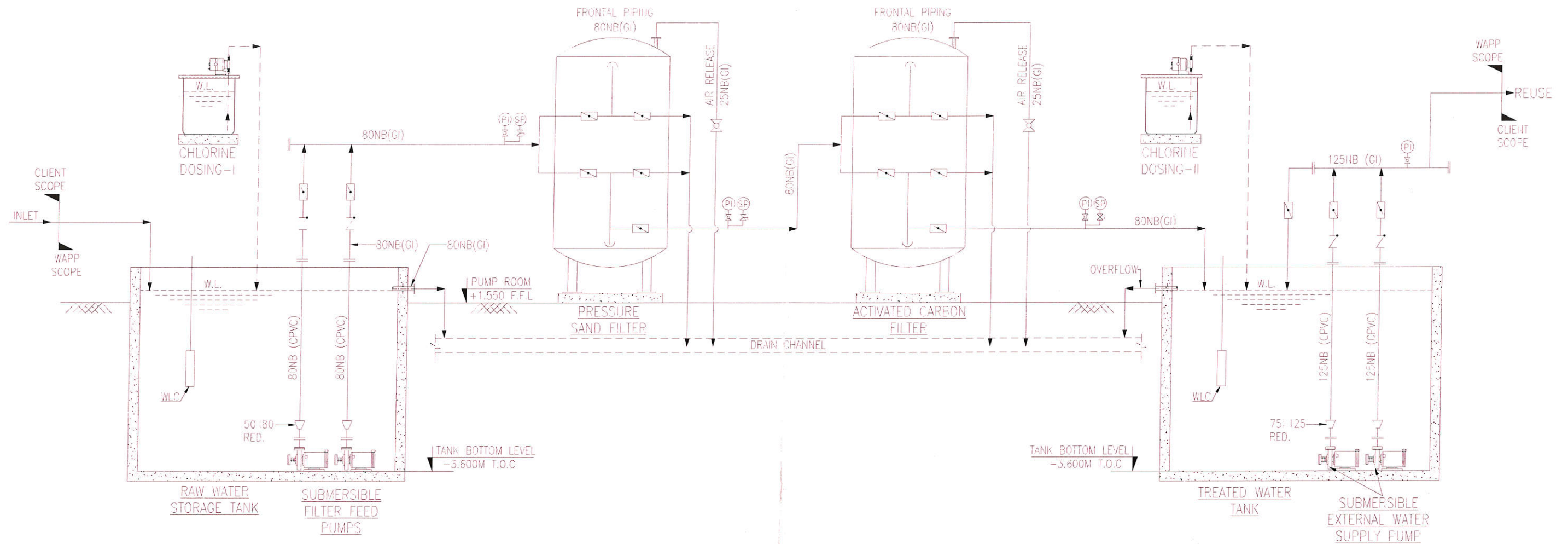
PROJECT:- WATER TREATMENT PLANT (PURULIA) 230 CUM/DAY

SIZE	SCALE	DIMN.	TITLE:--
A1	1:50	MM	PIPING LAYOUT PLAN & SECTION

DRN. BY	CHD. BY	APP. BY	DATE	DRG NO.

15.02.19	REJESH	DK	NEHA	16	15
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# LEGENDS

SR.NO	SYMBOLS	DESCRIPTION
01		BUTTERFLY VALVE
02		NON RETURN VALVE
03		BALL VALVE
04		Y STRAINER
05		PRESSURE INDICATOR
06		SAMPLING VALVE
07		REDUCER
08		SUBMERSIBLE SUMP

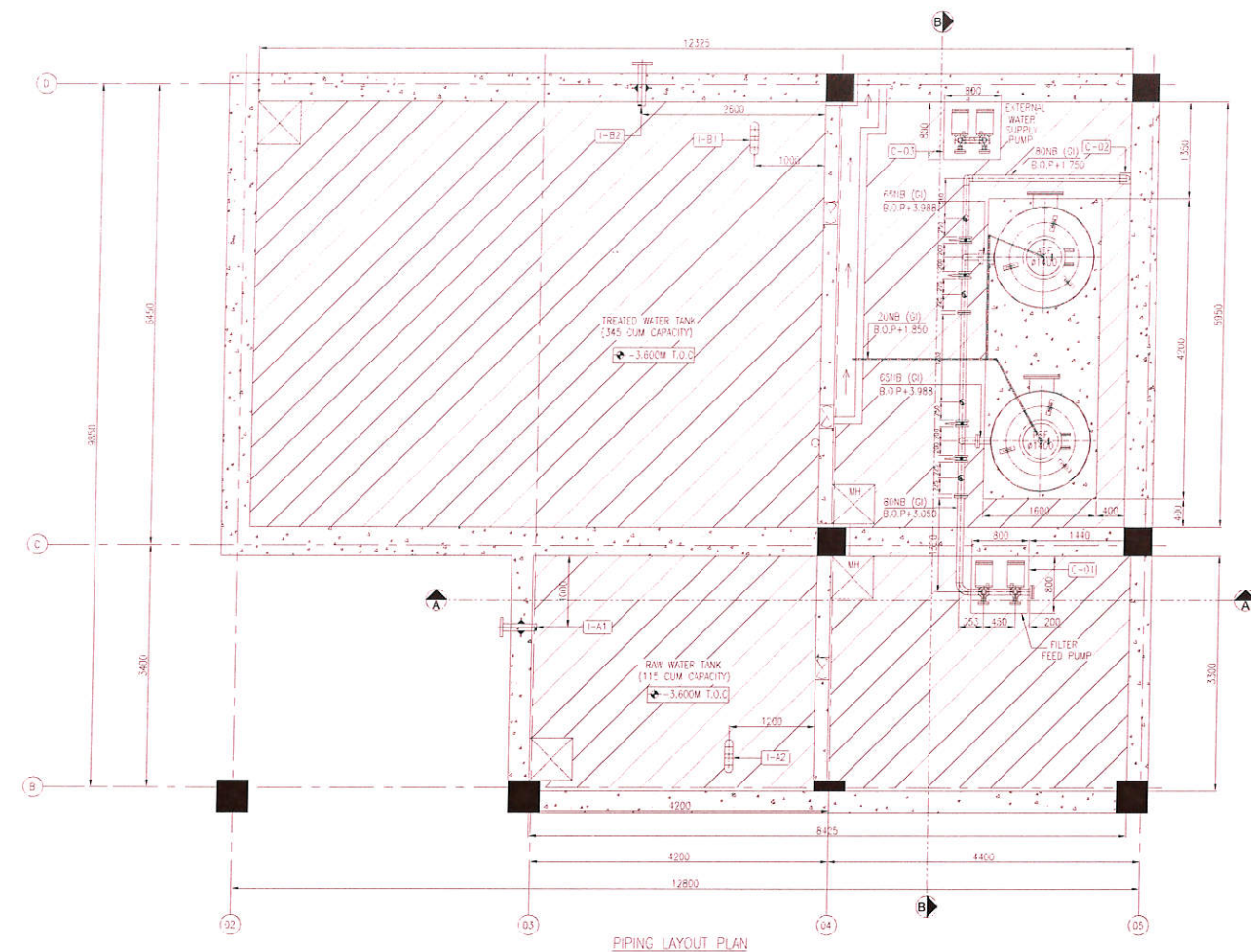
S.No.	DESCRIPTION	SPECIFICATION	QTY.
1	FILTER FEED PUMPS	CAPACITY- 30.0m <sup>3</sup> /hr @ 35m HEAD	2(1W+1S)
2	PRESSURE SAND FILTER	DIA:-1400 X 1800 HOS (MSEP)	1 NO.
3	ACTIVATED CARBON FILTER	DIA:-1400 X 1800 HOS (MSEP)	1 NO.
4	SUBMERSIBLE EXTERNAL WATER SUPPLY PUMP	CAPACITY- 18 LPS @ 54m HEAD	2(1W+1S)
5	CHLORINE DOSING PUMP	CAPACITY- 0-6 LPH	2 NOS.
6	CHLORINE DOSING TANK	100 LTR.	2 NOS.

13/11/19  
 (For approval of Client)  
 For West Bengal Water Supply Corporation Ltd.

R3	ISSUED FOR APPROVAL	11.02.19	DK	NEHA
R2	ISSUED FOR APPROVAL	30.10.18	DK	NEHA
R1	ISSUED FOR APPROVAL	09.10.18	DK	NEHA
00	ISSUED FOR APPROVAL	16.08.18	DK	NEHA
ISSUE	MODIFICATION	DATE	DRN. BY	APP. BY
CLIENT:- LARSEN & TOUBRO LIMITED (L&T) MEP SEGMENT-B&F/C				
CONSULTANT:-				
CONTRACTOR:- ENHANCED WAPP SYSTEMS (I) PVT. LTD. 914-B 9 FLOOR BPTP PARK CENTRA/SEC 30, GURGAON. TEL:- 0124-6710900-98, FAX :- 0124-6710099				
PROJECT:- WTP (PURULIA) 230 KLD				
SIZE	SCALE	DIMM.	TITLE:-	
A3	NTS	MM	PROCESS & INSTRUMENT DIAGRAM (P&ID)	
DRN. BY	CHD. BY	APP. BY	DATE	DRG. NO.
DK	NEHA	RAJESH	11.02.2019	-
				REV.
				R3

WAPP





#### INSETS DETAILS

##### A) RAW WATER TANK

S. NO.	DESCRIPTION	MOC	DIA(MM)	BOTTOM LVL. OF PIPE(M)	PUDDLE/SLEEVE
I-01	OVERFLOW	GI	80	+1.050	PUDDLE SINGLE END FLANGE
I-02	AIR VENT	GI	100	AT TANK SLAB	SLEEVE

##### B) TREATED WATER TANK

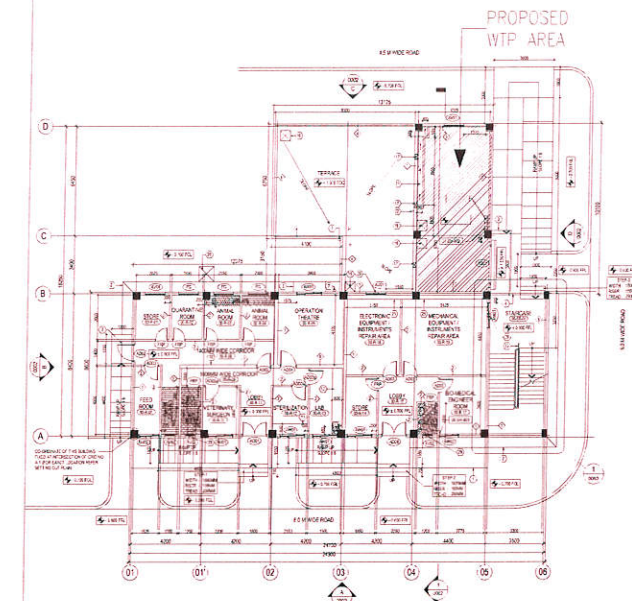
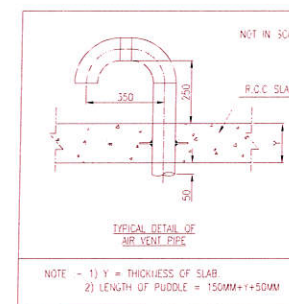
S. NO.	DESCRIPTION	MOC	DIA(MM)	BOTTOM LVL. OF PIPE(M)	PUDDLE/SLEEVE
I-01	OVERFLOW	GI	80	+1.050	PUDDLE SINGLE END FLANGE
I-02	AIR VENT	GI	100	AT TANK SLAB	SLEEVE

#### CUTOUT DETAILS

S. NO.	DESCRIPTION	SIZE(MM)	BOTTOM LVL. OF CUTOUT	TYPE
C-01	CUTOUT FOR RAW WATER TANK SLAB (FILTER FEED PUMP)	800X800	AT TANK SLAB	SQUARE
C-02	CUTOUT FOR TREATED WATER TANK	150X150	AT TANK SLAB	SQUARE
C-03	CUTOUT FOR TREATED WATER TANK TO EWSP	800X300	AT TANK SLAB	SQUARE

#### FOUNDATION DETAIL FOR STP

S.R.NO.	DESCRIPTION	LENGTH IN MM.	WIDTH IN MM.	HEIGHT IN MM.
01	MULTI GRADE & ACTIVATED CARBON FILTER	4200	1600	150



*(Joydip Ojha)*  
Executive Engineer (Civil)  
West Bengal Medical Services Corporation Ltd.

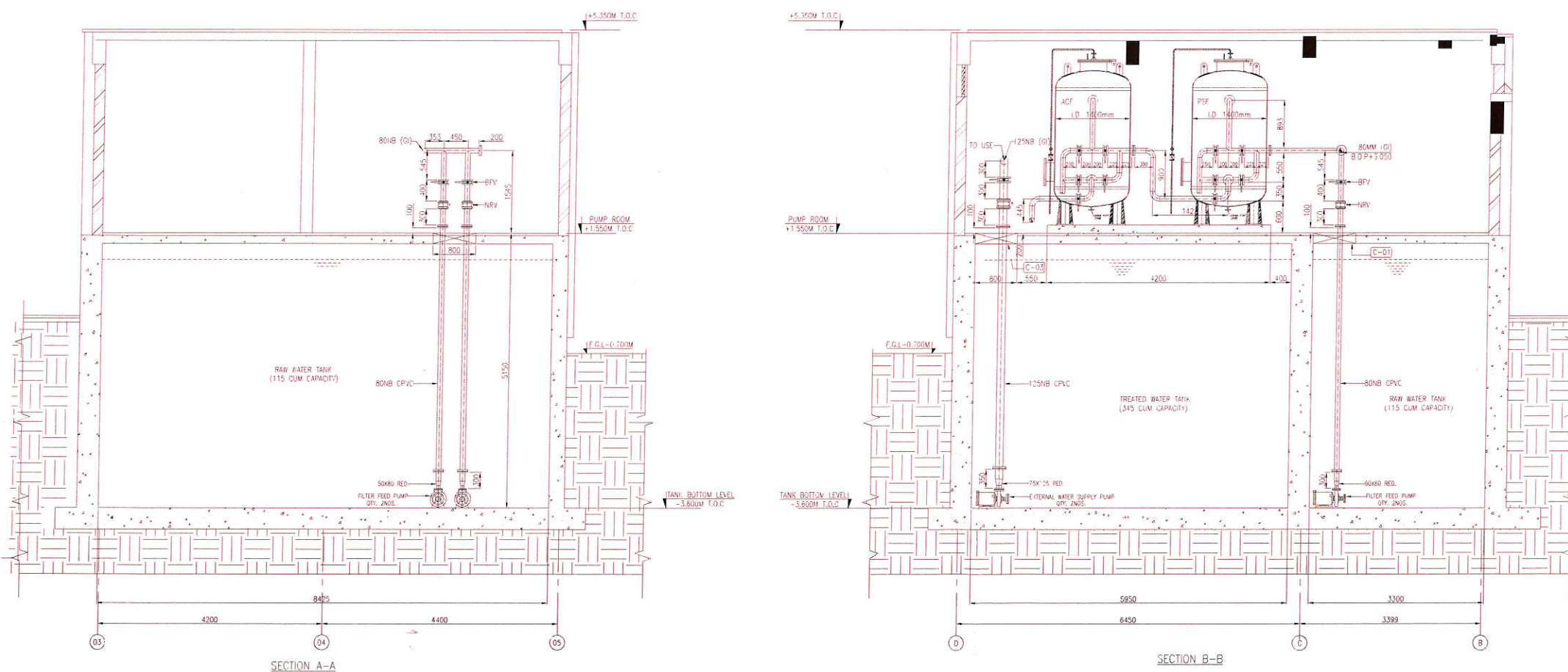
#### LEGENDS:-

	BUTTERFLY VALVE
	BALL VALVE
	FLANGE
	UNION
	REDUCER
	FOOT VALVE

#### NOTE :-

1) ALL DIMENSIONS ARE IN MM. & LEVEL ARE IN METEP.

R1	ISSUED FOR APPROVAL	15.02.19	DK	R-JESH
00	ISSUED FOR APPROVAL	06.12.18	DK	NEHA
ISSUE	MODIFICATION	DATE	DRN BY	APP BY
CLIENT:- LARSEN & TOUBRO LIMITED (L&T) MEP SEGMENT-B&FIC				
CONSULTANT:-				
CONTRACTOR:- ENHANCED WAPP SYSTEGI (I) PVT. LTD. 914-B 9 FLOOR BPTP PARK CENTRA, SEC 30, GURGAON. TEL:- 0124-6710900-98, FAX :- 0124-6710399				
PROJECT:- WATER TREATMENT PLANT (PURULIA) 230 CUM/DAY				
SIZE	SCALE	DIMN.	TITLE:-	SHEET
A1	1:50	MM	PIPING LAYOUT PLAN & SECTION	01/01
DRN. BY	CHK. BY	APP. BY	DATE	DRG. NO.
DK	NEHA	REJESH	15.02.19	
				REV.
				R1





**ELECTRICAL LOADLIST**

Rev-02

**PROJECT**  
**WTP**

**Place: Purulia West bengal**

**CLIENT**

**LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC**

**ENHANCED WAPP SYSTEMS(I) INDIA PVT LTD.**

**PARK CENTRA, 914-B ,9th FLOOR, Sector-30, GURGAON-122001**

**TEL- 91-124-6710000 , FAX - 91-124-6710099**

ELECTRICAL LOAD LIST										
Site	L&T Kolkata Hospitals-Purulia					Client		L&T		
Project	WTP									
Vendor	Enhanced Wapp System									
SL.No.	Feeder		Rating of Feeder (Kw)	Qty	duty	Rev	standby	Working Load (Kw)	Standby load (Kw)	R2 Connected load (Kw)
			KW	No.	No.		No.	KW	KW	KW
1	MAIN MCC PANEL		5.5	2	1		1	5.5	5.5	11
2	Filter Feed Pump		0.1	2	2		0	0.2	0	0.2
3	CHLORINE DOSING PUMP		0	1	0		1	0	0	0
4	SPARE 20A TPN MCB		0	1	0		1	0	0	0
	SPARE 6A DP MCB		0	1	0		1	0	0	0
	TOTAL							5.7	5.5	11.2

APPROVED

*Pranab Kumar Samanta*  
01.02.19

Pranab Kumar Samanta  
Consultant Electrical Engineer (MCH)  
Consultant Medical Services Corporation Ltd.  
West Bengal

<b>PROJECT</b>	WATER TREATMENT PLANT FOR PURULIA			
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC			
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.			
<b>Document Title</b>	ELECTRICAL AND AUTOMATION			
	<b>Process Requirement</b>	<b>Approved R-0 Specs</b>	<b>Final Specs</b>	<b>Deviations</b>
<b>A</b>	<b>Control Panel</b>			-
	Make	WAPP	WAPP(SnG)/Eq.	-
	Type	-	Non-Compartmentalized	-
	Specifications:	-	Indoor Type, Dust & vermin proof, constructed from 16 Gauge CRCA sheet enclosure and Bus bar completely surrounded , Neoprene rubber gasket for doors & covers. . Panel Shall be treated with all anticorrosive process before painting as per specification with 2 coat of Red Oxide primer and final approved shade of powder coated paint.	-
<b>B</b>	<b>Makes of Components</b>			
	MCCB	-	L&T/Siemens/Abb/Schneider	-
	MCB	-	L&T/Siemens/Abb/Schneider	-
	Contactors	-	L&T/Siemens/Abb/Schneider	-
	Overload relay	-	L&T/Siemens/Abb/Schneider	-
	Digital MFM	-	Conzerv/Reputed	-
	Indicating lights	-	L&T/Esbee/Reputed	-
	Push buttons	-	L&T/Esbee	-
	CTs		Kappa/Reputed	-
	Selector switch		Salzer/Kaycee/Reputed	-
	Timer	-	L&T/Siemens/Reputed	-
	Cable	-	Polycab/Empire/KEI	-
	Cable Gland	-	Comet/Eqv.	-
	Terminals	-	Elmex/Connectwell/Reputed	-
<b>C</b>	<b>Level Switches</b>			
	Make		ExProcess/SNG/Eq.	

 01/03/19

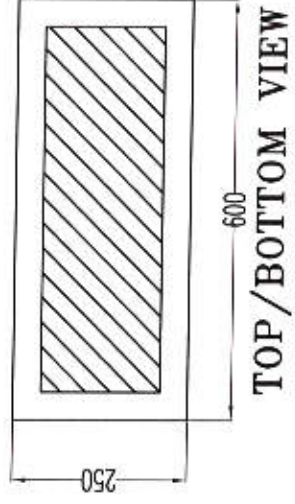
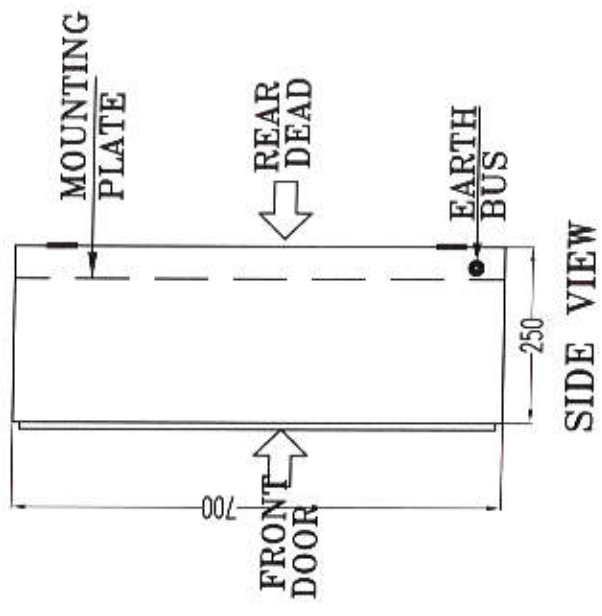
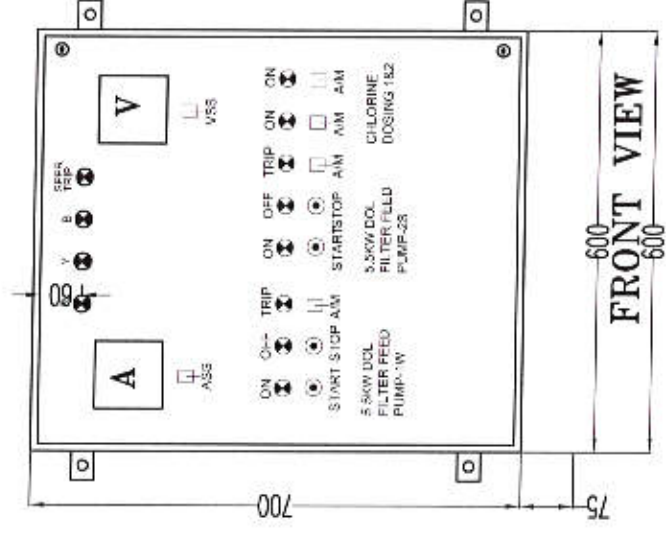
(Joydip Ojha)

Executive Engineer (Civil)

West Bengal Medical Services Corporation Ltd.

1									2									3									4									5									6									7									8									9								
A									B									C									D									E									F																																			
1. SYSTEM VOLTAGE:- 415V AC TPN,50HZ (VARIATION IN VOLTAGE $\pm 10\%$ & FREQUENCY $\pm 5\%$ ) SOLIDELY GROUNDED NEUTRAL.									2. THE PANEL BOARD SHALL BE CUBICAL DESIGN, FREE STANDING, FLOOR MOUNTING, NON COMPARTMENTALISED, SINGLE FRONT EXECUTION, DUST AND VERMIN PROOF, WITH DEGREE OF PROTECTION-IP42.									3. THE PANEL BOARD SHALL BE FABRICATED OUT OF C.R.C.A SHEET HAVING THICKNESS OF:- (a) LOAD BEARING MEMBERS :- 2MM (b) DOOR & NON LOAD BEARING MEMBERS :- 1.6MM (c) GLAND PLATE :-3MM (d) BOTTOM FRAME :-75X40X3MM									4. THE PANEL SHALL BE PAINTED WITH ELECTRO STATIC POWDER COATING PAINT WITH MIN. 7 TANK PROCESS AS PER FOLLOWING COLOUR SCHEME :- A. DOOR / COVERS & SIDES :- SIEMENS GRAY RAL-7035 B. MOUNTING PLATE :- ORANGE B. BASE FRAME :- BLACK									5. ALL CONTROL WIRING SHALL BE DONE AS UNDER:- VOLTAGE CIRCUIT :- 1.5 SQ. MM 1100 VOLTS GRADE CU. WIRE. CURRENT CIRCUIT :- 2.5 SQ. MM 1100 VOLTS GRADE CU. WIRE POWER CIRCUIT :- MIN. 4.0 SQ. MM 1100 VOLTS GRADE CU. WIRE AND SUITABLE HIGHER SIZE AS PER LOAD REQUIREMENT. EARTH WIRE :- 2.5 SQ.MM CU. WIRE GREEN WITH YELLOW STRIP									6. CABLE ENTRY WILL BE FROM TOP / BOTTOM 7. THE CONTROL VOLTAGE WILL BE 230 V AC.									8. ALL BUS BAR SUPPORTS SHALL BE OF SMC/DMC CAST AND PROVIDED AT SUITABLE INTERVAL.									9. THE MINIMUM CLERANCE IN MAIN BUS BAR (HORIZONTAL/ VERTICAL) SHALL BE AS FOLLOWS: (a) BETWEEN PHASE TO PHASE :- 32 MM (b) BETWEEN PHASE TO NEUTRAL :- 26 MM (c) BETWEEN PHASE TO EARTH :- 26 MM (d) BETWEEN NEUTRAL TO EARTH :- 26 MM									10. BUS BAR CURRENT DENSITY SHALL BE 1.0 AMP/MM <sup>2</sup> 11. ALL DOORS SHALL BE EARTHED WITH 4.0 Sqmm. OF BRAIDED COPPER WIRE. 12. EACH FEEDER SHALL BE PROVIDED WITH INDIVIDUAL INSCRIPTION PLATE MADE OUT OF AL. BLACK ANODIZED SHEET WITH ENGRAVED LETTERS. 13. SHROUDING SHALL BE DONE WITH (FR-2) & POLYCARBONATE MATERIAL. 14. ALL MCBs SHALL BE OF TYPE -C CURVE.								
A									B									C									D									E									F																																			
1									2									3									4									5									6									7									8									9								
REV NO.									DATE.									REVISION									PROJECT:- 230 KLD WTP--(PURULUA)									CLIENT:- LARSEN & TOUBRO LIMITED (L&T) MEP SEGMENT-B&FC									CONSULTANT:- CONVENIENT CONSTRUCTION & CONSULTANCY PVT. LTD.									TITLE:- ENHANCED WAPP SYSTEMS (I) PVT. LTD. 9/4B 8 FLOOR BPTP PARK CENTRA SEC 30, GURGAON TEL:- 0124-571000-85 FAX :- 0124-5710999									GENERAL NOTES																	
1									2									3									4									5									6									7									8									9								
DRN. R.K									DATE. 17/10/18									SIGN:									APR.									DRAWING NO.									SCALE - N.T.S.									SHEET 1 OF 1									REV.-R0																	





**APPROVED**

*Pranab Kumar Samanta*  
 Consultant Electrical Engineer (MCH)  
 West Bengal Medical Services Corporation Ltd.  
 01/08/19

PROJECT:-		230 KLD WTP--(PURULIA)		ENHANCED WAPP SYSTEMS (I) PVT. LTD. 514 B FLOOR BPTF PARK CENTRA SEC 30, GURGAON TEL:-0124-8710000-08, FAX:-0124-8710008		TITLE:-		GA DRAWING OF WTP PANEL									
CLIENT:-		LARSEN & TOUBRO LIMITED (L&T) MEP SEGMENT-B&FC				DRN. R.K		APR.	DRAWING NO.								
CONSULTANT:-		CONVENIENT CONSTRUCTION & CONSULTANCY PVT. LTD.				DATE: 17/10/18		SIGN:									
						SCALE: N.T.S.		SHEET 1 OF 1	REV.-R0								
1		2		3		4		5		6		7		8		9	



**Pranab Kumar Samanta**  
Consultant Electrical Engineer (MCH)  
West Bengal Medical Services Corporation

**CONVENIENT CONSTRUCTION & CONSULTANCY PVT. LTD.**

REV NO.	0
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**CONVENIENT CONSTRUCTION & CONSULTANCY PVT. LTD.**

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DATE	DRN. R.K	APR.	DRAWING NO.
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SCALE - N.T.S.	SHEET 1 OF 3	REV.-R0
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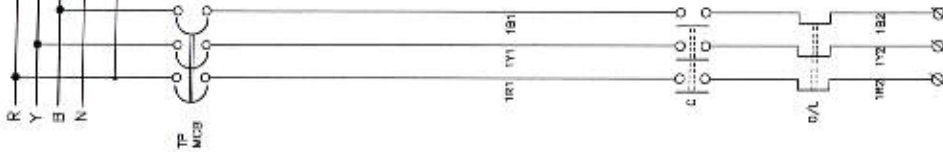


**Pranab Kumar Samanta**  
Consultant Electrical Engineer (MCH)  
West Bengal Medical Services Corporation Ltd.

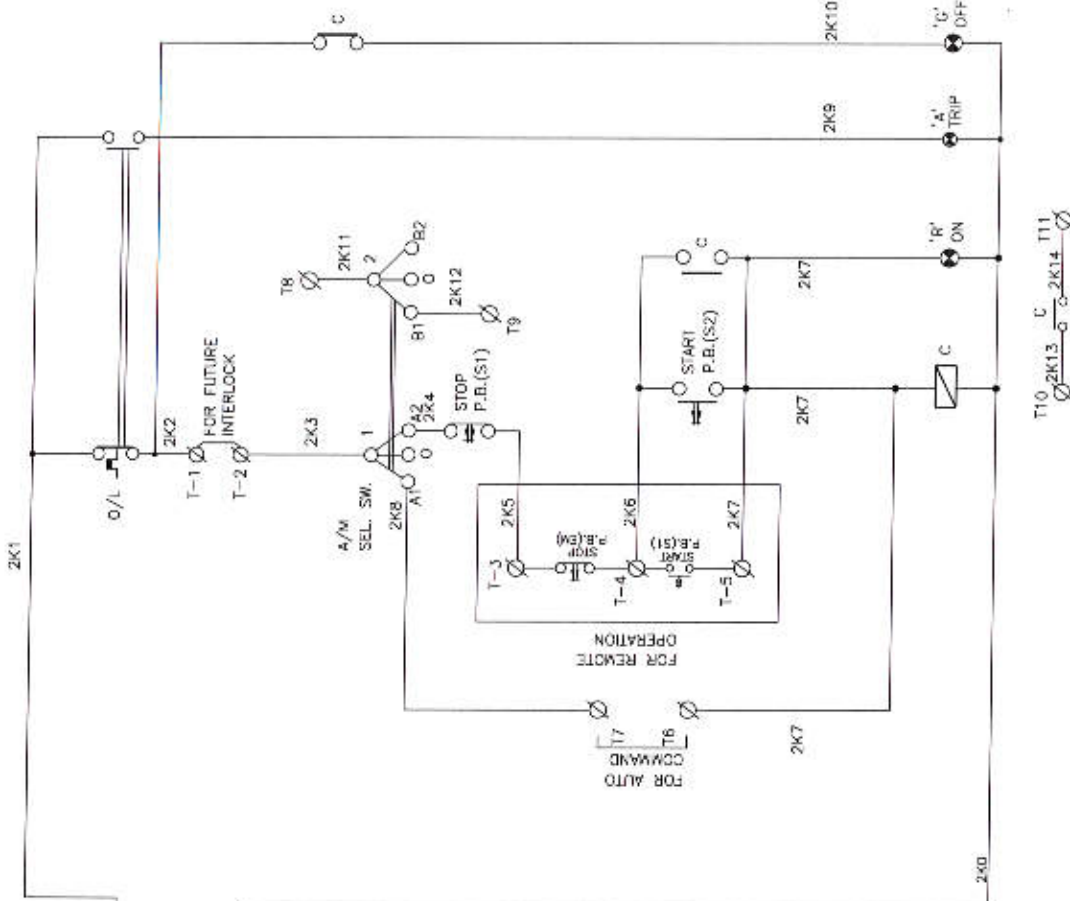
REV NO.	DATE.	REVISION
1	2	3
<b>PROJECT:-</b> 230 KLD WTP-(PURULIA)		
<b>CLIENT:-</b> LARSEN & TOUBRO LIMITED (L&T) MEP SEGMENT-B&FC		
<b>CONSULTANT:-</b> CONVENIENT CONSTRUCTION & CONSULTANCY PVT. LTD.		
<b>TITLE:-</b> CONTROL DRAWING OF WTP PANEL		
ENHANCED WAPP SYSTEMS (I) PVT. LTD. 914-8 B FLOOR BPIIP PARK CENTRA SEC 30, GURGAON TEL:- 0124-6710001-88, FAX :- 0124-6710889		
DRN. R.K	APR.	DRAWING NO.
DATE. 17/10/18	SIGN:	-----
SCALE . N.T.S.	SHEET 1 OF 4	REV.-RO
7	6	9







POWER CIRCUIT  
DOL STARTER



TERMINAL DETAIL

2K2	1	FOR FUTURE INTERLOCKING
2K3	2	
2K5	3	RLNOTE OPERATION
2K6	4	
2K7	5	
2K8	6	FOR AUTO COMMAND
2K11	7	
2K12	8	A/M STATUS FOR BMS
2K13	9	
2K14	10	ON/OFF STATUS TO BMS
	11	

APPROVED

Pranab Kumar Samanta  
Consultant Electrical Engineer (MCH)  
West Bengal Medical Services Corporation Ltd

TITLE:-

CONTROL DRAWING OF  
WTP PANEL

ENHANCED WAPP SYSTEMS (I) PVT. LTD.

914-3 9 FLUXOR BTP PARK CENTRA SEC 30, GURGAON  
TEL:- 0124-8710000-96, FAX :- 0124-8710999

PROJECT:-  
230 KLD WTP-(PURULLA)

CLIENT:-  
LARSEN & TOUBRO LIMITED (L&T)  
MEP SEGMENT-B&FC

CONSULTANT:-  
CONVENIENT CONSTRUCTION &  
CONSULTANCY PVT. LTD.

REV NO. DATE.

REVISION

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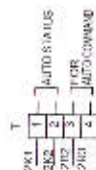
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### TERMINAL DETAIL

APPROVED

6/20/10  
L. M. A. C.

Pharmaceuticals  
Corporation  
West Bengal Medical Services Corporation Ltd.

REV NO.		DATE.	REVISION		PROJECT:- 230 KLD WTP-(PURULIA)		TITLE:-  CONTROL DRAWING OF WTP PANEL	
					CLIENT:- LARSEN & TOUBRO LIMITED (L&T) MEP SEGMENT-B&FC		ENHANCED WAPP SYSTEMS (I) PVT. LTD. 9/4-B 9 FLOOR 8/11 PARK CENTRA SFC 30, GURGAON TEL:- 0124-6710000-86, FAX :- 0124-6710098	
					CONSULTANT:- CONVENIENT CONSTRUCTION & CONSULTANCY PVT. LTD.		DRN. R.K	
							APR.	
							DRAWING NO.	
							DATE. 17/10/18	
							SIGN:	
							SCALE . N.T.S.	
1		2	3	4	5	6	7	8
								REV.-R0
								9



L&T West Bengal Hospital-PURULIYA WTP PANEL			
S.NO.	DESCRIPTION	MAKE	QTY.
<b>I</b>	<b><u>INCOMING</u></b>		
1	32A FP MCB 7.5KA CURVE-C	SIEMENS	1
2	INDICATING LIGHT 230V AC RED	ESBEE	1
3	INDICATING LIGHT 230V AC YELLOW	ESBEE	1
4	INDICATING LIGHT 230V AC BLUE	ESBEE	1
5	INDICATING LIGHT AMBER 230V AC	ESBEE	1
6	ANALOG AMMETER 0-30A,CTR/5 96X96MM	RISHABH	1
7	ANALOG VOLTMETER 0-500V 96X96MM	RISHABH	1
8	TAPE WOUND CT-30/5A VA-5 CL-5	PROCON/REPUTED	3
9	6A,SP MCB 7.5KA CURVE-C	SIEMENS	3
10	NEUTRAL LINK	REPUTED	1
<b>II</b>	<b>FILTER FEED PUMP-5.5KW DOL</b>		<b>2</b>
1	25A TP MCB 7.5KA CURVE-C	SIEMENS	2
2	12A CONTACTOR COIL-230VAC	SIEMENS	2
3	OVER LOAD RELAY 8-12.5A	SIEMENS	2
4	INDICATING LIGHT RED 230V AC	ESBEE	2
5	INDICATING LIGHT GREEN 230V AC	ESBEE	2
6	INDICATING LIGHT AMBER 230V AC	ESBEE	2
7	PUSH BUTTON 'RED' WITH ELEMENT	ESBEE	2
8	PUSH BUTTON 'GREEN' WITH ELEMENT	ESBEE	2
9	A/M SELECTOR SWITCH 2POLE 2WAY WITH OFF	SALZER	2
10	6A,SP MCB 7.5KA CURVE-C	SIEMENS	2
11	NEUTRAL LINK	REPUTED	2
<b>III</b>	<b>CHLORINE DOSING PUMP</b>		
1	DP MCB 7.5KA CURVE-C	SIEMENS	2
2	INDICATING LIGHT RED 230V AC	ESBEE	2
3	A/M SELECTOR SWITCH 2POLE 2WAY WITH OFF	SALZER	2
<b>IV</b>	<b>SPARE MCB</b>		
1	6A DP MCB 7.5KA CURVE-C	SIEMENS	1
2	20A FP MCB 7.5KA CURVE-C	SIEMENS	1
	PANEL BOX H- 700 W-700 D-250	REPUTED	1

APPROVED

Pranab Kumar Samanta  
Consultant Engineer (Electrical)  
West Bengal Medical Corporation Ltd.

01/02/19

L&T West Bengal Hospital-PURULIYA WTP PANEL			
S.NO.	DESCRIPTION	MAKE	QTY.
<b>I</b>	<b><u>INCOMING</u></b>		
1	32A FP MCB 7.5KA CURVE-C	SIEMENS	1
2	INDICATING LIGHT 230V AC RED	ESBEE	1
3	INDICATING LIGHT 230V AC YELLOW	ESBEE	1
4	INDICATING LIGHT 230V AC BLUE	ESBEE	1
5	INDICATING LIGHT AMBER 230V AC	ESBEE	1
6	ANALOG AMMETER 0-30A,CTR/5 96X96MM	RISHABH	1
7	ANALOG VOLTMETER 0-500V 96X96MM	RISHABH	1
8	TAPE WOUND CT-30/5A VA-5 CL-5	PROCON/REPUTED	3
9	6A,SP MCB 7.5KA CURVE-C	SIEMENS	3
10	NEUTRAL LINK	REPUTED	1
<b>II</b>	<b>FILTER FEED PUMP-5.5KW DOL</b>		<b>2</b>
1	25A TP MCB 7.5KA CURVE-C	SIEMENS	2
2	12A CONTACTOR COIL-230VAC	SIEMENS	2
3	OVER LOAD RELAY 8-12.5A	SIEMENS	2
4	INDICATING LIGHT RED 230V AC	ESBEE	2
5	INDICATING LIGHT GREEN 230V AC	ESBEE	2
6	INDICATING LIGHT AMBER 230V AC	ESBEE	2
7	PUSH BUTTON 'RED' WITH ELEMENT	ESBEE	2
8	PUSH BUTTON 'GREEN' WITH ELEMENT	ESBEE	2
9	A/M SELECTOR SWITCH 2POLE 2WAY WITH OFF	SALZER	2
10	6A,SP MCB 7.5KA CURVE-C	SIEMENS	2
11	NEUTRAL LINK	REPUTED	2
<b>III</b>	<b>CHLORINE DOSING PUMP</b>		
1	DP MCB 7.5KA CURVE-C	SIEMENS	2
2	INDICATING LIGHT RED 230V AC	ESBEE	2
3	A/M SELECTOR SWITCH 2POLE 2WAY WITH OFF	SALZER	2
<b>IV</b>	<b>SPARE MCB</b>		
1	6A DP MCB 7.5KA CURVE-C	SIEMENS	1
2	20A FP MCB 7.5KA CURVE-C	SIEMENS	1
	PANEL BOX H- 700 W-700 D-250	REPUTED	1

  
 01/03/19  
**Pranab Kumar Samanta**  
 Consultant Electrical Engineer (MCH)  
 West Bengal Medical Services Corporation Ltd.

L&T West Bengal Hospital-PURULIYA WTP PANEL			
S.NO.	DESCRIPTION	MAKE	QTY.
<b>I</b>	<b><u>INCOMING</u></b>		
1	32A FP MCB 7.5KA CURVE-C	SIEMENS	1
2	INDICATING LIGHT 230V AC RED	ESBEE	1
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6	ANALOG AMMETER 0-30A,CTR/5 96X96MM	RISHABH	1
7	ANALOG VOLTMETER 0-500V 96X96MM	RISHABH	1
8	TAPE WOUND CT-30/5A VA-5 CL-5	PROCON/REPUTED	3
9	6A,SP MCB 7.5KA CURVE-C	SIEMENS	3
10	NEUTRAL LINK	REPUTED	1
<b>II</b>	<b>FILTER FEED PUMP-5.5KW DOL</b>		<b>2</b>
1	25A TP MCB 7.5KA CURVE-C	SIEMENS	2
2	12A CONTACTOR COIL-230VAC	SIEMENS	2
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4	INDICATING LIGHT RED 230V AC	ESBEE	2
5	INDICATING LIGHT GREEN 230V AC	ESBEE	2
6	INDICATING LIGHT AMBER 230V AC	ESBEE	2
7	PUSH BUTTON 'RED' WITH ELEMENT	ESBEE	2
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9	A/M SELECTOR SWITCH 2POLE 2WAY WITH OFF	SALZER	2
10	6A,SP MCB 7.5KA CURVE-C	SIEMENS	2
11	NEUTRAL LINK	REPUTED	2
<b>III</b>	<b>CHLORINE DOSING PUMP</b>		
1	DP MCB 7.5KA CURVE-C	SIEMENS	2
2	INDICATING LIGHT RED 230V AC	ESBEE	2
3	A/M SELECTOR SWITCH 2POLE 2WAY WITH OFF	SALZER	2
<b>IV</b>	<b>SPARE MCB</b>		
1	6A DP MCB 7.5KA CURVE-C	SIEMENS	1
2	20A FP MCB 7.5KA CURVE-C	SIEMENS	1
	PANEL BOX H- 700 W-700 D-250	REPUTED	1

*Pranab Kumar Samanta*  
01/03/19

**Pranab Kumar Samanta**  
Consultant Electrical Engineer (MCH)  
West Bengal Medical Services Corporation Ltd.



# TECHNICAL DATASHEETS

Rev-01

## PROJECT EXTERNAL WATER SUPPLY

Place: Purulia - West bengal

NOTE:

- 1) Valves should be provided as per requirement
- 2) SLD should be submitted at the earliest.

  
09/11/19

(Joydip Ojha)  
Executive Engineer (Civil)  
West Bengal Medical Services Corporation Ltd.

## CLIENT

**LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & FIC**

**ENHANCED WAPP SYSTEMS(I) INDIA PVT LTD.**

PARK CENTRA, 914-B, 9th FLOOR, Sector-30, GURGAON-122001

TEL- 91-124-6710000 , FAX - 91-124-6710099

  
21/11/19

Pradip Kumar Nag  
Chief Consultant Engineer (Civil)  
West Bengal Medical Services Corporation Ltd.

<b>PROJECT</b>	EXTERNAL WATER SUPPLY FOR PURULIA		
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC		
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.		
<b>S.No.</b>	<b>List of Equipments</b>	<b>Make</b>	<b>Qty.</b>
1	Submersible Monobock Pump For External Water Supply (Domestic Water Supply)	Wilo	2 Nos.



(Joydip Ojha)  
Executive Engineer (Civil)



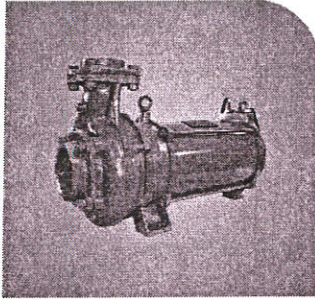
<b>PROJECT</b>	EXTERNAL WATER SUPPLY FOR PURULIA				
<b>OWNER</b>	LARSEN & TOUBRO LIMITED, MEP SEGMENT - B & F IC				
<b>SUPPLIER</b>	ENHANCED WAPP SYSTEMS (I) PVT. LTD.				
<b>Document Title</b>	Submersible Monobock Pump For External Water Supply (Domestic Water Supply)				
<b>A</b>	<b>Technical Details</b>	<b>Units</b>	<b>Approved R-0 Specs</b>	<b>Final Specs</b>	<b>Deviations</b>
	Quantity	Nos.	2	2(1w+ 1s)	-
	Fluid		-	Clear Water	-
	Temperature	°C	-	Ambient	-
	Capacity	lps	18	18.0	-
	Total Offered Head	m	54	54.0	-
	Type		Submersible	Submersible	-
<b>B</b>	<b>PUMP DESCRIPTION</b>				
	Make		Grundfos/ Xylem/ Wilo	Wilo	-
	Pump set Model		-	MPO 2527	-
	Discharge Nozzle	mm		75.0	-
	Pump Casing			CI	-
	Impeller			CI	-
	Shaft			SS	-
<b>C</b>	<b>DRIVE SPECIFICATION</b>				
	Rating	V, $\phi$ , HZ	-	415, 3, 50	-
	Power Rating	HP	-	25.0	-
	Type of Starter		-	DOL	-
	Degree of protection		-	IP68	-
	Insulation Class		-	F	-

  
**Joydip Ghosal**  
 (Joydip Ghosal)  
 Executive Engineer (Civil)  
 West Bengal Medical Services Corporation Ltd.



## MPO

### Openwell submersible



#### Technical Data:

**Flow:** 1460 LPM

**Head:** upto 62 mts

**Power:** upto 10 hp

**Voltage:** available in 3 phase

#### Application:

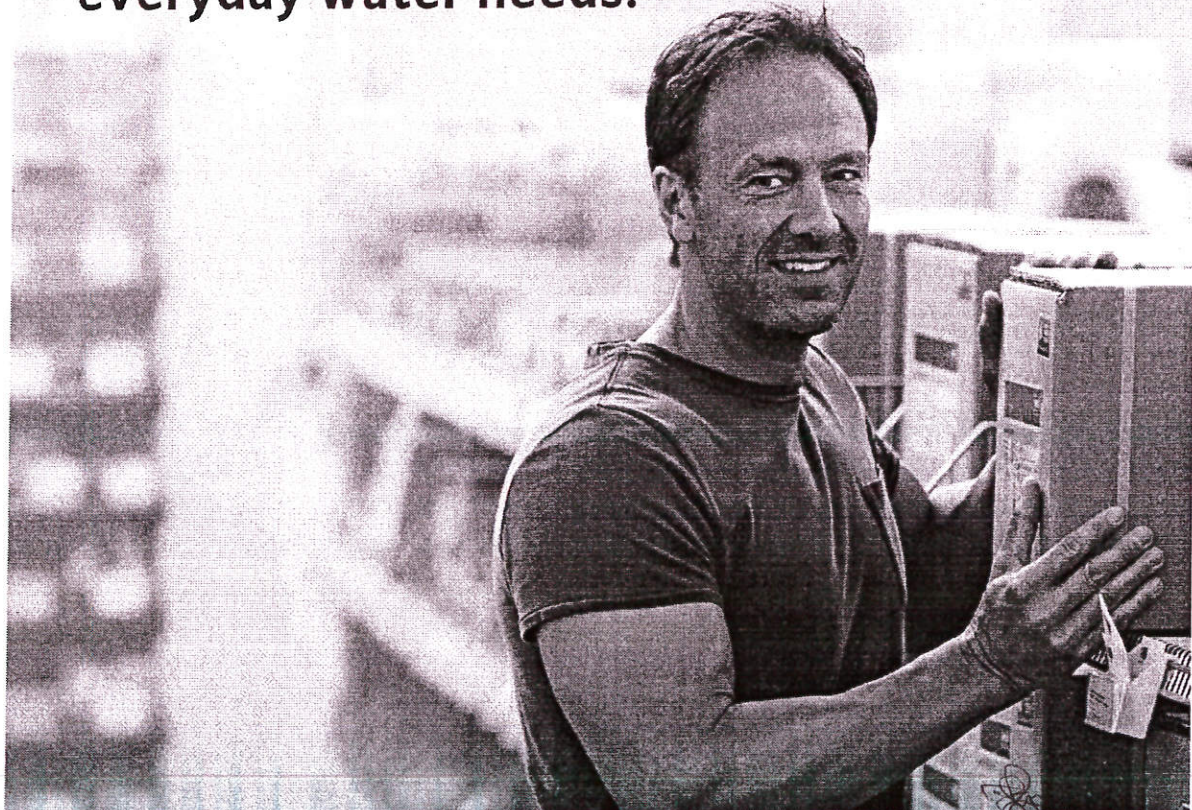
Water transfer in:

- Bungalows
- Farm houses
- Apartments
- Agriculture

#### Standard Features:

- No need of foundation and foot wall as installed under water
- SS shaft for long and trouble free life
- Energy efficient motor design
- Motor designed to operate in wide voltage range
- Motor filled with anti corrosive liquid to increase life of internal parts
- Strong carbon v/s stainless steel thrust bearing for longer life

**"We take care for your  
everyday water needs."**



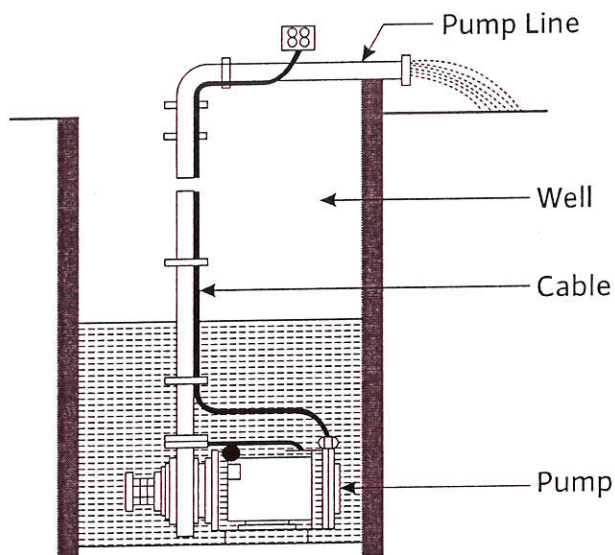
(Joydip Ojha)

Executive Engineer (Civil)

West Bengal Medical Services Corporation Ltd.



## Typical Submerged Installation



## Selection Table

### Openwell 3 Phase

Pump Model	HP	kW	Outlet Size (mm)	Head (m)																	
				8	11	12	15	16	18	19	21	22	24	25	26	28	30	32	33	35	39
MPO020	2.00	1.50	40					250	235	220	195	180	150	130	115	50					
MPO020L	2.00	1.50	50	640	550	500	410	350													
MPO031	3.00	2.20	40											250	240	235	220	205	190	180	
MPO032	3.00	2.20	40							350	330	320	290	275	250	180				150	
MPO033	3.00	2.20	50	680	660	585	550	485	435	300											
MPO034	3.00	2.20	65	930	810	775	600	400													
MPO055	5.00	3.70	40											500	490	470	445	425	410		
MPO055H	5.00	3.70	50														450	425	410	380	270
MPO056	5.00	3.70	50						690	650	635	600	575	550	500	450	325		375	150	
MPO057	5.00	3.70	65	1150	1020	960	860	805	690	600	430										
MPO078	7.50	5.50	40																		
MPO079	7.50	5.50	50												720	685	655	620	590	330	240
MPO0710	7.50	5.50	65						1040	1000	980	920	900	870	785	730	640	590	530	340	250
MPO0711	7.50	5.50	75						1450	1320	1270	1100	1030	850	780	620			420		

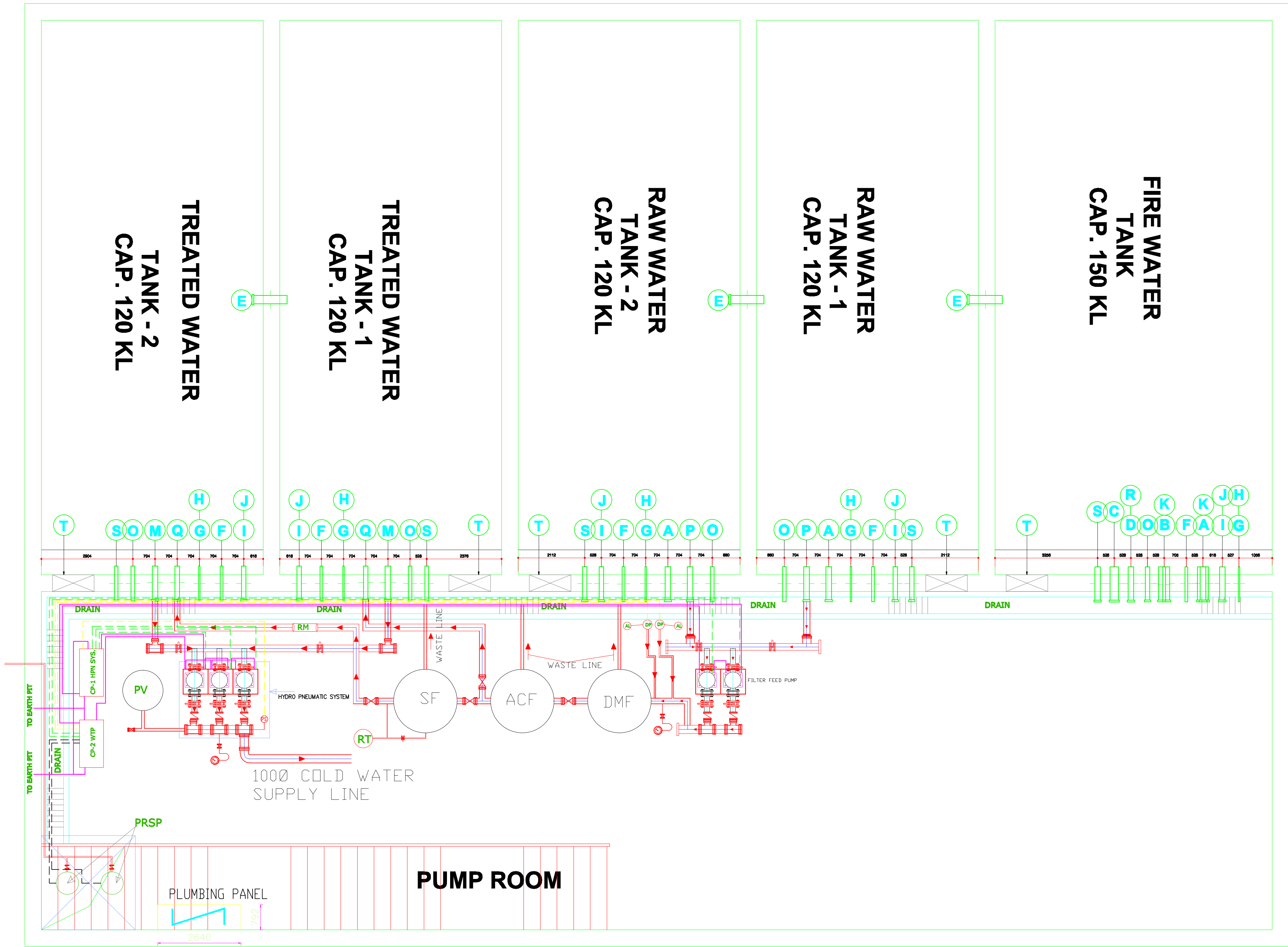
Pump Model	HP	Outlet Size (mm)	Head (m)																	
			19	21	24	27	30	32	33	34	35	36	42	48	50	53	56	59	60	62
MPO1012	10.0	40											470	420	405	370	325	250	230	100
MPO1013	10.0	50						820	810	790	770	730	650	420	300					
MPO1014	10.0	65						1250	1150	1050	970	925	900	810	400					
MPO1015	10.0	75						1540	1390	1210	990	750	600							
MPO1016	10.0	75	1400	1200	500															
MPO1217	12.5	50						1000	920	900	880	870	850	800	740	600	550	400		
MPO1218	12.5	65						1200	1140	1090	1050	1040	1000	910	650					
MPO1219	12.5	75	1770	1640	1470	1300	1060	920	780											
MPO1520	15.0	50											900	780	735	660	550	440	400	
MPO1521	15.0	50											880	840	785	710	670	625	480	300
MPO1522	15.0	65											1250	1160	1050	800	600			
MPO1523	15.0	75	1980	1860	1760	1640	1520	1475	1380	1290	800									
MPO2024	20.0	50													850	810	800	740	690	630
MPO2025	20.0	65											1280	1230	1150	1045	900	800	650	
MPO2026	20.0	75						1650	1620	1580	1540	1420	1200	600						
MPO2527	25.0	75										1860	1760	1550	1450	1300	1100			
MPO3028	30.0	75											2250	2080	2000	1830	1710	1550	1500	1350

Conversion Table: 1 m = 3.281 ft and 1 m<sup>3</sup>/hr = 16.67 LPM = 3.67 GPM




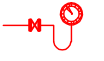

# **Drawings & Inventory List**

**For**


**Super Specialty Hospital,**  
**HATUARA, PURULIA**



U.G. TANK - PLAN

List Of Electromechanical Unit		
MARK	DESCRIPTION	QTY.INSTALLED
	BUTTER FLY VALVE (B.F.V)	14 NOS
	NON RETURN VALVE(N.R.V)	7 NOS
	BALL VALVE	5 NOS
	PRESSURE GAUGE WITH VALVE	2 NOS
	PRESSURE SWITCH	1 NOS
PV	PRESSURE VESSEL	1 NOS
PRSP	PLANT ROOM SUMP PUMP	2 NOS
AL	ALUM TANK	1 NOS
DP	DOSING PUMP	2 NOS
SF	SOFTENER	1 NOS
ACF	ACTIVATED CORBON FILTER	1 NOS
DMFL	DUAL MEDIA FILTER	1 NOS
CP-1	CONTROL PANEL WTP	1 NOS
CP-2	CONTROL PANEL HYDRO PNEUMATIC SYS	1 NOS
RT	RE-GENERATION TANK	1 NOS
RM	ROTA METER	1 NOS
FFP	FILTER FEED PUMP	2 NOS
HS	HYDRO PNEUMATIC SYS	3 NOS

CABLE SCHEDULE			
CABLE	SPECIFICATION	FROM	TO
-----	16sq. mm 4 core cu armoured	C.P.-1	PUMP-1 H.S.
		C.P.-1	PUMP-2 H.S.
		C.P.-1	PUMP-3 H.S.
-----	1.5sq. mm 3 core	C.P.-1	PRESSURE SWITCH
-----	2.5sq. mm 3 core cu armoured	C.P.-2	PLANT ROOM SUMP PUMP
-----	1.5sq. mm 3 core	C.P.-2	DOSING PUMP
-----	16sq. mm 4 core cu armoured	C.P.-2	FILTER FEED PUMP
-----	G.I. FLATE BAR 25MM	C.P.-1&2	ALL MOTORS AND PUMPS

	Consulting Architect	PRINCIPAL CONTRACTOR	CONTRACTOR	DRAWING TITLE:			SCALE	NTS	DATE	SIGN
Super Speciality Hospital, Hatuara,Purulia	 <div>DDF CONSULTANTS Private Limited</div> <div>501 B-9, IIT TWIN TOWERS, NETAJI SUBHASH PLACE, PITAM PURA, NEW DELHI TEL: +91-11-47400500 www.ddfgroup.com email:info@ddfgroup.com</div>	BRIDGE & ROOF CO (INDIA) LTD 5TH FLOOR, KANKARIA CENTRE, 2/1- RUSSEL STREET, KOLKATA-700071	MECO TECHNOLOGIES PRIVET LIMITE 414,RAJEEV VIHAR, NEAR VASANT VIHAR BILASPUR(C.G.), 495006	PIPE LINE, FLOW DIAGRAM& ELECTRICAL FOR WTP			DRAWN	S. SAHU	30/09/2017	
Owner				AS BUILT DRAWING NO.	REV.	SIZE	CHECKED	R. KHAN		
WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED				MTPL/B&RWTP/PUR/AB-01		A2	APPROVED	A. SURYA		

**ANNEXURE-A**  
**Mandate Form for e-Payment**

To  
The Managing Director,  
WBMSCL, Swahstya Sathi,  
Swasthya Bhawan Complex,  
GN-29, Sev-V, Salt Lake,  
Kolata - 700091

**Subject: Payment through electronic mode.**

Sir/Madam,

I/We am/are giving option for availing the facility of e-Payment. Kindly arrange to remit the amount to my /our Bank Account hereinafter. The details of my/our particulars are furnished below:

1. (a) Name of the claimant /Payee /Receipt: .....  
(Capital Letters)
- (b) Address:.....
- (c) Contact. Land Line: ..... Mobile: .....
- (d) Email Address:.....
- (e) ID No.\*\* ..... Nature of ID\*\* .....
- (f) PAN No:.....
2. (a) Name of Bank: .....
- (b) Name of Bank Branch.....
- (c) Account Type: Saving /Current / Cash-Credit Account.....
- (d) Bank Account No. ( CBS allotted a/c no. ):

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(e) Branch IFSC (11 digits): 

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The Bank particulars furnished above is correct and true.

I/We hereby declare that I /We and my/ our heirs and successors accept the liability of making good to Government the overpayment, if any, made to me /us under the scheme.

I/WE hereby authorize ..... Branch (name of the Branch) of the ..... Bank to receive amount on my / our behalf for credit to my/ our account as stated above and further authorize that the receipt of credit given by the bank for the amount for my /our account shall be treated as legal quittance.

Yours faithfully,

(Signature of the claimant /payee/recipient)

( To be accepted by the Head of Office)

Signature of the Head of Office  
(Office Seal)

Date:

N.B. (a) ID No. & Nature of ID: ID No. (i) For Individual: It should be the Voter Card / Aadhar Card / PAN Card / Any other Identity card issued by State Government / Central Government / Government Autonomous Bodies /Local Bodies, (ii) For Autonomous Body /Firm/Company: Registration No./ PAN / TN Number or Trade License.

(b) Verification of Bank Particular: Copy of 1<sup>st</sup> Page of the Pass-Book along with a copy of cancelled cheque or certified by the concerned Bank Branch.



**SECTION-IV**  
**FORM-2911**

Issued to (Bidder): .....

Postal Address with Contact No. & e-mail .....

Price – Free of Cost

**West Bengal Form No. 2911**  
Applicable For Works of value up to Rs 25 (Twenty Five) Crore

TenderNo. \_\_\_\_\_, Sl.No. \_\_\_\_\_ of \_\_\_\_\_ (Year)

**TENDER AND CONTRACT FOR WORKS**  
**GENERAL RULES AND DIRECTIONS FOR GUIDANCE OF BIDDERS/CONTRACTORS**

**(A) Applicable for off-line tenders up to Tender Value of Rs. 5.0lakh**

1. All work proposed for execution by contract will be notified in the form of invitation to tender posted in concerned departmental website, e-procurement portal of the Government of West Bengal (<https://wbtenders.gov.in>) and to be published in local news paper for wide circulation also in the notice boards at public places signed by the Tender Inviting Authority.

This form will state the work to be carried out, the date for submitting and opening of tenders as well as the time allowed for carrying out the work; also the amount of earnest money to be deposited with the tender, the amount of security deposit to be deposited by the successful bidder and the percentage, if any, to be deducted from bills. Copies of the specification, design & drawings and other documents required in connection with the work, signed for the purpose of identification by the Authority inviting Tender shall also be open for inspection by the contractor at the office of the Tender Inviting Authority during Office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each member thereof, or, in the event of absence of any of the partners, it must be signed on his/her behalf by a person holding a Power-of-Attorney authorizing him/her to do so. Such power-of-attorney is to be produced with the tender, and in the case of a firm carried on by one member of a joint family; it must disclose that the firm is duly registered under the Indian Partnership Act.

3. Acceptance of measurements entered and bills raised on account of a work, when executed by a firm, must also be signed by the several partners, except where the contractors are described in their tender as a firm in which case the receipts must be signed in the name of the firm by one of the partners or by some other person having authority to give effectual receipt for the firm.

4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he or she is willing to undertake the work. Tenders which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, will be liable to rejection. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit a separate tender for each. Tenders shall have the name and number of the work to which they refer, written outside the sealed envelopes.

5. The Tender Inviting Authority or his/her duly authorized representative will open tenders in presence of intending contractors/bidders who may be present at the time, and

will enter the bid amounts as percentage rates above or below or at par of the tender BOQ of several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt shall thereupon be given to the contractor/bidder who shall thereupon for the purpose of identification, sign copies of specifications and other documents mentioned in the Rules. In the event of a tender being rejected, the earnest money with such unaccepted tender shall be refunded within 10 days from the date on which the tender is decided, provided the contractor(s) present himself/herself before the Tender Inviting Authority to take the earnest money refund.

6. The accepting authority reserves the right to reject any or all of the tenders without assigning any reasons to the participating bidders and he/she will not be bound to accept either the lowest tender or any of the other tenders.

7. Receipt of an accountant or clerk for any money paid by the contractor/bidder will not be considered as an acknowledgement of payment to the Tender Inviting Authority and the contractor shall be responsible for ensuring that he/she procures a receipt signed by the Tender Inviting Authority, or a duly authorized representative.

8. The Memorandum of work tendered for, and the schedule of materials to be supplied by the executing Department at their supply/issue rates, shall be filled in and completed in the office of the Tender Inviting Authority before the tender form is issued. If a form is issued to an intending bidder/contractor without having been so filled in and completed, he/she shall request the office to have this done before he/she completes and delivers his/her tender.

**(B) Applicable for e-tenders of value above Rs. 5.0Lakh**

1. All works of tender value above Rs. 5.00 lakh proposed for execution through this contract document are to be notified and published in the form of notice inviting e-tender (e-NIT) in the designated official tender website of Government of West Bengal having URL <https://wbtenders.gov.in>, and uploaded simultaneously in the URL of concerned Department inviting Tenders. Thus the tender may be seen and downloaded by logging into the “e-procurement” link provided therein, digitally signed by the concerned Tender Inviting Authority and its corresponding abridged notice also published on the same date in the print media.

2. This e-Notice Inviting Tender (e-NIT) will state the work to be carried out, the date for encrypting (submitting) and decrypting (opening) of e-tenders, the time allowed for carrying out the work; amount of earnest money to be deposited with the e-tender; procedure for submission of EMD, amount of security to be furnished by the successful bidder/contractor, security/ performance security to be deducted from running account bills, copies of specifications, Bill of Quantities, design and drawings and any other document required in connection with the work, digitally signed for the purpose of identification by the Tender Inviting Authority.

3. Intending contractors/bidders are required to download the e-tender documents directly from the website stated above. Tender is required to be submitted online by the intending bidders by authorized e-Tokens provided as DSC. This is the only mode of e-submission of tender and document(s). All information posted in the website consisting of e-NIT, WB Form No. 2911, Tender Bill of Quantities (BOQ), corrigenda notices and drawings etc., if any, shall form part of the Contract. Details of procedure of submission have been explained under “General Terms & Conditions” and Annexure attached with the notice of e-tender (e-NIT).

4. All the documents uploaded by the Tender Inviting Authority forms an integral part of the tender contract/agreement. Contractors/bidders are required to upload the entire set of tender documents along with other related documents as asked for in the e-tender through the above website(s) within the stipulated date and time as given in the e-NIT. Tenders are to be submitted in two folders at a time for each work, one being the ‘Technical Bid’ and the other ‘Financial Bid’. The contractor/ bidder shall carefully go through all the documents and prepare to upload the scanned documents in Portable Document Format (PDF) in the designated link in the web portal as their Technical Bid. He/she needs to fill up the rates of items/percentage in the BOQ downloaded for the work in the designated cell and upload the same again in the designated link in the portal as their Financial Bid. Documents uploaded are virus scanned and digitally signed using the Digital Signature Certificate (DSC). Contractors/bidders should especially take note of all



the addenda and corrigenda related to the e-tender and upload all of these documents also as apart of their tender document.

5. Documents uploaded by the contractors/bidders with all information & rates comprising Technical and Financial bids cannot be changed after last/end date for submission of thee-tender.

6. Deed of Consortium/Partnership Firm, and documents of their registration in the form of certified copy of 'Form No. VIII,' issued under the Indian Partnership Act, 1932 (Act-IX of 1932), GST, & PAN (Permanent Account Number) as per RBI guidelines/above Rs. 50,000/- may be compulsorily furnished for all contracts and all other statutory clearances defined in thee-NIT.

7. The tender evaluation and accepting authorities reserve the right to reject any or all of the tenders without assigning any reasons and he/she will not be bound to accept either the lowest tender or any of the tenders.

8. Withdrawal of e-Tender once the bid has been submitted online and after passing of end date for submission which has been accepted for further processing is not allowed. EMD will be forfeited by the Government and the bidder/contractor penalized in terms of provisions in the notice of the tender.

9. Generally Bids will be valid for 120 days from the date of opening of the financial proposal. However, extension of bid validity may be suitably considered by the Tender Inviting Authority, if required, subject to obtaining a written confirmation of the contractor/bidder(s) to that effect.

#### **TENDER FOR WORKS**

I/We on behalf of the Governor hereby tender for the execution of the work specified in the underwritten "Memorandum" within the time specified in such "Memorandum" at the rates specified therein, and in accordance, in all respects within the Rules contained in clauses hereinafter, in all of the annexed General Conditions of Contract (GCC), Special Conditions of Contract (SCC) and with such other materials as are provided for, by and in all other respects in accordance and with such conditions so far as applicable.

### **MEMORANDUM**

*(a) If several sub-works are included, they should be detailed in a separatelist*

- (a) General description of work.....
- (b) Estimated cost put to Tender ... Rs
- (c) Earnest Money Deposit ... Rs.
- (d) Security Deposit (including earnest money) .....Rs
- (e) Percentage, if any, to be deducted from bill ..... Rs  
.....  
(Rupees.....  
Percentage.....)
- (f) Time allowed for the work from date of written order to Commence .....calendar months.

For offline tender during submission of bid and during execution of Agreement for online tender

Name of Work Tendered	Amount Put to Tender	Rate Quoted by the Bidder (% above or less or at par)	Tendered Amount (Contract Price both in words & figures)

Should this Tender be accepted, I/we hereby agree to abide by and fulfill all of the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the Governor or his/ her successions in office, the sums of money mentioned in the said conditions.

*\*Give particulars and numbers*

*Strikeout (a) or (b) as applicable.*

A sum of Rs ..... \* has been furnished through online net banking/RTGS/NEFT transfer as earnest money deposit [(a) the full value of which is to be absolutely forfeited to the Governor or his/her successors in office, without prejudice to any other rights or remedies of the said Governor or his successors in office. Should I/we not deposit the full amount of security specified in the above 'Memorandum' in accordance with clause I(A) of the said conditions of contract, the said sum of Rs ..... shall be retained by the Government as on account of such security as aforesaid:(b) the full value of which shall be retained by Government on account of the security deposit specified in clause I (B) of the said conditions of contract].

*T Signature of Contractor before submission of tender*

*X Signature of Witness to Contractor's signature*

*XX Signature of the Executive Engineer/AE on behalf of the Department.*

Dated the \_\_\_\_\_ Day of \_\_\_\_\_ 20\_\_\_\_

X  
(Witness)  
Address  
Occupation

The above tender is here by accepted by me for and on behalf of the Governor of the State of West Bengal

XX

Dated the \_\_\_\_\_ Day of \_\_\_\_\_ (Month) \_\_\_\_\_ (Year)

## GENERAL CONDITIONS OF CONTRACT

**Clause 1 1.1 Earnest Money** - The person/persons who intend to participate in the Tender for an Estimated Amount up to Rs. 25 (Twenty Five) Crore shall have to deposit Earnest Money @ 2% (Two percent) of the Estimated Amount put to Tender or Rs 10 Lakh, whichever is lower.

In case of offline tender earnest money is to be submitted in the form of Bank Draft or Bankers Cheque.

In case of Online Tender (e-Tender) earnest money is to be deposited through e-tender portal (<https://wbtenenders.gov.in>) by selecting from either of the following payment modes:

- i) Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment Gateway.
- ii) RTGS/NEFT in case of offline payment through bank account in any Bank with his/her tender/quotation as per Memorandum No. 3975-F(Y) dated: - 28.07.2016 of Secretary to the Government of West Bengal, Finance Department. The L1 bidder shall make the Formal Agreement after getting the Letter of Acceptance (LOA) issued by the Tender Accepting Authority. Failure to make the Formal Agreement within the time period as prescribed in the Letter of Acceptance (LOA) for the purpose, may be construed as an attempt to disturb the tendering process and will be dealt with accordingly in a legal manner as deemed fit including black listing the bidder.

**1.2 Security Deposit** - While making any payment to the person(s) whose tender has been accepted (hereinafter shall be called the contractor) for work done under the contract, the authority making payment shall deduct such sum which together with the Earnest Money already deposited and converted into security deposit, shall amount to 10% of the value of works executed at the material point of time and paid during the progressive running accounts bills, so that total deduction together with

Earnest Money constitute 10% of the tendered value of work actually done.

In case of excess/and supplementary work over the tendered amount, additional security @ of 10% of such additional amount is to be deposited for all such excess/ and supplementary works beyond the tendered amount before payment of final bill.

Compensation of all other sums of money payable by the contractor to the Government under the terms of the contract may be deducted from the security deposit.

However, even though the earnest money deposited exceeds the prescribed percentage, due to reduction of tendered amount due to any reason whatsoever, such additional earnest money shall be deemed to have been converted into security and further deductions from progressive bills shall be made, taking into consideration the enhanced component of earnest money so converted into security.

Security deduction will not normally be required for hiring of inspection vehicles and boats etc., supply of tools & plants, furniture and computer peripherals. Separate agreement may be required in those cases, particularly for consultancy and RFP for EPC, which shall be made in standard formats to be approved by the Government.

After completion of the work, the Contractor may opt for refund of the Security Deposit by replacing equal amount of Bank Guarantee of scheduled Bank valid up to 3 months beyond the defect liability period.

**Additional Performance Security @ 10% of the tendered amount in the form of Bank Guarantee from a Scheduled Bank, valid up to the date of completion of work, shall be obtained from the successful bidder, if the accepted bid value is 80% or less than the estimated amount put to tender.**

If the bidder fails to submit Additional Performance Security within 7 (seven) working days from the date of LoA or the time period as approved by the Tender inviting Authority, his Earnest Money will be forfeited.

If the bidder fails to complete the works successfully, the Additional Performance Security along with Security Deposit lying with the Government shall be forfeited at any time during the pendency of contract period as per relevant Clauses of the Contract.

Necessary provisions regarding deductions of Security Deposit from the progressive bills of the Contractor as per relevant clauses of the contract will in no way be affected/ altered by this Additional Performance Security.

**Clause 2.** The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence. Time being deemed to be the essence of the contract on the part of the contractor, the contractor shall be bound in all cases, to achieve the 'Milestones' as defined under Clause 5 and specified in the NIT into various 'Identifiable and quantifiable construction related stages' pertaining to the work. In the event of the contractor failing to comply with any of the conditions related to achieving the 'Milestones' within the specified time period prescribed for such 'Milestone' plus one month, he/she shall be liable to pay compensation.

If the contractor fails to commence and/or maintain required progress viz. Milestones defined in the Notice Inviting Tender over the total time allotted for its full completion and in terms of clause 5 or fails to complete the work and clear the site on or before the end of contract period or extended date of completion, he/she shall, without prejudice to any other right or remedy available under the law on account of such breach, pay as agreed compensation to the implementing Department.

This will also apply to items or group of items for which a separate period of completion has been specified.

**Compensation for delay of work: @ 2% (Two percent) of the tendered value of work arrived for each month of delay to be computed on per day basis subject to the ceiling limit of security deposit already withheld or due to be withheld during imposition of the said clause and minimum payable compensation equivalent to the Earnest Money deposited(EMD).**

*Compensation  
for delay*

Provided always, that the total amount of compensation for delay, to be paid under this clause shall not exceed 10% of the tendered value of work or the tendered value of the item or group of items of the work, for which a separate period of completion is originally given.

*Action when whole of security deposit is forfeited*

The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this contract, if the contractor catches up with the progress of work subsequently, part or full of the desired progress as per the contract in accordance with the decision of the Tender Accepting Authority, under powers delegated by Government to be communicated by the Engineer-in-Charge, the withheld amount shall be released. However, no interest, what so ever, shall be payable on such withheld amount.

**Force majeure :-** If the work(s) be delayed for the following reasons:-

Due to war, internal emergency and other conditions such as abnormally bad weather, flood, cyclone natural calamity or serious loss or damage by fire or civil commotion, the contractor shall immediately give notice thereof in writing to the Engineer-in-charge but shall nevertheless use constantly his/her best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the works.

*Contractor remains liable to pay compensation, if action is not taken under Clause 3*

**Clause 3.** Subject to other provisions contained in this clause, the Engineer-in-charge with the prior approval of Tender Accepting Authority, may, without prejudice to his/her any other rights, remedy against the Contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provision of the contract or otherwise, and whether the date of completion has or has not been elapsed, by notice in writing, absolutely determine the contract in any of the following cases:

- (i) If the Contractor has been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that work is being performed in an inefficient or otherwise improper or un-workman like manner, shall omit to comply with the requirements of such notice for a period of seven days thereafter;
- (ii) If the Contractor has without reasonable cause suspended the progress of work, or has failed to proceed with the work with due diligence so that, in the opinion of the Engineer-in-Charge he/she will be unable to secure completion of the work by the schedule date for completion, and continues to do so after a notice of seven days in writing from the Engineer-in-charge;
- (iii) If the Contractor fails to complete the work within the stipulated date or the Milestones/items of work within individual dates of completion, if any, stipulated on or before such date(s) of completion and does not complete them or reach the defined Milestones within the period specified in the notice given in writing to that effect by the Engineer-in-charge;
- (iv) If the Contractor persistently neglects to carry out his/her obligations under the contract and/or commits default by not complying with any of the terms & conditions of the contract and does not remedy it, or take effective steps to remedy it, within seven days after a notice in writing is given to him/her to that effect by the Engineer-in-Charge;
- (v) If the Contractor being an individual, or a firm, or any partner thereof, shall at any time be adjudged insolvent or have a 'Receiving Order' or Order for administration of his/her Estate made against him/her, or take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force, or make any conveyance or assignment of his/her effects or composition or arrangement for the benefit of his/her creditor or purport to do so, or if any application be made under Insolvency Act for the time being in force for the sequestration of his/her Estate, or if a trust deed is executed by him/her for benefit of his/her creditors;
- (vi) If the Contractor being a Company pass a resolution or the court delivers an order of judgement that the Company shall be wound up, or if a receiver or a manager on behalf of a creditor be appointed, or if a circumstance arise which entitle the Court or the creditor to appoint a receiver or a manager or which entitle the court to issue a winding up order;
- (vii) If the Contractor shall suffer an execution order being levied on his/her goods and allow sitto be continued for a period of 21 days;
- (viii) If the Contractor assigns without prior written approval of the Tender Accepting

Authority, transfers, sublets (engagement of labour on piece work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire work or any portion thereof without prior written approval of the Engineer-in-charge;

- (ix) AND THEREFORE, the Contractor has made himself/herself liable for action under any of the cases aforesaid, the Engineer-in-charge on behalf of the Government with the prior approval of Tender Accepting Authority, shall have the powers to adopt any of the following actions, as he/she may deem best suited to the interest of the Government:-
- (a) To determine the contract as aforesaid, of which rescission notice in writing and costs to be recovered for works since executed subject to a minimum of the amount of Earnest Money deposited by the Contractor under the hand of Engineer-in-charge, shall be the conclusive evidence. Upon such determination, the Earnest Money Deposit, Security Deposit already recovered for executed works and performance guarantee, if any under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government.
  - (b) After giving notice to the Contractor to measure up the work executed and to take such whole or the balance or part thereof, as shall be un-executed out of his/her hands, and to give it to another Contractor to complete the balance work. The Contractor, whose contract is determined or rescinded as above, shall not be allowed to participate in the tendering process for the balance work.
  - (c) To employ labour paid by the implementing Department, and to supply materials, to carry out the works or any part of the work, debarring the contract or and debiting the cost of labour and price of materials (of the amount of which cost and price determined by certificate of the Engineer-in-Charge shall be final and conclusive against the contractor) and crediting him/her with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his/her contract; the certificate of the Executive Engineer as to the value of the work done shall be final and conclusive against the contractor.

In the event of above course being adopted by the Engineer-in-charge, the Contractor shall have no claim of compensation for any loss sustained by him/her by reason of his/her having purchased or procured any material or entered into any engagement or made any advances on any account or with a view to execute the work or the performance of the contract. In case, action is taken under any of the provisions aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof actually performed under this contract, unless and until the Engineer-in-charge has certified in writing that the performance of such work and value payable in respect thereof, and he/she shall only be entitled to be paid the value so certified.

*Contractors  
remains liable to  
pay compensation  
if action not taken  
under Clause 3*

**Clause 3A.** In case, the work cannot be started due to reasons not within the control of the Contractor within 1/4<sup>th</sup> (one fourth) of the stipulated time for completion of the work or 45 days whichever is less, which is accepted as a valid & justified reason by the Tender Accepting Authority, either party viz. Contractor & the Engineer-in-Charge may close the contract with the approval of Tender Accepting Authority. In such an eventuality, the earnest money deposited and the security of the contractor shall be refunded, but no payment on account of interests, loss of profit or damages etc. shall be payable at all.

**Clause 3B.** In case a continuing work cannot be completed due to reasons beyond the control of the contractor, like Force Majeure enumerated later under Clause 5, the contract may be terminated as stated in clause 3A above by the Engineer-in-Charge with the consent of the contractor and approval of the Tender Accepting Authority.

**Clause 4.** In cases in which any of the powers conferred upon the Engineer-in-Charge under Clause 3 here of shall have become exercisable and the same had not

*Power to take  
possession of or  
require removal  
of or sell  
Contractor's  
plant*

been previously exercised, non-exercising thereof shall not constitute as a waiver of any of the conditions hereto, and such powers shall, notwithstanding be exercisable in the event of any future case of default by the contractor, for which by any clause or clauses hereof, he/she is declared liable to pay compensation amounting to whole of his/her security deposit, and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force either of the powers under ix (a) or (c) vested with him/her under the preceding clause, he/she may if he/she so desires, take possession of all or any tools & plant, materials and stores, in or upon the work, or the site thereof, or belonging to the contractor, or procured by him/her and intended to be used for execution of the work, or any part thereof, paying or allowing for the same in account at the contract rates or in case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge whose certificate thereof, shall be final and binding. Otherwise, the Engineer-in-Charge may deliver notice in writing to the contractor or his/her clerk, foreman or other authorized agent, requiring him/her to remove such tools & plant, materials or stores from the premises within a time to be specified in such notice; and in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sale them by public auction or private sale on account of the contractor and at his/her risk, in all respects, and the certificate of the Engineer-in-Charge as to the expense of any such removal, and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

**Clause 5.** The time allowed for execution of a work as specified in the 'Schedule of Work' or in the extended time in accordance with the terms and conditions shall be the essence of the contract. Execution of work shall commence from such time period as mentioned in the said schedule, or from the date of handing over of the site to the contractor whichever is later. If the contractor commits default in commencing execution of the work as aforesaid within thirty days, without justifiable reasons included under Force Majeure or other such reasons beyond the control of the contractor, in which case to be reported within seven days by the contractor, considered valid and cogent by the Engineer-in-Charge, the Engineer-in-Charge shall after passing of thirty days from the date of scheduled commencement of work as per work order, with the prior approval of the Tender Accepting Authority, without prejudice to any other right to remedy available in law, be at liberty to apply clause 2 and subsequently clause 3 of the tender document.

As soon as possible after the contract is executed, signed and agreed, the contractor shall submit a 'Time and Progress Chart' for each broad activity (Milestone) and get it approved by the Engineer-in-Charge. The chart shall be prepared in direct relation to the time slated in the Notice Inviting Tender (NIT) document, for completion of items or group of items of the work. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work. This may be amended, as necessary, by an agreement between the Engineer-in-Charge and the contractor within the limitations of time imposed in the NIT document. Further, to ensure good progress during execution of work, the contractor shall in all cases, in which the time allowed for any work exceeds one month (save and except for special jobs for which a separate programme has been agreed upon) to complete the work as per defined 'Milestones' given in such 'Schedule of Work' defined clearly in the NIT itself into various 'Identifiable and quantifiable construction related stages' related with the type and nature of work, and that the 'total time allowed for completion of work' is to be broken up against achievement of those stages during the construction / progress of work to ensure a periodic monitoring of progress and enable the contractor and the Engineer-in-Charge to take corrective measures from time to time.

If the work(s) be delayed by:

Force majeure, due to war, internal emergency and other conditions such as abnormally bad weather, flood, cyclone natural calamity or serious loss or damage by fire or civil commotion, strike or lockout affecting procurement of construction materials or any of the trades employed in the work, or any other cause which in the absolute discretion of the Engineer-in-Charge is beyond the contractor's control, then upon happening of any such event causing delay, the



contractor shall immediately give notice in writing to the Engineer-in-Charge but shall nevertheless use constantly his/her best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

Request for rescheduling of 'Milestones' of various activities and extension of time, to be eligible for consideration, shall be made by the contractor in writing within fourteen days of the happening of the event causing delay in the prescribed form. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

If any such case the Engineer-in-Charge, with the approval of Tender Accepting Authority, may give a fair and reasonable extension of time and reschedule the activity wise 'Milestones' for completion of the work. Such extension shall be communicated to the contractor by the Engineer-in-Charge with the approval of Tender Accepting Authority in writing within maximum 1 (one) month of the date of receipt of such request.

*Final Certificate*

**Clause 6.** On completion of work, the contractor shall be furnished with a certificate by the Engineer-in-Charge of such completion, but no such certificate shall be given, nor shall the work be considered to be completed until and unless the contractor shall have removed from the work premises on which the work is executed, all scaffolding, surplus materials and rubbish, and cleaned off the dirt from wood works, doors, windows, floors, or other parts of any building, upon or about which the work is executed, or of which he may have had possession for the purpose of the execution thereof, nor until the work shall have been measured by the Engineer-in-charge whose measurements shall be binding and conclusive against the contractor. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and cleaning off dirt on or before the date fixed for completion of the work, the Engineer-in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish, and dispose of the same as he/she thinks fit, and clean off such dirt as aforesaid; and the contractor shall forthwith be bound to pay the amount of all expense so incurred, and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid, except for any sum actually realized by the sale thereof.

*Payment on  
inter- mediate  
certificates to  
be regarded  
as advances*

**Clause 7.** No running account bill payment shall be normally made for works less than 30 (Thirty) percent of Tendered Value or up to Rs 25.00 lakh, whichever is less, till after the whole of the work shall have been completed and certificate of completion given. For works of tendered value above Rs 25.00 lakh, for running account bill payment, the contractor shall on submitting a bill of at least Rs 25.00 lakh there for, be entitled to receive a payment proportionate to the part thereof, approved and passed by the Engineer-in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. But all such intermediate payments shall be regarded as payments by way of advance against the final measured bill payment only and not as payments for work actually done and completed, and shall not preclude the bad, unsound, and imperfect or unskillful work which is to be removed and taken away and reconstructed, or re-erected or to be considered as an admission of the due performance of the contract, or any part thereof, in any respect, or the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of the Engineer-in-charge under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of the work, otherwise the Engineer-in-charge's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties.

*Bills to be  
submitted  
monthly*

**Clause 8.** W o r k s bill shall be submitted by the contractor each month, after fulfilling above clause, on or before the date fixed by the Engineer-in-charge, for all works executed during the previous month, and the Engineer-in-charge shall take or cause to take the requisite measurement for the purpose of having the same verified, and the claim as far as admissible adjusted, if possible, before the expiry of fourteen days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a Junior Engineer to measure up the said

work in presence of the contractor, whose countersignature in the measurement book will be sufficient warrant; and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contract or in all respects.

Within 10 (Ten) days of completion of work, the contractor shall give notice of such completion to the Engineer-in-charge and within 14 (Fourteen) days of receipt of such notice, the Engineer-in-charge shall inspect the work, and if there is no defect in the work, he/she shall furnish to the contractor a final certificate of completion. Otherwise, a provisional certificate of physical completion indicating defects (a) to be rectified by the Contractor and/or (b) for which payment will be made at reduced rates, shall be issued. Such reduced rate is to be imposed with the approval of Superintending Engineer concerned.

**Clause 8A.** When annual repair and maintenance work is carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floors, windows shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done without waiting for the actual completion of all the other items of work in the contract. In case, the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either Departmentally or through any other contractor. Before taking such action, the Engineer-in-Charge shall give ten days notice in writing to the contractor.

**Clause 8B.** The Contractor shall submit completion Plan/Drawing as required in the 'General Specification' for Civil as well as Electrical Works as applicable within 30 days of completion of the work.

**Clause 9.** The Contractor shall submit all bills in printed forms, as per format prescribed by Government of West Bengal, in the office of the Engineer-in-Charge, and the charges in the bills shall always be entered at the rates specified in tender or in case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender at rates thereafter provided for such work.

*Payments of  
contractor's  
bills to Banks*

**Clause 9A** (1) Payments due to the contractor may, if so desired by him/her be made to his bank through e-Pradan, details of which has to be directly furnished to the Engineer-in-charge.

While the online receipt given by such Banks shall constitute a full and sufficient discharge/acquittance for the payment, the contractor should wherever possible present his/her bills duly receipted and discharged through his/her Banker/s.

(2) In the case of bills, which the contractor presents for payment direct, and which are not endorsed in favour of the Bank, while efforts will be made to secure payment to the financing Bank, payments made to the contractor should be accepted as full acquittance so far as the Government is concerned. As a part of the arrangement, the financing Bank should give the Government a letter to this effect.

Note1. The procedure will not affect the usual rights of the Government to deduct from contractor's bill, (whether endorsed in favour of a Bank or not) any sum due to Government of account of penalties, over-payments etc., on this or any other contract with the Governor of the State of West Bengal.

Note2. Nothing contained herein shall operate to create in favour of the Bank any rights, claims or equities vis-à-vis the Governor.

*Stores supplied  
by Government*

**Clause 10.** If the specification or estimate of the work provides for use of any special description of material to be supplied by the Engineer-in-Charge, (such materials & stores and the prices to be charged there for as hereinafter mentioned being so far as practicable for the convenience of the contractor, but not so as in any way to control the meaning or effect of this contract specified in the schedule or 'Memorandum' hereto annexed), the contractor shall be supplied with such materials and stores as is required from time to time to be used by him/her for the purpose of the contract only, and the value of the full quantity of materials and stores so supplied at the rates specified in the said schedule or Memorandum may be set off or deducted from any sums then due, or thereafter to become due to the contractor under the contract, or otherwise or against or from the security deposit, or the proceeds of sale thereof; if the same is held in Government securities, the same or a sufficient portion thereof being in this case sold for

the purpose. All materials supplied to the contractor shall remain the absolute property of Government, and shall not on any account be removed from the site of the work, and shall at all times be open for inspection by the Engineer-in-charge. Any such material unused and in perfectly good condition at the time of the completion or determination of the contract shall be returned to the Engineer-in-charge's store, if by a notice in writing under his/her hand, he/she shall so require; but the contractor shall not be entitled to return any such material unless with such consent, and shall have no claim for compensation on account of any such material so supplied to him/her as aforesaid being unused by him, or for any wastage or damage to any such material.

*Work to be executed in accordance with specifications, drawings, orders, etc.*

**Clause 11.** The Contractor shall execute the whole and every part of work in the most substantial and workman like manner, and both, as regards to materials and otherwise, in every respect, in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design and drawings, and instructions in writing relating to the work signed by the Engineer-in-Charge and lodged in his/her office, to which the contractor shall be entitled to have access at such office, or on the site of the work for the purpose of inspection during office hours, and the contractor shall, if he/she so require, be entitled at his/her own expense to make or cause to be made copies of the specifications, and of all such design, drawings and instructions as aforesaid.

*Alteration in specification and designs do not invalidate contract*

**Clause 12.** The Engineer-in-Charge shall have powers to make any alteration in, omission from, addition to, or substitution for, the original specifications, drawings, designs and instructions, that may appear to him/her to be necessary or recommended by Superintending Engineer or the Chief Engineer during the progress of work, and the contractor shall be at all times be bound to carry out these works, in accordance to any instructions which may be given to him/her in writing, signed by the Engineer-in-charge, and such alterations, omissions, additions or substitutions, shall not invalidate the contract but shall be deemed to have formed a part of the work included in the original tender and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as a part of the work shall be carried out by the contractor on the same conditions in all respects on which he/she agreed to do the main work, and at the same rates, if any, may be specified in the tender for the main work. Time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original work contract, and the certificate of the Engineer-in-charge shall be conclusive as to such proportion. And, if the altered, additional or substituted work includes any class of work, for which no rate is specified in the contract, then such class of work shall be carried out at the rates entered in the schedule of rates of concerned Works Department applicable in the district, which was in force at the time of acceptance of the contract, minus/plus the percentage which the total tendered amount bears to the estimated cost of the entire work put to tender; and if the altered, additional or substituted work is not entered in the said schedule of rates, payment thereof shall be made by the Engineer-in-charge by determining the rates on analysis worked out from (a) the basic rates of materials and labour provided in the aforesaid schedule of rates, or (b) the current market rates of materials and labour when even basic rates for the work are not available in the schedule. In cases when such rates are determined on analysis by the Engineer-in-charge under (a) above, the stipulated percentage above or below schedule of rates as provided in the contract shall also apply, and in case of rates worked out on analysis under (b) above, payment shall be made at the rates so determined without application of the said stipulated percentage. In the event of any dispute regarding rates determined on analysis for any altered, additional or substituted work under this clause, the decision of the Superintending Engineer shall be final and binding.

*Rates for works not in tender BOQ/SoR*

*No compensation for alternation in or restriction of work to be carried out.*

**Clause 13.** If at any time after the commencement of the work the Governor shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the Engineer-in-charge shall give notice in writing of the fact to the contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from execution of the work in full, but which he/she did not derive in consequence of the full amount of the work not having been carried out; neither shall he/she have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.

*Action and compensation payable in case of bad work*

**Clause 14.** If it shall appear to the Engineer-in-charge or his/her subordinate engineer in-charge of the work, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials of any inferior description, or that any materials or articles provided by the Contractor, for the execution of the work are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the Engineer-in-charge specifying the work, materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and re-construct the work so specified in whole or in part, as the case may require, or as the case may be remove the materials or articles so specified and provide other proper and suitable materials or articles at his/her own proper charge and cost; and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in his/her demand aforesaid, then the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate put to tender / on up to date executed work value for every day not exceeding ten days, while his/ her failure to do so shall continue and in the case of any such failure, the Engineer-in-charge may rectify or remove, and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.

*Work to be open to inspection*

**Clause 15.** All work under or in course of execution or executed in pursuance of the contract shall at all times be open to inspection and supervision of the Engineer-in-Charge and all his/her subordinates and also higher Officers / Authority of the Government and the contractor shall at all times during the normal working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his/her subordinates to visit the work site shall have been given to the contractor, either himself/herself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if it had been given to the contract or himself / herself.

*Contractor or his/her responsible agent to be present*

*Notice to be given before work is covered up*

**Clause 16.** The Contractor shall give, not less than five days notice in writing to the Engineer-in-charge or his/her subordinate in-charge of the work, before covering up or otherwise placing beyond the reach of measurement any work, in order that the same is so covered up or placed beyond the reach of measurement, and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his/her subordinate, in-charge of the work; and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense, or, in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

*Contractor liable for damage done and for imperfections for 180 days after certificate*

**Clause 17.** If the Contractor or his/her workers or authorized representatives shall break, deface, injure or destroy any part of the structure in which they may be working or any building, road, road curbs, fence, canals, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatever or any imperfections become apparent in it at any time, whether during its execution or within a period of six months after issuance of a certificate of its completion by the Engineer-in-Charge, the contractor shall make the same good at his/her own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workers, and deduct the expenses (of which the certificate of the Engineer-in-Charge shall be final and binding) from any sums, whether under the contract or otherwise, that may be then, or at any time thereafter become due to the contractor by the Government or from his/her security deposit, or the proceeds of sale thereof, or of a sufficient portion thereof, and if the cost in the opinion of the Engineer-in-Charge whose opinion shall be final and conclusive against the contractor, making such damage or imperfections good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Government to recover the excess costs from the contractor in accordance with the procedure prescribed by any law for the time being in force.

**Clause 17A.** The Contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works, and counting, weighing, assisting in the joint measurement or examination at any time and from time to time of the work or materials. Failing his/her so doing the same may be

provided by the Engineer-in-Charge at the expense of the Contractor and the expenses may be deducted from any money due to the contractor under the contract or from his/her Security Deposit or the proceeds of sales thereof or of a sufficient portion thereof. The Contractor shall also provide all necessary fencing / barricading / providing caution boards etc. and light required to protect the public from accident, and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damage and costs which may be awarded in such suit, actions or proceedings to any such persons or which may with the consent of the Contractor be paid to compromise any claim by any such persons.

**Clause 18A.** In every case in which by virtue of the provisions under sub-section (1) of Section 12, of the Workmen's Compensation Act, 1923, the implementing Department is obliged to pay compensation to a workman employed by the contractor, in execution of the works. The implementing Department will recover from the Contractor the amount of compensation so paid; and without prejudice to the rights of the Department under sub-section (2) of section 12, of the said Act, implementing Department shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by implementing Department to the Contractor whether under this contract or otherwise. The implementing Department shall not be bound to contest any claim made against it under sub-section (1) Section 12, of the said Act, except on the written request of the contractor and upon his/her giving to the implementing Department full security for all costs for which the Department might become liable in consequence of contesting such claims.

**Clause 18B.** In every case in which by virtue of the provisions under 'The Contract Labour (Regulation & Abolition) Act 1970', and its amendments and rules, the implementing Department is obliged to pay amount of wages to a workman employed by the Contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by Contractors, executing Department will recover from the Contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the executing Department under sub-section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, executing Department shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Executing Department to the Contractor whether under this contract or otherwise and the executing Department shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of section 21, of the said Act, except on the written request of the Contractor and upon his/her giving to the implementing Department full security for all costs for which the Department might become liable in contesting such claim.

**Clause 19.** The Contractor shall obtain a valid license under the Contract Labour (Regulation and Abolition) Act, 1970, before the commencement of the work, and continue to have valid licenses until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986, Fatal Accident Act, 1855, Personal Injuries (Compensation Insurance) Act, 1970.

The Contractor shall also comply with the provisions of the 'Building and Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996' and 'The Building and Other Construction Workers Welfare Cess Act, 1996'. Failure to fulfill these requirements shall attract penal provisions of the contract, arising out of the resultant non-implementation of such provisions.

*Labour*

**Clause 19A.** No labour/s below the age of eighteen years shall be employed in the work and the contractor shall abide by the provisions of the Child Labour (Prohibition & Regulation) Act, 1986. Employment of female labour/s in works in the neighborhoods of sensitive barracks should be avoided as far as possible.

*Payment of  
minimum  
Wages to  
Labour*

**Clause 19B.** The Contractor shall pay to labours employed by him/her either directly or through Sub-Contractors, wages not less than fair wages as defined by the Labour Commissioner of the State Government under 'Minimum Wages Act, 1948', Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and



Abolition) Act, 1970, wherever applicable.

The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him/her.

In respect of all labourers directly or indirectly employed in the works for performance of the Contractor's part of the contract, the contractor shall comply with or cause to be complied with the contractor's Labour Regulations made by the State Government/ Government of India, from time to time in regard to payment of wages, wage period, deductions from wages, recovery of wages not paid and deductions made without authority, maintenance of wage books or wage slips, publication of scale of wage and other terms of employment, inspection and submission of periodical returns and all other matters likewise in nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, Minimum Wages Act, 1948, wherever applicable.

- a) The Engineer-in-Charge concerned shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his/her/their wages which are not justified by their terms of the contract or non-observance of the regulations.
- b) Under the provision of Weekly Holidays Act, 1986, the contractor is bound to allow to the labours, directly or indirectly employed in the work, one day rest for 6 days of continuous work, and pay wages at the same rate as for duty. In the event of default, the Engineer-in-charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labour and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-charge concerned.

The contractor shall also comply with the provisions of the 'Employees Liability Act, 2008', Workmen's Compensation Act and 'Maternity Benefits Act' or the amendments thereof or any other law relating thereto, and the rules made there under from time to time.

The Contractor shall indemnify and keep indemnified the implementing Department against payments to be made under and for the observance of the laws aforesaid and PW Contractor's Labour Regulations without prejudice to this right to claim indemnity from his/her sub-contractors.

The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

Whatever is the minimum wage for the time being, or if the wage payable is higher than minimum wage, such wage shall be paid by the contractor to the workers directly without the intervention of any Dafadar, and that Dafadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workers as and by way of commission or otherwise.

The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Dafadar from the wage of workers.

**Clause 19C.** In respect of all labours directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his/her own expenses, arrange for the safety provisions as framed from time to time by the competent authority, and shall at his/her own expense provide all facilities in connection therewith. In case the contractor fails to make arrangement, and fail to provide necessary facilities as aforesaid, he/she shall be liable to pay a penalty of Rs. 2000/- for each default, and in addition the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in their behalf, from the contractor.

**Clause 19D.** For the works above Rs. 2.0 crore, the Contractor shall submit by the 4th and 19th of every month to the Engineer-in-charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively-

The number of labourers employed by him/her on the work, their working hours, and the

wages paid to them;

Accidents that had occurred during the said fortnight showing the circumstances under which it had happened, and the extent of damage and injury caused by them, and the number of female workers who have been allowed maternity benefits according to Clause 19F of the contract and the amount paid to them;

Failing which the contractor shall be liable to pay to the Department, a sum not exceeding Rs. 2000/- for each default or materially incorrect statement. The decision of the Engineer-in-charge shall be final in deducting from any bill due to the contractor; the amount levied as fine and would be binding on the contractor.

**Clause 19E.** In respect of all labours directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by the Government from time to time for the protection of health and sanitary arrangements of workers employed by the contractor.

**Clause 19F.** In the event of the contractor(s) committing a default or breach of any of the provisions of the Contractor's Labour Regulations and Rules for the protection of health and sanitary arrangement for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and Rules which is materially incorrect, he/she shall, without prejudice to any other liability, pay to the Department a sum not exceeding Rs. 2000/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractors defaulting continuously in this respect, the penalty may be enhanced to Rs. 200/- per day for each day of default subject to a maximum of five per cent of the tendered value. The decision of the Engineer-in-charge shall be final and binding on the parties.

Should it appear to the Engineer-in-charge that the contractor(s) is/are not properly observing and complying to the provisions of the Contractor's Labour Regulations and Rules, The Minimum Wages Act, 1948 and Contract Labour (Regulation and Abolition) Act 1970, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as 'the said Rules') the Engineer-in-charge shall have the power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/or observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-charge shall have the power to provide the amenities herein before mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/her own expense and to approved standards all necessary hutments and sanitary arrangements required for his/her/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-charge shall have power to give notice in writing to the contractor(s) requiring that the said hutments and sanitary arrangements be remodeled and/or reconstruct such hutments and sanitary arrangements according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such hutments and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-charge shall have the power to remodel or reconstruct such hutments and sanitary arrangements according to approved standards at the cost of the contractor(s).

**Clause 19G.** The contractor shall comply with all the provisions of The Minimum Wages Act, 1948, Contract Labour (Regulation and Abolition) Act, 1970, Employees Liability Act, Industrial Dispute Act and Maternity Benefit Act, 1961, as amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force by the appropriate authority from time to time.

**Clause 19H.** The Engineer-in-charge may require the contractor to remove from the site of work, any person or persons engaged/assigned or employed by the contractors upon the work who may be determined as insane or incompetent or misconducts himself/herself, and the contractor shall forth with comply with such requirements.

**Clause 19I.** It shall be the responsibility of the contractor to see that the

building/structure under construction is not occupied by anybody unauthorized during construction, and is handed over to the Engineer-in-charge with vacant possession free from encumbrances in entirety, If such buildings/structures through completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/structure in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay a levy up to 5% of tendered value of work may be imposed by the Engineer-in-charge whose decision shall be final both with regard to the justification and quantum and shall be binding on the contractor.

However, the Engineer-in-charge, through a notice, may require the contractor to remove the illegal occupations, any time on or before construction and delivery.

*Work on Sundays*

**Clause 20.** No work shall be done on Sundays without the prior sanction of the Engineer-in-charge.

*Work not to be sublet. Contract may be rescinded and security deposit forfeited for subletting, bribing, or if contractor becomes insolvent*

**Clause 21.** The contract shall not be assigned or sublet without specific orders from Government in respect of a specified sub-contractor. And if the contractor shall assign or sublet his contract, or attempt so to do, or become insolvent or commence any insolvency proceedings or make any composition with his creditor, or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised, or offered by the contractor, or any of his servants or agents to any public officer or person in the employ of Government in any way relating to his office of employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Divisional Officer may thereupon by notice in writing rescind the contract, and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Government and the same consequences shall ensue as if the contract had been rescinded under the Clause 3 hereof, and in addition the contractor shall not be entitled to recover or be paid for any work there for actually performed under the contract.

*Sum payable as compensation to be considered as reasonable without reference to actual loss*

**Clause 22.** All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Government without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

*Changes in constitution of firm*

**Clause 23.** Where the contractor is a partnership firm or a consortium, prior approval in writing of the Engineer-in-Charge shall be obtained for any change made in the constitution of the firm/consortium. Where the contractor is an individual or a Hindu Undivided Family (HUF) business concern, such approval as aforesaid shall likewise be obtained, before the contractor enters into any partnership agreement/Memorandum of Articles where under the partnership firm/ consortium would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract is liable to be rescinded.

*Works to be under direction of Engineer-in-Charge*

**Clause 24.** All works to be executed under the contract shall be executed under the direction of Engineer-in-Charge. Further instructions/advice, if felt necessary by Superintending Engineer/ Chief Engineer, shall also be binding to be communicated by the Engineer-in-Charge.

*Settlement of disputes - Dispute Redressal Committee'*

**Clause 25. Settlement of Disputes and Arbitration:**

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever, in any way arising out of or relating to the contracts, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the executions or failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment thereof shall be dealt with as mentioned herein after:

If the contractor considers any work demanded of him/her to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge or any matter in connection with or arising out of the contract or carrying out of the work to be unacceptable, he/she shall promptly within 15 days request the Chairman of the Departmental Dispute Redressal Committee, in writing, for

written instruction or decision. Thereupon, the Dispute Redressal Committee shall give its written instruction or decision within a period of three months from the date of receipt of the Contractor's letter.

The Dispute Redressal Committee in each of the Works Departments shall be constituted with the following officials as Members:

1	Secretary / Engineer-in-Chief of the Department concerned	Chairman
2	Joint Secretary / Deputy Secretary / any Officer of equivalent rank of the Department	Member
3	One Designated Chief Engineer / Engineer of the Department to be nominated by the Department concerned.	Member Secretary and Convenor
4	One representative of Finance Department of the Government not below the rank of Joint Secretary or Financial Advisor in case of the Works Department where FA system has been introduced.	Member

This provisions will be applicable irrespective of the value of the works to which the dispute may relate.

**Clause 26.** The contractor shall fully indemnify and keep indemnified the implementing Department against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against implementing Department in respect of any such matter as aforesaid, the contractor shall be immediately notified thereof by the implementing Department and the contractor shall be at liberty, at his/ her own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the implementing Department if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge this behalf.

*Lump sum as in estimates*

**Clause 27.** When the estimate on which the tender is made includes lump sums in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of works involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-charge, capable of measurement, certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of this clause.

*Action where no specification*

**Clause 28.** In the case of any class of work for which there is no such specifications as referred to under Clause 11, such work shall be carried out in accordance with the latest Bureau of Indian Standards (BIS) specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per reputed manufacturer's specifications if accepted by the Engineer-in-Charge. If not available, then as per State Government / Union Government accepted and approved specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in- Charge which is approved by the Tender Accepting Authority.

*Definition of works*

**Clause 29.** The expression "works" or "work" where used in these conditions shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract constructed to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

**Clause 30.** The Contractor(s) shall at his/their own cost provide his/their labour with hutting on an approved site, and shall make arrangements for conservancy and sanitation in the labour camp to the satisfaction of the local Public Health and Medical Authorities. He/they shall also at his/their own cost make arrangements for the laying

of pipe lines for water supply to his/their labour camp from the existing mains wherever available, and shall pay all fees, charges and expenses in connection with there and incidental thereto.

**Clause 31.** The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions:-

- i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-charge;
- ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are, in the opinion of the Engineer-in-Charge, unsatisfactory.

**Clause 32.** The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the construction materials. The Contractor shall collect the total quantity of materials as per approved programme required for the work as per approved programme, before the work is started and shall hypothecate it to the Engineer-in-Charge. If any material remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-Charge shall be made and the material returned to the contractor. Although the materials are hypothecated to Institute, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-Charge in writing.

The contractor shall be responsible for rectifying defects noticed within Defect Liability Period from the date of completion of the work and the portion of the security deposit relating to work shall be refunded after the expiry of Defect Liability Period.

**Clause 33.** The contractor shall provide all necessary superintendence during execution of the work and as long thereafter as may be necessary for proper fulfilling of the obligations under the contract.

*Contractors  
Superintendence,  
Supervision,  
Technical Staff &  
Employees*

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(es) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his/her approval or otherwise of such representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative shall be appointed by the contractor soon after receipt of the approval from the Engineer-in-Charge and shall be available at site before start of work.

If the contractor (or any partner in case of firm/company) himself/herself has such qualifications, it will not be necessary for the said contractor to appoint such a principal technical representative but the contractor shall designate and appoint a responsible agent to represent him and to be present at the work whenever the contractor is not in a position to be so present. All the provisions applicable to the principal technical representative under the clause will also be applicable in such a case to the contractor or his responsible agent. The principal technical representative and/or the contractor shall on receiving reasonable notice from the Engineer-in-Charge or his designated representative(s) in charge of the work in writing or in person or otherwise, present himself/herself to the Engineer-in-Charge and/or at the site of work, as required, to take instructions. Instructions given to the principal technical representative or the responsible agent shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and/or the contractor or his/her responsible authorized agent shall be actually available at site especially during important stages of execution of work, during recording of measurement of works and whenever so required by the Engineer-in-Charge by a notice as aforesaid and shall also note down instructions conveyed by the Engineer-in-Charge or his/her designated representative in the site order



book and shall affix his signature in token of noting down the instructions and in token of acceptance of measurements.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule and the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked / test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint a suitable technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every running account bill / final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The contractor shall provide and employ skilled, semi-skilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who, in his opinion, misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

**Clause 34. "Levy / Taxes Payable by Contractor"**

- (i) GST, Building and other Construction Workers' Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the Contractor and Engineer-in-Charges shall not entertain any claim whatsoever in this respect.
- (ii) The contractor shall deposit Government Royalty and obtain necessary permit for supply of the sand, stone chips, red bajri, sand stone, river bed materials etc. from local authorities, if those are directly procured from quarry sites.

In case materials are procured from secondary sources, certificates of quarry owners to the effect of payment of royalties and Cess would have to be furnished. In absence of such certificates towards payment of Royalties and Cess such components shall be deducted from the contractor's bills at prescribed rates and deposited through 'GRIPS' portal or otherwise, in the designated Government Treasuries/PAO.

If pursuant to or under any law, notification or order, any Royalty, Cess or the like becomes payable by the implementing Department and does not at any time become payable by the contractor to the State Government/Local appropriate authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the Department and it will have the right and be entitled to recover the amount paid in the circumstances as afore said from dues of the contractor.

**Clause 35.**

- (i) All tendered rates shall be inclusive of statutory taxes and levies payable under respective statutes. However, if any further tax or cess is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies/cess, the contractor shall be reimbursed the amount so paid. Provided such payments, if any, is not, in the opinion of the Engineer-in-charge (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- (ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Department and/or the Engineer-in-Charge

and further shall furnish such other information/document as the Engineer-in-Charge may require from time to time.

- (iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

**Clause 36.** Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-in-charge shall have the option of terminating the contract without compensation to the contractor, but would be liable to clear full dues and claims on work done to his/her legal successor/s.

**Clause 37.** The contractor shall not be permitted to tender for works in which his near relative is posted as in any capacity between the grades of the Executive Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him/her in any capacity or are subsequently employed by him/her and who are near relatives to any Official in the Institute. Any breach of this condition by the contractor would render him/her liable to be removed from the approved list of contractors of the Department. If however the contractor is registered in any other Department, he/she shall be debarred from tendering in the Department for any breach of this condition.

NOTE: By the term "near relatives" is meant wife, husband, own parents and grandparents, own children and grandchildren, own brothers and sisters, own uncles, aunts and first cousins and their corresponding in-laws.

**Clause 38.** No engineer of Gazetted Rank or other Gazetted Officer employed in engineering or administrative duties in the Government shall work as a contractor or employee of a contractor for a period of one year after his/her retirement from Government service without the previous permission of Government in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

**Clause 39.** The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him/her to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation up to the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Engineer-in-Charge concerned. The contractor shall be paid for the damages/destruction suffered and for the restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the Air Force Officers or the Engineer-in-Charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he/she shall be allowed such extension of time for its completion as is considered reasonable by the Engineer-in-charge.

**Clause 40.** The contractor shall comply with the provisions of the Apprentices Act, 1961 and the Apprenticeship Rules, 1992 and orders issued there under from time to time. If

he/she fails to do so, his/her failure will be a breach of the contract and the Engineer-in-Charge may, in his/her discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him/her of the provisions of the said Act.

#### **Clause 41. Procedure For Suspension and Debarment of Supplier, Contractors and Consultants**

The procedure as laid down below shall govern the suspension/debarment of Suppliers/Contractors/Consultants (Contractors for brevity) involved in Government procurement for offences or violations committed during competitive bidding and contract implementation, for the works under different Departments of Government of West Bengal.

##### **Grounds for Suspension and Debarment:-**

- (1) Submission of eligibility requirements containing false information or falsified documents.
- (2) Submission of Bids that contain false information or falsified documents, or the concealment of such information in the Bids in order to influence the outcome of eligibility screening or any other stage of the bidding process.
- (3) Unauthorized use of one's name/digital signature certificate for the purpose of bidding process.
- (4) Any documented unsolicited attempt by a bidder (**A Person/Contractor/Agency /Joint Venture/Consortium/Corporation participating in the procurement process and/or a person / Contractor / Agency / Joint Venture / Consortium / Corporation having an agreement/contract for any procurement with the department shall be referred as Bidder**) unduly influencing the outcome of the bidding in his favour.
- (5) Refusal or failure to post a self-declaration to the effect of any previous debarment imposed by any other department of State Government and/or Central Government.
- (6) All other acts that tend to defeat the purpose of the competitive bidding such as lodging false complain about any Bidder, lodging false complain about any Officer duly authorized by the Department, restraining any interested bidder to participate in the bidding process, etc.
- (7) Assignment and subcontracting of the contract or any part thereof without prior written approval of the procuring entity.
- (8) Whenever adverse reports related to adverse performance, misbehaviour, direct or indirect involvement in threatening, making false complaints etc. damaging the reputation of the department or any other type complaint considered fit by the competent authority of the department, are received from more than one Officer or on more than one occasion from individual Officer.
- (9) Refusal or failure to post the required performance security / earnest money within the prescribed time without justifiable cause.
- (10) Failure in deployment of Technical Personnel, Engineers and/or Work Supervisor having requisite license / supervisor certificate of competency as specified in the contract.
- (11) Refusal to accept an award after issuance of "Letter of Acceptance" or enter into contract with the Government without justifiable cause.
- (12) Failure of the Contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period as mentioned in the "Letter of Acceptance", "Letter of Acceptance cum Work Order", "Work Order", "Notice to Proceed", "Award of Contract", etc.
- (13) Failure by the Contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the Contractor to comply with any written lawful instruction of the Procuring Entity/Authority (the Officer authorized by the Administrative Department, Government of West Bengal for procurement) or its representative(s) pursuant to the implementation of the Contract.
- (14) For the procurement of Consultancy Service/Contracts, poor performance by the Consultant of his services arising from his fault or negligence. Any of the following acts by the Consultant shall be construed as poor performance.
  - (i) Non deployment of competent technical personnel, competent Engineers and/or work supervisors;
  - (ii) Non-deployment of committed equipment, facilities, support staff and manpower;
  - (iii) Defective design resulting in substantial corrective works in design and/or construction;

- (iv) Failure to deliver critical outputs due to consultant's fault or negligence;
  - (v) Specifying materials which are inappropriate and substandard or way above acceptable standards leading to high procurement cost;
  - (vi) Allowing defective workmanship or works by the Contractor being supervised by the Consultant.
- (15) For the procurement of goods, unsatisfactory progress in the delivery of the goods by the manufacturer, supplier, or distributor arising from his fault or negligence and/or unsatisfactory or inferior quality of goods, vis-à-vis as laid down in the contract.
- (16) Willful or deliberate abandonment or non-performance of the project or Contract by the Contractor resulting in substantial breach thereof without lawful and/or just cause.

**CATEGORY OF OFFENCE :-**

- (A) First degree of offence: 1 to 16 of the above Clause-41 to be considered as First degree of offence.
- (B) Second degree of offence: Any one of the offences as mentioned under 'A' above, committed by a particular Bidder/Contractor/Supplier on more than one occasion, be considered as Second degree of offence.

**In addition to the penalty of suspension/debarment, the bid security / earnest money posted by the concerned Bidder or prospective Bidder shall also be forfeited.**

**PENALTY FOR OFFENCE :-**

- (I) For committing First degree of offence: Disqualifying a Bidder from participating in any procurement process under the Administrative Department of Government of West Bengal up to 2 (two) years.
- (II) For committing Second degree of offence: Disqualifying a Bidder from participating in any procurement process under the Administrative Department of Government of West Bengal up to 3 (three) years.

**PROCEDURE OF SUSPENSION AND DEBARMENT DURING THE PROCUREMENT PROCESS**

- (1) Initiation of Action, Notification and Hearings:  
Any Bidder or procurement authority on his own or based on any other information made available to him may invite the process of suspension/debarment proceedings by filing a written application with the **Bid Evaluation Committee** and such filing of written application has to be done within forty eight hours from the date and time of publication of the result of technical evaluation of any bid.
  - (a) Upon verification of the existence of grounds for suspension/debarment, the Chairperson of **Bid Evaluation Committee** shall immediately notify the bidder concerned either electronically through his registered e-mail or in writing to his postal address, advising him that:
    - i) A complaint has been filed against him and prima facie material has been found, which may lead to suspension/debarment.
    - ii) He has been recommended to be placed under suspension/debarment by the suspension committee (as constituted by the respective Administrative Department) stating the ground for such.
    - iii) The said bidder, within three days from the date of issue of such notification by the Bid Evaluation Committee, may approach the Chairperson of Suspension Committee by submitting all required documents in his favour for hearing. Any application made thereafter would not be entertained. Such notice should contain the e-mail id and the postal address of the Chairperson of the Suspension Committee.
  - (b) After receiving the recommendation for suspension from Bid Evaluation Committee, Suspension Committee shall issue a notice to the alleged bidder electronically through his registered e-mail id, to submit all relevant documents in support of his defense within three working days after issuance of the notice of the Suspension Committee. The Suspension Committee will conduct the hearing within seven working days from the date of receipt of the documents from the alleged bidder. If no appeal has been received from the alleged bidder or if after hearing sufficient ground for suspension is found, the Suspension Committee, will suspend the alleged bidder from participating in the procurement process under the Administrative Department for a period of six months from the date of issuance of suspension order. The Chairpersons of the

Suspension Committee shall issue the suspension order within seven days from the last date of hearing and shall notify the bidder concerned either electronically through his registered e-mail id or in writing to his postal address. The Chairperson of Suspension Committee shall also inform the decision to all concerned.

If sufficient reason for suspension is not found, the Suspension Committee would reject there commendation of Bid Evaluation Committee and would allow the bidder to take part in the tendering process.

If the bidder is suspended, the Suspension Committee would recommend debarment of the bidder and forward the case with all documents to the Debarment Committee for further action.

- (c) The Debarment Committee upon receipt of the recommendation of the Suspension Committee shall scrutinize the documents. The Debarment Committee will hold a hearing of the alleged bidder and issue necessary order within ten working days from the last date of hearing. The Debarment Committee, if satisfied after hearing, shall forward the case to the Department for orders of Debarment. The Department in due course will issue Debarment Order disqualifying/prohibiting the erring bidder from participating in the bidding/procurement of all projects under the Administrative Department for a specified period. The alleged bidder shall be intimated accordingly either electronically through his registered e-mail id or in writing to his postal address. Otherwise the Debarment Committee may reject the recommendation of the Suspension Committee. The Chairperson of Debarment Committee shall also inform the decision to all concerned.

#### **PROCEDURE FOR DEBARMENT DURING THE CONTRACT IMPLEMENTATION STAGE:-**

- (A) Upon termination of contract due to default of the Bidder, the Engineer-in-Charge shall recommend for debarment to the Bid Evaluation Committee. The Bid Evaluation Committee shall submit his recommendation of debarment of the alleged Bidder along with a detailed report stating clearly the reasons for debarment to the Debarment Committee within 30 (thirty) days from the date of termination of contract. The alleged Bidder shall be intimated accordingly either electronically to his registered e-mail id or in writing to his postal address. The Chairperson of Bid Evaluation Committee shall also inform the decision to all concerned.
- (B) The Debarment Committee upon receipt of the recommendation of Bid Evaluation Committee shall scrutinize the documents. The Debarment Committee will hold a hearing about the matter from the Bidder and issue necessary order within 10 (ten) working days from the last date of hearing. The Debarment Committee, if satisfied after hearing, shall forward the case to the Department for the order of debarment. The Department in due course will issue debarment order disqualifying/prohibiting the erring Bidder from participating in the bidding/procurement of all projects under the Administrative Department, Government of West Bengal for a specified period. The alleged Bidder shall be intimated accordingly either electronically to his registered e-mail id or in writing to his postal address. Otherwise the Debarment Committee may reject the recommendation of the Bid Evaluation Committee. The Chairperson of Debarment Committee shall also inform the decision to all concerned.

#### **STATUS OF SUSPENDED / DEBARRED BIDDER :-**

- (a) Bidder placed under Suspension/Debarment by the competent authority will not be allowed to participate in any procurement process under the Administrative Department within the period of suspension/debarment. The earnest money of the suspended Bidder shall stand forfeited to the Government.
- (b) If the Suspension/Debarment Order is issued prior to the date of issue of “Letter of Acceptance”, “Letter of Acceptance cum Work Order”, “Work Order”, “Notice to Proceed”, “Award of Contract” etc. for any Bid, the Suspended/Debarred Bidder shall not be qualified for Award for the said Bid and such Procurement Process will be dealt with as per existing norms by simply excluding the erring Bidder.
- (c) If the Suspension/Debarment Order is issued after award of a Government Project/Contract to the Debarred Bidder, the awarded Project/Contract shall not be prejudiced by the said Order provided that the said offence(s) committed by the Debarred Bidder is not connected with the awarded project/contract.

**Clause 42.** Executive Engineer of the concerned Division will be the Engineer-in-Charge in respect of the Tender contract and all correspondences concern ingrates, claims, change



in specifications and/or design and similar important matters will be valid only if accepted/recommended by the Engineer-in-Charge. If any correspondence of above tender is made with Officers other than the Engineer-in-charge for speedy execution of works, the same will not be valid unless copies are sent to the Engineer-in-Charge and also approved by him. Instructions given by the Assistant Engineer and the Junior Engineer on behalf of the Engineer-in-Charge (who have been authorized to carry out the work on behalf of the Engineer-in-Charge) regarding specification, supervision, approval of materials and workmanship shall also be valid. In case of dispute relating to specification and work, the decision of Engineer-in-Charge shall be final and binding. The Engineer-in-Charge will however invariably take decisions relating to tender contract or as mentioned in the relevant rules and clauses of the contract document with the approval of the Tender Accepting Authority.

**Clause 43.** Acceptance of the Tender will rest with the Tender Accepting Authority without assigning reason thereof to the bidder. The accepting authority reserves the right to reject any or all of the tenders without as signing any reason thereof to the bidder / contractor.

**Clause 44.** In the event of acceptance of Lowest Rate, no multiple Lowest Rates will be considered for acceptance by the Department. In such cases, the Tender will be cancelled.

**Clause 45.** In the event of conflicting different clauses, the clauses in the e-NIT will prevail.

**Clause 46.** Engineer-in-Charge shall not entertain any claim whatsoever from the Contractor for payment of compensation on account of idle labour on such grounds including non-possession of encumbrance free land.

**Clause 47.** Engineer-in-Charge shall not be held liable for any compensation due to machines becoming idle or any circumstances including untimely rains, other natural calamities, like strikes etc.

**Clause 48.** Imposition of any Duty / Tax / Octroi / Royalty etc. whatsoever of its nature (after work order / commencement and before final completion of the work) is to be borne by the contractor / bidder. Original challan of those materials, which are procured by the bidder, may be asked to be submitted for verification.

**Clause 49.** Cess @ 1% or as amended time to time of the cost of construction works shall be deducted from the Gross value of all Works Bill in terms of Finance Department order. Also it is instructed to register his/her establishment under the Act, with the competent registering Authority, i.e. Assistant Labour Commissioner / Deputy Labour Commissioner of the region.

**Clause 50.** No Mobilization/Secured Advance will be allowed unless specified otherwise in the contract.

**Clause 51.** Valid PAN issued by the Income Tax Department, Government of India, valid 15 digit Goods and Services Tax Payer Identification Number (GSTIN) under GST Act 2017, Cess, Royalty of Sand, Stone Chips, Stone Metal Gravel, Boulders, Forest product etc., Toll Tax, Income Tax, Ferry Charges and other Local Taxes, if any, are to be paid by the Contractor/Bidder. No extra payment will be made as a reimbursement or as compensation for these. The rates of supply and finished work items are inclusive of these taxes and charges.

**Clause 52.** All working Tools & Plants, Scaffolding, Construction of Vats & Platforms and arrangement of Labour Camps will have to be arranged by the Contractor at his/her own cost.

**Clause 53.** The Contractor shall supply Mazdoors, Bamboos, Ropes, Pegs, Flags etc. for laying out the work and for taking and checking measurements for which no extra payment will be made.

**Clause 54.** The Contractor/Bidder should see the site of works and Tender Documents, Drawings etc. before submitting e-Tender and satisfy himself/herself regarding the condition and nature of works and ascertain difficulties that might be encountered in executing the work, carrying materials to the site of work, availability of drinking water and

other human requirements & security etc. Work on river banks may be interrupted due to a number of unforeseen reasons e.g. sudden rises in water levels, inundation during flood, inaccessibility of working site for carriage of materials. Engineer-in Charge may order the contractor to suspend work that may be subjected to damage by climate conditions. No claim will be entertained on this account. There may be variation in alignment, height of embankment or depth of cutting, location of revetment, structures etc. due to change of topography, river condition and local requirements etc. between the preparation and execution of the scheme for which the tendered rate and contract will not stand invalid. The Contractor will not be entitled to any claim or extra rate on any of these accounts.

**Clause 55.** A machine page numbered Site Order Book (with triplicate copy) will have to be maintained at site by the Contractor and the same has got to be issued from the Engineer-in-Charge before commencement of work. Instructions given by inspecting officers not below the rank of Assistant Engineer will be recorded in this book and the contractor must note down the action to be taken by him in this connection as quickly as possible.

**Clause 56.** The work will have to be completed within the time mentioned in the e-NIT. A suitable Work Programme based on time allowed for completion of work as per e-NIT is to be submitted by the contractor within 7 (seven) days from the date of receipt of work order which should satisfy the time limit of completion. The contractor should inform in writing, within 7 (seven) days from the date of receipt of work order, the names of his authorized representatives who are to remain present at site daily during work execution who will receive instructions of the work, sign measurement book, bills and other Government papers etc.

**Clause 57.** No compensation for idle labour, establishment charge or on other reasons such as variation of price indices etc. will be entertained.

**Clause 58.** All possible precautions should be taken for the safety of the people and work force deployed at worksite as per safety rule in force. Contractor will remain responsible for his labour in respect of his liabilities under the Workmen's Compensation Act etc. He must deal with such cases as promptly as possible. Proper road signs as per PWD practice or any other sign board for safety purpose as per requirement by the concerned Administrative Department will have to be erected by the Contractor at his own cost while operating in public thorough fares.

**Clause 59.** The Contractor will have to maintain qualified technical employees and/or Apprentices at site as per prevailing Apprentice Act or as stipulated in the contract.

**Clause 60.** The Contractor will have to accept the Work Programme as per modifications and priority of work fixed by the Engineer-in-Charge so that most vulnerable reach and/or vulnerable items are completed before impending monsoon or rise in river flood water level or for other suitable reasons.

**Clause 61.** Quantities of different items of work mentioned in the tender schedule or in work order are only tentative. In actual work, these may vary considerably. Payment will be made on the basis of works actually done in different items and no claim will be entertained for reduction of quantities in some items or for omission of some items. For execution of quantitative excess in any item or supplementary new items of work as decided by the Department, approval of the Superintending Engineer / Chief Engineer / Government would be required, depending on whosoever be the Tender Accepting Authority, before making such payment.

**Clause 62.** In order to cope up with the present system of e-billing, supply of departmental materials is generally not allowed. However, if in special circumstances, Departmental materials may be issued to the Contractor/Bidder to the extent of requirements as assessed; those may be recovered from the Running Account Bill and/or Final Bill, as applicable.

**Clause 63.** Any material brought to site by the contractor is subject to approval of the Engineer-in-Charge. The rejected materials must be removed by the contractor from the site at his own cost within 24 hours of issue of the order to that effect. The rates in the schedule are inclusive of cost and carriage of all materials to worksite. The materials will have to be supplied in phase with due intimation to the Assistant Engineer concerned in

conformity with the progress of the work. For special type of materials, i.e. Geo Synthetic Bags, HDPE Bags, Geo Textile Filter, Geo Jute Filter etc., if any, relevant Data Sheet containing the name of the Manufacturers, Test Report etc. will also be submitted on each occasion. Engineer-in-Charge may conduct independent test on the samples drawn randomly before according approval for using the materials at site. In this regard decision of Engineer-in-Charge shall be final and binding.

**Clause 64.** For all items of contract jobs requiring skilled labour, the contractor shall have to employ 70% (Seventy Percent) of skilled labour locally. In case the Contractor fails to recruit skilled local labour, the Contractor shall employ skilled labour locally secured by Government in the manner indicated above. For bridge works, highly technical works of labour, the contractor may, with the prior permission in writing of the Engineer-in-charge to whom full facts must be placed for such permission, import and employ skilled labour up to 30% (Thirty Percent) of the total requirement. In this case the expression "Imported labour" shall mean "labour imported primarily from other States and secondarily, from the distant districts of the State of West Bengal." In case where the contractor fails to secure unskilled local labour or to engage imported labour, the contractor shall employ labour locally recruited by Government or labour imported by Government at the rate to be decided by the Superintending Engineer of the works concerned, whose decision as to the circumstances in which employment of such labour is of mutual advantage to Government and the contractor, will be final and binding on the parties.

**Clause 65.** All queries and disputes arising out of the works tender contract is to be brought to the notice of the Chairman of the 'Department Dispute Redressal Committee' in writing for decision within 15 days.

**Clause 66.** The contractor shall have to make his own arrangements for water, both for the work and use by his workers, etc., for road rollers and for all tools and plant, etc., required on the work.

**Clause 67.** Contractor will be responsible for the payments of all water charges payable to the Corporation Municipality / Panchayat or any other water works authority including a Government Department concerned.

**Clause 68.** If the contractors shall desire an extension of the time for completion of the work under clause 5 of the contract, no application for such extension will be entertained if it is not received in sufficient time to allow the Executive Engineer to consider it and the Contractor will be responsible for the consequences arising out of his negligence in this respect.

**Clause 69.** The Contractor will have to leave ducts in walls and floors to run conduit or cables, where necessary, and he will not be entitled to any extra payment on this account.

**Clause 70.** Contractors in the course of their work should understand that all materials obtained in the work of Dismantling, Excavation, etc., will be considered Government property and will be disposed of to the best advantage of Government.

**Clause 71.** In case of very special case of circumstances, if any Departmental materials are issued, there may be delay in obtaining the materials by the Department and the Contractor is, therefore, required to keep himself/herself in touch with the day to day position regarding the supply of materials from the Engineer-in-charge and to so adjust the progress of the work that his labour may not remain idle nor may there be any other claim due to or arising from delay in obtaining the materials. It should be clearly understood that no claim whatsoever shall be entertained by the Department on account of delay in supplying materials.

**Clause 72.** No compensation for any damage done by rain or traffic during the execution of the work will be made.

**Clause 73.** Whenever a work is carried out in municipal area, electric lights or electric danger signals whenever available shall be provided by the contractors on the barriers as well as paraffin lights. Facilities for the electric connection will be made by this Department but the Contractor will bear all the expenses.

**Clause 74.** The Contractor should quote through rate inclusive of cost of materials and carriage to place of working.

**Clause 75.** The Contractors should give complete specifications showing the method of execution and the quantity and quality of materials they intend to use per hundred square metre area.

**Clause 76.** In cases where water is used by the Contractor he will be required to deposit in advance with the Executive Engineer the charges for water which are to be calculated in accordance with the schedule of miscellaneous rates in the Canal Act.

**Clause 77.** It must be clearly understood by the Contractor that no claim on account of enhanced rates on those already accepted, due to fluctuations arising out of any situation will be entertained during the currency of this contract for the work as per schedule attached to the agreement and the additional work, if any, under Clause 12 of the contract.

**Clause 78.** In the event of emergency the Contractor will be required to pay his labour everyday and if this is not done, Government shall make the requisite payments as would have been paid by the contractor and recover the cost from the contractors.

#### **INCONVENIENCE OF THE PUBLIC**

**Clause 79.** The Contractor(s) shall not deposit material on any site which will seriously inconvenience the public. The Engineer-in-charge may require the Contractor(s) to remove any materials, which are considered by him to be a danger or inconvenience to the public or cause them to be removed at the contractor's cost.

**Clause 80.** The Contractor undertakes to have the site clean, free from rubbish to the satisfaction of the Engineer-in-charge. All surplus materials, rubbish etc. will be removed to the places fixed by the Engineer-in-charge and nothing extra will be paid.

**Clause 81.** The Contractor shall not allow any rubbish or debris to remain on the premises during or after repairs, but shall remove the same and keep the place neat and tidy during the progress of the work. The Engineer-in-charge may get the site premises cleared of debris etc. And recover the cost from the bill of the contractor, if the latter shows slackness in observing this clause.

**Clause-82.** Construction materials brought at site shall not be stacked at random. The contractor shall stack all these materials as directed by the Engineer-in-charge.

#### **INTERPRETATION OF CLAUSES**

Governor means the Governor of the State of West Bengal and his/her successors.

The Government means Government in the concerned Works Department.

The Department means the Secretary of the concerned Department or his/her authorized representative.

The Divisional Officer means the Executive Engineer of the concerned Works Department for the time being of the Division concerned, also identified as the Engineer-in-Charge.

The Sub-divisional Officer means the Assistant Engineer of the concerned Works Department for the time being of the Sub-division concerned. Junior Engineer equivalent to Section Officer of the Section concerned.

Superintending Engineer in the concerned works Department is the final Authority regarding Schedule of Rates and also the acceptance of Non-scheduled item rates arrived on the basis of market rate analysis for supplementary items, and the authority for approval of Reduced Rates and Part Rates. He is also the Tender Accepting Authority for works of value above Rs. 45.00 lakh and up to Rs. 2.00 crore under existing delegated power.

Chief Engineer in the concerned Works Department is the technical head of the Directorate and is also the Tender Accepting Authority for all works of value above Rs.

2.00 crore. Excess work over individual items comprising the original tender may be exceeded beyond 10% with the approval of concerned tender accepting authority and verified by the Superintending Engineer/ Chief Engineer subject to the total value of work upon completion is within the technically sanctioned cost and that there is no major deviation from original scope of work in the tender. **Any supplementary tender/item/work in connection with the main tender is to be taken up with the approval of the Tender Accepting Authority not below the rank of Executive Engineer.** Such supplementary tenders above 10% of BOQ are to be executed only with the approval of appropriate Government irrespective of the value of tender.

Words importing the singular number only include the plural number and vice versa.

**Irrespective of the accepting authority, Divisional officer shall be the authority signing agreement for all tenders of value more than Rs. 3.00 lakh up to any amount on behalf of the State.**

Schedule showing (approximately) materials to be supplied by the Engineer-in-Charge under clause 10:

Particulars	Rates at which the materials will be charged to the contractor			Place of delivery
	Unit	Rs.	P.	

Note 1- The person or firm submitting the tender should see that the rates in the above schedule are filled up by the Engineer-in-charge on the issue of the form prior to the submission of the tender.

(Name in full)  
 \*Signature of Contractor/Agency  
 with official seal containing  
 Principal office address

(Name in full)  
 \*Signature of Executive  
Engineer/Assistant Engineer  
 on behalf of the Governor of the  
 State of West Bengal with official  
 seal containing designation & address

\* To be authenticated on each and every page of the contract document by all parties.