



**GOVERNMENT OF ODISHA  
(HOUSING & URBAN DEVELOPMENT DEPARTMENT)**

**OFFICE OF THE ENGINEER-IN-CHIEF, PUBLIC HEALTH  
ODISHA, BHUBANESWAR**

**DETAILED TENDER CALL NOTICE (DTCN)  
FOR**

**"Construction of ESR and other ancillary works in  
connection with the work "Augmentation of water supply  
system along with ancillary works for Balangir town."**

**ESTIMATED COST: Rs. 1534.37 LAKHS (Excluding GST)**

**Bid Identification No. EICPH- 02/2026-27 Dt.17.06.2026**

**PART-I : General & Technical Bid**

***COST OF TENDER PAPER: Rs.10,000.00***

**June - 2026**

## CONTENTS OF DETAILED TENDER CALL NOTICE (DTCN)

Section	Description
<b>DTCN Part – I: General &amp; Technical- Bid</b>	
Section-1	Notice Inviting Tender (NIT)
	Check List to be Filled up by the Bidder
	Contract Data
Section-2(A)	Details of the Documents to be Furnished for Online Bidding
Section-2(B)	Instructions to Bidders
Section-2(C)	Data Sheet
Section-2(D)	Letter for Submission of Tender
Section-2(E)	Tender Declaration
Section-2(F)	Letter of Acceptance of Tender
Section-2(G)	Memorandum
Section-3	Information regarding Tenderer
Section-4	Declaration by the Tenderer
Section-5	Form of Agreement
Section-6	Conditions of Contract
Section-7	Special Conditions of Contract
Section-8	Scope of Work
Section-9	Technical Specifications & Design Criteria
Section – 10	Drawing
Section – 11	Payment Break-up Schedule
Schedule-A to J	Formats for furnishing Information by the Bidder
Appendix - I	Executive Instruction regarding calling for and acceptance of tenders in e-Procurement in Govt. of Odisha
Appendix - II	Procedure for Electronic Receipt, Accounting and Reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids
<b>DTCN Part – II: Price Bid/BoQ</b>	

## SECTION-1



### **GOVERNMENT OF ODISHA OFFICE OF THE ENGINEER-IN-CHIEF (PH), ODISHA, BHUBANESWAR**

\* \* \* \* \*

### **NOTICE INVITING TENDER (NIT) FOR THE WORK "Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town."**

#### **NATIONAL COMPETITIVE BIDDING THROUGH e-Procurement Identification No. EICPH-02/2026-27 Dt.17.06.2026**

The **Engineer-in-Chief (PH), Odisha, Bhubaneswar** on behalf of Governor of Odisha invites **Percentage Rate Bids** through **e-Procurement** in conformity with the terms and conditions of the Detailed Tender Call Notice (DTCN) in Two Bid system (Part-I: General & Technical Bid and Part-II: Price Bid) from **"A' Class & Special Class" Contractors** registered with the Odisha State Government and Contractors of equivalent grade/class registered with Central Government/ any other State Government/ MES/ Railways having experience and expertise in Design, Construction, Testing & Commissioning of Similar Type of Works and fulfilling minimum eligibility criteria as stated hereunder and other detailed qualifying requirements given in the DTCN to be eventually drawn up in the **Standard P-1 Contract Form of Odisha PWD**. The bid should be submitted on-line in the website [www.tendersodisha.gov.in](http://www.tendersodisha.gov.in) by eligible class of contractors. The bidders should have necessary Portal Enrolment (with his own Digital Signature Certificate). Contractors registered elsewhere but not registered with Government of Odisha can also participate in the e-procurement after necessary enrolment in the portal but have to subsequently register themselves with the appropriate registering authority of the State Government before award of work / signing of the Agreement as per prevalent registration norms of the State.

<b>Sl. No.</b>	<b>Name of the Work</b>	<b>Value of Work excluding GST (Rs. Lakh)</b>	<b>Bid Security (EMD) (Rs. Lakh) (Online)</b>	<b>Cost of Bid Document (in Rs.) (Online)</b>	<b>Period of completion</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>1.</b>	<b>Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town.</b>	<b>1534.37</b>	<b>15.34</b>	<b>10,000.00</b>	<b>09 (Nine) Months</b>

2. Mode of Submission of tender: Tender should be submitted online in [www.tendersodisha.gov.in](http://www.tendersodisha.gov.in).
3. The bidders desirous to participate in bidding must possess compatible Digital Signature Certificate of Class-II or Class-III and should follow the changes/ modifications/ addendum to DTCN if any.

4. The original documents i.e., Affidavits, Undertakings & Certificates as per the Schedules and Annexure of DTCN that have been uploaded by the bidder in the e-tender website should be submitted for verification during evaluation within **four days** after last date of submission of bid.

5. **Critical Dates:-**

SN	Description	Critical Dates
(i)	Period of availability of tenders on-line	<b>From 11.00 Hrs. of 24.06.2026 to 17.00 Hrs. of 17.07.2026</b>
(ii)	Last date & time of seeking clarification as per Schedule-I	<b>17.00 Hrs. of 09.07.2026</b>
(iii)	Last date & time of bidding on-line	<b>17.00 Hrs. of 17.07.2026</b>
(iv)	Date & time of opening of Technical Bid	<b>11.00 Hrs. of 18.07.2026</b>

6. **Minimum Eligibility Criteria :-**

- i) The Firms/ Companies/ Registered Contractors should have **Successfully Completed Work(s) of Similar Nature** (with ancillary electrical or mechanical or instrumentation or surveillance type of works, as applicable) valuing not less than **Rs.543.17 Lakh (30% of the estimated cost including GST)** in any one year during the last 5 (five) years in any Govt. Sector and/or Public Sector and/or any Govt. Parastatal of India or any of its constituent State or Union Territory. **However, any one such completed similar nature of work in the year under consideration must cover at least one Drinking Water Treatment Plant with Rapid Gravity Filtration System (RGF) or Sewage Treatment Plant or Septage Treatment Plant or Intake Well or Elevated Service Reservoir of (minimum 20 m staging having capacity not less than 5.0 lakh litre without cumulative or additive effect/ Ground Storage Reservoir of capacity not less than 5.0 lakh litre (not cumulative or additive) or combination of any two or more.** The firm shall have to submit the performance certificate of the works constructed by them for satisfactory performance from appropriate authority i.e., not below the rank of Executive Engineer /Superintending Engineer/equivalent. Weightage @ 10% per year shall be given on the value of the completed work in the preceding years. However, the Work(s) completed in the current year shall also be considered without any weightage factor on production of certificate from competent authority.
- ii) The Firms/Companies/Registered Contractors should have annual financial turnover of not less than **Rs.724.22 Lakh (40% of the estimated cost including GST)** in any one year in **Civil Construction Works** during last 5 (five) years and the turn over need to be certified by Chartered Accountant. **The certificate issued by Chartered Accountant should bear the Unique Document Identification Number (UDIN).** Weightage @ 10% per year shall be given on the annual turnover of the preceding years. However, the financial turnover of the Work(s) in the current year shall also be considered without any weightage factor subject to production of Audited Balance Sheet and Certificate from the CA with verifiable UDIN.
- iii) When bids have been invited in a common notice for different works, the order of opening of the financial bids shall be in seriatim in which those works are mentioned in the notice of 'Invitation for Bids' unless otherwise required to be changed. Bid capacity of any bidder shall be progressive in nature depending upon the corresponding bidder being declared as **L<sub>1</sub>** in the preceding financial bid(s).

7. **Weightage Factor (On Compound basis):**

Following enhancement/compounding factors will be used for the costs of works executed and the financial figures to a common base value.

<u>Year before</u>	<u>Multiplying factor</u>
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

8. To arrive at the value of completed works, value of multiple contracts executed in a financial year shall be considered. For this purpose, the completion certificates given by the authorities for any one financial year shall be considered. In case value of works executed in any one financial year is not available in the certificates, the same shall be calculated on a pro-rata basis, considering that the total completed value and the time schedule in days.
9. The Bidder should have not been blacklisted by any Govt./ Govt. Undertaking on the bid submission date. **Self-Declaration Certificate** by Bidder in the form of Affidavit is to be submitted.
10. All Bidders/Contractors are bound to register themselves in CDMS Portal developed by State Procurement Cell, Odisha, Bhubaneswar. However, the successful out State Bidders those who are not registered in CDMS Portal, Odisha, are bound to register themselves before signing of agreement.
11. The bid for the work shall remain valid for a period of **120 (One Hundred Twenty) days from the date of opening of Price Bid**. If any Bidder/ Tenderer withdraws his bid/ tender before the said period or makes any modifications in the terms and conditions of the bid, the bid security/earnest money shall stand forfeited.
12. Bids from Consortium/ Unincorporated Joint Venture is not acceptable.
13. Other details can be seen in the bidding documents, which is available in website [www.tendersorissa.gov.in](http://www.tendersorissa.gov.in).
14. All amendments, time extension, clarifications etc. will be uploaded in the website only. Bidders should regularly visit the above website to keep themselves updated.
15. Authority reserves the right to reject any or all the tenders without assigning any reasons thereof.
16. The estimated cost put to tender in respect of the work as mentioned in the above table is tentative only. The actual estimated cost shall be as per the bill of quantities / schedule of quantities appended to the DTCN. The estimated cost mentioned in the said bill of quantities shall be the basis for tender finalization, acceptance, submission of ISD, APS (if applicable) and for all other practical purposes.
17. If any mismatch is observed between the specifications reflected in the BoQ and the corresponding details mentioned in Section-8 & 9 of DTCN or, if specification of any item/component/sub-item is not mentioned in the BoQ then, in such cases, decision of the Engineer-in-charge shall be final & binding.
18. Since the aforesaid project put to tender is under resource tied-up programme, it's time of execution and expenditure vis-à-vis completion are of utmost importance. To ensure

participation of sincere and reasonable bidders through this transparent bidding process, it is clarified that the bidder(s), whose contract(s)/ agreement(s) has/ have been rescinded under PHEO/ WATCO/ RWS&S during last two years prior to the date of invitation of this tender, shall not be eligible to participate in the bidding process for the aforesaid work. Even if such contractors participated in the bidding process for the aforesaid work, their bids shall be out rightly rejected.

19. It is being observed that complaints are being raised by the fellow bidder(s) and/or from other persons(s)/entity(s) regarding the eligibility of other bidder(s) participated in the bidding process. In this connection it is clarified that, simply raising a complaint against any bidder(s), participated in the bidding process for the aforesaid work will not hold good unless it is substantiated with required documentary evidence(s) by the said complainant(s). This means the onus of establishing the ineligibility of any bidder shall lie with the complainant(s) within a reasonable time frame to be decided by the officer inviting the bid for the aforesaid work. Appropriate decision on the said complaint(s) shall be taken by the competent authority without assigning any reason thereof to the complainant(s).

20. **Name and Address of the Officer Inviting Bids**

**The Engineer-in-Chief (PH)**  
**Office of the Engineer-in-Chief, PH**  
**1st Floor, Unnati Bhawan, Satyanagar,**  
**Bhubaneswar, Odisha – 751 007.**  
**Phone : #91-674-2575309,**  
**email : [eicphodisha@gmail.com](mailto:eicphodisha@gmail.com)**

**Sd/-**  
**ENGINEER-IN-CHIEF (PH)**

## CHECK LIST TO BE FILLED UP BY THE BIDDER

**Name of the Work: Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town.**

Sl. No	Particulars	Reference to Clause No.	Whether furnished		Reference to Page no.
			Yes	No	
01.	Cost of Bid Document <b>Rs.10,000.00(Online remittance)</b>	As per NIT			
02.	Bid Security (EMD) for <b>Rs. 15.34 lakh (Online)</b>	Clause 23.1, Section 2(B) of DTCN			
03.	Copy of valid <b>GST Registration Certificate / GSTIN</b>	Clause (a)iii., Section 2(A) of DTCN			
04.	Copy of <b>PAN Card</b>	Clause (a)iv., Section 2(A) of DTCN			
05.	Copy of valid <b>Contractor's Registration Certificate</b>	Clause (a)v., Section 2(A) of DTCN			
06.	<b>No Relationship Certificate</b>	Clause (a)viii., Section 2(A) of DTCN			
07.	<b>Work schedule</b> in the form of Bar Chart	Clause 7.14, Section-7 of DTCN			
08.	Self-declaration certificate by the bidder in the form of Affidavit for <b>No Criminal Case pending at the time of Bidding</b>	Clause 6, Section 2(B) of DTCN			
09.	Self-declaration certificate by the bidder in the form of Affidavit for not being <b>Blacklisted</b> by any Govt./ Govt. Undertaking	As per NIT			
10.	Self-declaration certificate by the bidder in the form of Affidavit declaring that in last 3 financial years they have not applied for/ are undergoing <b>Corporate Debt Restructuring (CDR) /Strategic Debt Restructuring (SDR)</b> or facing recovery proceedings from Financial Institutions or those are facing Sickness and under consideration of Board for Industrial and Financial Reconstruction (BIFR)	Clause 8.4, Section - 2(B) of DTCN			
11.	<b>Structure &amp; Organization</b>	Schedule-A			
12.	<b>Financial Statement</b>	Schedule-B			
13.	<b>List of Tools, Plants &amp; Equipments</b>	Schedule-C			
14.	<b>Works Experience -</b>	Schedule-D			
(a)	List of similar works executed during last 5 years	Schedule-D (Item-3)			
(b)	Works in hand-Approximate value of existing commitment and ongoing works.	Schedule-D (Item-4)			
(c)	Bid Capacity Calculation Sheet	Schedule-D (Item-5)			
15.	Information regarding <b>Current Litigation, Debarring / Expelling of the Tender or Abandonment of the work by the tenderer</b>	Schedule-E			
16.	<b>Electrical License for External &amp; Internal Electrical Works</b>	Schedule-F			
17.	<b>Affidavit / Declaration</b>	Schedule-G			
18.	<b>Solvency Certificate from a Schedule Bank</b>	Schedule-H			
19.	<b>Bank Guarantee for any Security Deposit (If allowed)</b>	Schedule-J			

## CONTRACT DATA

### A. GENERAL INFORMATIONS

SN	Item	Details
1	Bid Identification No.	<b>EICPH-02/2026-27 Dt.17.06.2026</b>
2	Name of the Work	<b>Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town.</b>
3	Officer Inviting Tender	<b>Engineer-in-Chief (PH), Odisha, Bhubaneswar</b>
4	Executive/Superintending Engineer concerned with head-quarters authorized as Engineer-in-charge of this work.	<b>Additional Chief Engineer, PH Division, Balangir</b>
5	Superintending Engineer/Addl. Chief Engineer with head-quarters	<b>Addl. Chief Engineer, PH Circle, Bhawanipatna</b>
6	Accepting Authority	<b>Engineer-in-Chief (PH), Odisha, Bhubaneswar</b>
7	Estimated Cost	<b>Rs.1534.37 lakh (Excluding GST)</b>

### B. BID INFORMATION

8	Intended completion period/Time period assigned for Completion	<b>09 (Nine) Calendar Months</b>
9	Last Date & time of submission of Bid	<b>17.00 Hrs. of Dt.17.07.2026</b>
10	<b>Cost of Bid Document (To be Remitted Online)</b>	<b>Rs.10,000.00</b>
11	<b>Bid Security (EMD) (To be Remitted Online)</b>	<b>Rs. 15.34 lakh</b>
12	<b>Additional Performance Security (In the shape as mentioned at Clause 23 of Section-2(B))</b>	
	<b>SI No</b>	<b>Incremental Basic of Additional Performance Security.</b>
i)	Amount	<b>Additional Performance Security to be deposited by the Successful bidder</b>
	i	Below 0% but not below 10% of the Project Cost put to bid.
	ii	Below 10% but not below 20% of the Project Cost put to bid.
	iii	Bid price is 20% or more below of the project cost put to bid.
		No Additional Performance guarantee/ Security percentage is required.
		0.1% for every percentage of bid price below 10% of the project cost put to bid starting at 11% with the Additional Bid Performance Guarantee being 0.1% and the Additional Bid Performance Guarantee percentage shall be applied on the bid price.
		0.2% for every percentage of bid price below 20% of the project cost put to bid in addition to 1% of the bid price and the Additional Bid Performance Guarantee percentage shall be applied on the bid price.
ii)	Pledged in favour of	<b>Additional Chief Engineer, PH Division, Balangir</b>
iii)	Payable at	<b>Balangir</b>
iv)	Type of Instrument	<b>As specified in the Bid document</b>
13	The Financial years of last five years	<b>2020-21 to 2024-25</b>
14	Bid validity period	<b>120 days from the date of opening of Price Bid</b>
15	Currency of Contract	<b>Indian Rupees</b>
16	Language of Contract	<b>English</b>

**SECTION- 2(A)**  
**DETAILS OF THE DOCUMENTS TO BE FURNISHED**  
**FOR ONLINE BIDDING**

- (a) Scanned copies of the following documents to be up-loaded in appropriate place in PDF format in the website [www.tendersodisha.gov.in](http://www.tendersodisha.gov.in).
- i. **Remittance of Cost of Bid Document(Online).**
  - ii. **Remittance of Bid Security (EMD)(Online)**
  - iii. **GST Registration Certificate/ GSTIN.**
  - iv. PAN Card.
  - v. Contractor's Registration Certificate.
  - vi. Affidavit regarding Correctness of Certificates.
  - vii. Affidavit regarding No Relation Certificate.
  - viii. Work Experience Certificate from the authority not below the rank of Executive Engineer/Superintending Engineer.
  - ix. Annual Turnover Certificate from Chartered Accountant for last Five (5) Financial Years with break-up of **Construction Works & Total Works including GST** for each Financial Year.
  - x. Any other relevant required document, if any.
- (b) Scanned Copies of the Certificates/Formats showing details of information to be furnished as per the enclosed formats should be uploaded in appropriate place after converting the same to PDF.
- Schedule A - Structure & Organisation.  
Schedule B - Financial statement  
Schedule C - List of tools, plant & equipment proposed to be deployed in the work.  
Schedule D - Work experience  
Schedule E - Information regarding Current Litigation, Debarring / Expelling of the Tender or Abandonment of the work by the Tenderer  
Schedule F - Information on Electrical License/Collaboration.  
Schedule G - Declaration.  
Schedule H - Solvency Certification from Bank  
Schedule I - Format for Seeking Clarification  
Schedule J - Form for Bank Guarantee for **EMD/ISD/APS/Any Other Security Deposit**  
***(The details of the Format is enclosed in the DTCN)***
- (c) Uploaded documents of valid successful bidders will be verified with the original before acceptance of offer.
- (d) DTCN is not to be uploaded by the bidder. The bidder has to only agree / disagree on the conditions in the DTCN. The bidders, who disagree on the conditions of DTCN, cannot participate in the tender.
- (e) **Cost of Bid Document will be paid on online mode** by the Bidder, failing which the bidder will be disqualified.
- (f) **Cost of Bid Security Amount (EMD) will be paid on online** by the Bidder, failing which the bidder will be disqualified.

## **SECTION- 2(B)**

### **INSTRUCTIONS TO BIDDERS**

#### **A. GENERAL**

1. **Definitions:**

- (a) "Employer" means the **Public Health Engineering Organisation (PHEO)** of the Government of Odisha represented by the **Engineer-in-Chief, PH, Odisha, Bhubaneswar** or his authorised representative with whom the selected Contractor signs the contract for the services.
- (b) "Contractor" / Bidder / Firm / Engineer Firm / Company carry the same meaning throughout the DTCN and Contract.
- (c) "Contract" means the contract/ agreement signed by the parties along with all attached documents listed in the DTCN (Tender Document Part -I & II).
- (d) "Data Sheet" means such part of the Instructions to Contractor as are used to reflect assignment conditions and evaluation of the bid.
- (e) "Day" means a calendar day.
- (f) "Government" means the Government of Odisha.
- (g) "Instructions to Bidders (Section-2(B) of the Part-I of DTCN) means the document which provides all information needed to prepare their proposals.
- (h) "NIT" (Section-1 of the DTCN) means the Letter of Invitation being sent by the Employer.
- (i) "Personnel" means professionals and support staff provided by the Contractor and assigned to perform the services in full or in any part thereof.
- (j) "Proposal" means the Technical Proposal (Tender Document Part I – General & Technical Bid) and the Financial Proposal (Tender Document Part II – Price Bid).
- (k) "DTCN" means the Detailed Tender Call Notice prepared by the Employer for the selection of contractor which includes Part-I & II.
- (l) "Govt". means Govt. of Odisha or Govt. of India as the case may be.

2. **Introduction / Selection Procedure:**

The Employer named in the Data Sheet will select a contract firm to execute the work as described in the scope of work and in the Data sheet.

The Contractor shall bear all costs associated with the execution of the work on **Percentage Rate Bid**. The Employer is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to contract award without thereby incurring any liability to the Contractor.

3. **Location of the Project:**

The place of action is at **Balangir Municipality** in the District of **Balangir** in the **State of Odisha**.

4. **Source of Funding:**

The work will be funded under **SUJALA/BASUDHA (State Plan)**

5. **Eligibility:**

5.1. A Bidder shall be deemed to have the nationality of India.

5.2. A Bidder shall be **'A' Class or 'Special' Class Contractor** registered with the Odisha State Government and Contractors of equivalent grade/class registered with Central Government/ any other State Government/ MES/ Railways.

- 5.3. Registered Contractor of **'A' Class or 'Special' Class Contractor** of Odisha State PWD or equivalent class of CPWD / Railway / MES / Central or other State Govt. Proof of registration is to be furnished along with the tender.
6. **History of Litigation and Criminal Record:**  
If any criminal cases are pending against the Contractor (him/her/partners) at the time of submitting the tender, then the tender shall be summarily rejected.
7. The Contractor has to furnish a declaration that no near relatives are working in the cadre of an Assistant Engineer/Assistant Executive Engineer/ Executive Engineer and above in the Organisation of Public Health Engineering Organisation (PHEO) of State of Odisha.
8. **Other Requirements:**
- 8.1. Even if the Contractor meets other criteria, his tender shall be summarily rejected if he is found to have misled or made false representation in the form of any of the statements submitted in proof of the eligibility and qualification requirements.
- 8.2. The tender shall also be summarily rejected if he has a record of performance such as absconding from work, works not properly completed as per contract, inordinate delays in completion, financial failure.
- 8.3. In addition to the above, even while executing the work, if it is found that he produced false / fake, certificates in his tender, he will be blacklisted.
- 8.4. The bidders who have in last 3 financial years applied for / are undergoing Corporate Debt Restructuring (CDR)/Strategic Debt Restructuring (SDR) or facing recovery proceeding from Financial Institutions or those are facing Sickness and under consideration of Board for Industrial & Financial Reconstruction (BIFR) are not eligible for qualification. Self-Declaration Certificate by the bidder in the form of affidavit is to be submitted.
9. **Original Certificates:**  
Original documents/certificates shall be produced as and when required to verify the copies of statements and other information furnished along with tender. Failure to produce original documents in time will lead to disqualification.
10. **Cost of Tendering:**  
The Contractor shall bear all expenses associated with the preparation and submission of his tender, **Engineer-in-Chief, PH, Odisha, Bhubaneswar** shall in no case be responsible or liable for reimbursement of such expenses.
11. **Site Visit:**  
The contractor is advised to visit and examine the site at **Balangir Municipality** in the District of **Balangir** and its surroundings and obtain for himself all information that may be necessary for preparing the tender and quoting rates at his cost and responsibility.

## **B. TENDER DOCUMENTS**

**12. Tender Documents:**

- 12.1. A set of Tender Documents comprising of the General & Technical Bid and the Price Bid includes the following together with all Addenda thereto, which may be issued in accordance with **Clause 2(B)13 and Clause 2(B)14.**

### **PART- I : GENERAL & TECHNICAL BID**

Section	Description
<b>DTCN Part – I: General &amp; Technical- Bid</b>	
Section-1	Notice Inviting Tender (NIT)
	Check List to be Filled up by the Bidder
	Contract Data
Section-2(A)	Details of the Documents to be Furnished for Online Bidding
Section-2(B)	Instructions to Bidders
Section-2(C)	Data Sheet
Section-2(D)	Letter for Submission of Tender
Section-2(E)	Tender Declaration
Section-2(F)	Letter of Acceptance of Tender
Section-2(G)	Memorandum
Section-3	Information regarding Tenderer
Section-4	Declaration by the Tenderer
Section-5	Form of Agreement
Section-6	Conditions of Contract
Section-7	Special Conditions of Contract
Section-8	Scope of Work
Section-9	Technical Specifications & Design Criteria
Section – 10	Drawing
Section – 11	Payment Break-up Schedule
Schedule-A to J	Formats for furnishing Information by the Bidder
Appendix - I	Executive Instruction regarding calling for and acceptance of tenders in e-Procurement in Govt. of Odisha
Appendix - II	Procedure for Electronic Receipt, Accounting and Reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids
<b>DTCN Part – II: Price Bid/BoQ</b>	

- 12.2. The Contractor is expected to examine carefully all instructions, terms of reference, tender conditions, forms, appendices to tender, addenda in the tender documents. Failure to comply with the requirements of tender submission will be at the contractor's own risk.

**13. Clarification of Tender Documents:**

The Contractor shall carefully examine the tender documents and be fully informed of all the conditions and matters, which may in any way affect the work or the cost thereof. Should a Contractor find any discrepancy in or omission from the specification or any other of the tender documents or should he be in doubt as to their meaning, he should immediately address a clarification online **as per format at Schedule-I.**

14. **Amendment of Tender Documents:**
- 14.1. At any time prior to the dead line for submission of tenders, **Engineer-in-Chief (PH), Odisha, Bhubaneswar** may for any reason, whether at its own initiative or in response to the clarifications requested by the prospective Contractor, modify the tender documents by issuing an Addendum.
- 14.2. Such addenda will be notifying in the website and will be binding upon them.
- 14.3. In order to afford prospective Contractor reasonable time to take such addenda into account in preparing their tenders, **Engineer-in-Chief (PH), Odisha, Bhubaneswar** at his discretion, may extend the dead line for the submission of tenders, if necessary.

## **C. PREPARATION OF TENDER DOCUMENT**

15. **Language of the Documents:**  
All documents relating to the Tender shall be in the English language.
16. **Documents Comprising the Tender:**
  - (a) General & Technical Bid (Part-I of Tender Document)
  - (b) Price Bid (Part-II of Tender Document)
  - (c) All documents stipulated elsewhere in the DTCN.
17. **Sufficiency of Tender:**  
The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the services to be provided and of the prices quoted in the financial bid, which shall cover all his obligations under the contract and all matters and things necessary for the successful accomplishment of the work.
18. **Preparation of Proposal:**
- 18.1. The Proposal (see Section-2(B) Clause 1(J)) as well as all related correspondence exchanged by the employer & the Contractor shall be written in the language specified in the Data Sheet.
- 18.2. In preparing the proposal, the Contractor is expected to examine in detail the documents comprising the DTCN. Material deficiencies in providing the information requested may result in rejection of a proposal.
- 18.3. **Site Inspection by tenderer.**  
The tenderer shall inspect the site at his own cost and shall satisfy himself with regard to the nature and extent of the work involved, the actual site conditions, existing facilities and shall collect any other information which may be required before submitting the tender. Any further data required during execution of the work / scheme shall be ascertained by the contractor at his own cost.
19. **Technical Proposal Format and Content:**  
The Contractor should have sufficient man power to execute & complete the work within the time schedule. He should have sufficient financial background / work experience with specification in construction of water supply scheme / tools, plant, machinery and equipment required for execution of the work / free from litigation / have good working record of completion of the works in time. It may be noted that the contractor should satisfy the minimum eligible criteria for award of Contract. The Technical Proposal shall provide the information indicated in the following paragraphs (clause 2(B)19.1 to

- 2(B)19.12) using the attached Standard Forms. A page is considered to be one printed side of A4 or letter size paper.
- 19.1. The Contractor has to furnish the names of the professional staff to be deployed in the work with their qualification / experience in **Scheduled-A**.
  - 19.2. A description of the approach, methodology and work plan for performing the assignment.
  - 19.3. The list of the tools, plant, machinery & equipment to be deployed in the work as per **Schedule-C**.
  - 19.4. Work completion certificate from an Engineer not below that the rank of Executive/ Superintending Engineer/equivalent in support of the work executed as furnished in **Scheduled-D**.
  - 19.5. Bio-data of the professional staff furnished need be signed by the staff themselves or by their authorized representatives.
  - 19.6. Annual financial turn over **including GST** of the last **5 (Five)** years shall be Audited accounts of the firm/Contractor and certified by Chartered accountant and to be indicated in **Schedule-B**.
  - 19.7. Solvency Certificate from a Scheduled Bank (**Schedule – H**).
  - 19.8. **GST Registration Certificate/ GSTIN:**  
Tenderers are required to submit copy of valid **GST Registration Certificate / GSTIN**.
  - 19.9. Copy of PAN Card.
  - 19.10. Copy of Contractor's Registration Certificate.
  - 19.11. General Power of Attorney if required in favour of the authorised signatory.
  - 19.12. Other information as required.
  - 19.13. The Technical Bid shall not include any financial information related to the Price Bid. **A Technical Bid containing financial information related to the Price Bid shall be declared non responsive.**
20. **The Financial Proposal:**
- 20.1. The Contractor shall quote his rates on prescribed form of the Bill of Quantities (BoQ) already supplied in the Tender.
  - 20.2. The offer shall be inclusive of all costs associated with the assignment including cost of all materials to be utilized in the work, cost of T&P, consumables, infrastructure backup etc. The offer shall also be inclusive of all duties, levies, taxes of the Central and State Govt. Further it shall also include all other expenses incidental thereto for successful accomplishment of the assignment in conformity with the DTCN.
  - 20.3. The contractor should make realistic assessment of the exhaustive nature of work and the extent of expert technical and managerial inputs and resources required to carry out the work diligently to complete the work within the stipulated time and quote their offer accordingly.
  - 20.4. The rate quoted by the firm shall be firm.
21. **Tender Validity:**
- 21.1. The proposal must remain valid for **120 (One Hundred Twenty) days** from the date of opening of price bid.
  - 21.2. A Contractor agreeing to the request of extending the validity period of the proposal will not be required or permitted to modify his tender, but will be required to extend the validity of his EMD.
22. **Authorisation, Corrections, Erasures etc. in Tender Papers:**
- 22.1. The tender document shall be digitally signed by a person duly authorized to do so. Proof of authorization shall be furnished in the form of a certified copy of Power of Attorney, which shall accompany the tender.

- 22.2. The completed tender shall be submitted without any alterations, inter-relations or erasures except those which accord with instructions given by the **Engineer-in-Chief (PH), Odisha, Bhubaneswar**.
- 22.3. Only one tender shall be submitted by a contractor. Submission of bids through e-Procurement portal the system shall consider only the last bids submitted through portal.
23. **ISD / SD / Additional Perform Security:**  
"Security for the due fulfilment of a contract should invariably be taken. The security may be taken in shape of **N.S.C./ Post Office Savings Bank Account/ Post Office Time Deposit Account/ Kisan Vikas Patra/ Bank Guarantee (Schedule-J)** in favour of the **Additional Chief Engineer, P.H. Division, Balangir** from any Nationalized Scheduled Bank in India counter guaranteed by its local Branch at **Balangir /Bhubaneswar/e-Bank Guarantee** executed on the **National e- Governance Services Limited (NeSL) Digital Document Execution Portal** towards **Initial Security Deposit/Any Other Security Deposit** from the contractor or supplier."(Works Deptt. OM No.1499/W Dt.01.02.2023).
- 23.1. **Earnest Money Deposit:**  
The Earnest Money Deposit (EMD) of **Rs. 15.34 lakh** shall be remitted on online mode. Tenders without EMD or with Part EMD or EMD in any other form shall not be accepted and such tenders shall be out rightly rejected. **Exemption of EMD is not applicable to the MSME registered firms/ units.**
- 23.2. **Return of EMD:**  
The Bank will remit the **Earnest Money Deposit on submission/ cancellation of bids** to respective bidders accounts as per direction received from TIA through e-procurement system.(as per the Appendix-II of DTCN).  
  
The earnest money given by other **One Parties (L<sub>2</sub>)** except one whose tender is accepted shall also be refunded within 15 (Fifteen) days of the acceptance of the tender (as per the Appendix-II of DTCN).  
  
EMD shall also be returned to the unsuccessful bidders of General & Technical Bid (Part-I of tender documents) after finalisation of its evaluation (as per the Appendix-II of DTCN).
- 23.3. **Initial Security Deposit:**  
**The successful Tenderers/Contractors, after receipt of formal order shall have to furnish Initial Security Deposit (ISD) equal to 2% (Two Percent) of the accepted value of the tender (including EMD already submitted along with the bid) in the shape as mentioned at Clause 23 within 7(Seven) days of receipt of intimation failing which their tender shall be cancelled with the forfeiture of EMD.**
- 23.4. **Additional Performance Security:**  
**Additional Performance Security (APS) shall be obtained from the bidder when the bid amount is less than estimated cost put to tender. In such an event, only the successful bidder who has quoted less bid price/rates than the estimated cost put to tender shall have to furnish the exact percentage (as per following table) in the shape as mentioned at Clause 23 within Seven (7) days of issue of Letter of Acceptance (LoA) (by e-mail) to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the Earnest Money Deposit/Bid Security shall be forfeited. Further proceeding for Blacklisting shall be initiated against the Bidder.**

Government of Odisha vide Works Department Office Memorandum No.173/W Dt. 03.01.2026 is pleased to fix the following rate of **Additional Performance Security.**

<b>SI No</b>	<b>Incremental Basic of Additional Performance Security.</b>	<b>Additional Performance Security to be deposited by the Successful bidder</b>
<b>i</b>	Below 0% but not below 10% of the Project Cost put to bid.	No Additional Performance guarantee/ Security percentage is required.
<b>ii</b>	Below 10% but not below 20% of the Project Cost put to bid.	0.1% for every percentage of bid price below 10% of the project cost put to bid starting at 11% with the Additional Bid Performance Guarantee being 0.1% and the Additional Bid Performance Guarantee percentage shall be applied on the bid price.
<b>iii</b>	Bid price is 20% or more below of the project cost put to bid.	0.2% for every percentage of bid price below 20% of the project cost put to bid in addition to 1% of the bid price and the Additional Bid Performance Guarantee percentage shall be applied on the bid price.
<b>iv</b>	The additional performance guarantee percentage shall be rounded off to the next lower percentage based on whether the decimal point of the percentage of bid price is below 0.5% or next higher percentage based on whether the decimal point of the percentage of bid price is 0.5% or more.	
<b>v</b>	The additional performance security shall be treated as part of the performance security.	
<b>vi</b>	Justification for abnormally low bids shall be scrutinized by the Departmental Technical Committee and recommended to the competent authority of the Administrative Department for the approval of the Additional Performance Security(APS). An abnormally low bid is one in which the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder to perform the contract at the offered price. Procuring Entity may, in such cases, seek written clarifications from the Bidder, including detailed price analyses of its Bid price in relation to scope, schedule, resource mobilization, allocation of risks and responsibilities, and any other requirements of the bid document., If, after evaluating the price analyses, the procuring entity determines that the Bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Procuring Entity may reject the Bid/Proposal. However, it would not be advisable to fix a normative percentage below the estimated cost, which would automatically be considered as an abnormally low bid.	

### 23.6. **Security Deposit**

In addition to that **5% of gross value** will be deducted from bill(s) of the contractor toward **Security Deposit (SD)** which will be refunded after the defect liability period subject to payment of final bill. Total Security value to be received from the bidder is **7%of the accepted value of tender.**

23.7. The EMD shall be forfeited if, (a) a contractor withdraws the tender during the validity period of tender or (b) if the firm fail to furnish ISD within due time or (c) the successful tenderer fails to sign the Agreement for whatever reason.

- 23.8. In consideration of the [Superintending Engineer/ Addl. Chief Engineer/ Chief Engineer/ Engineer-in-Chief/Government](#) to investigate and to take into account each tender and in consideration of the work thereby involved, all earnest money deposited by the tenderer will be forfeited in the event of such tenderer either modifying or withdrawing his tender at his instance within the validity period.
24. **Signing of Tenders / Bid**  
All tender documents will be signed digitally with Digital Signature Certificate (DSC). The online bidder shall digitally sign on all statements, documents, certificates, uploaded by him, owing responsibility for their correctness / authenticity as per IT Act 2000. If any of the information furnished by the bidder is found to be false / fabricated/ bogus, his EMD / Bid security shall stand forfeited and the bidder is liable to be blacklisted.
- 24.1. If the tender is made by an individual, it shall be signed with his own Digital Signature Certificate (DSC).
- 24.2. If the tender is made by a corporation / company, it shall be signed by a duly authorized officer who shall produce with his tender satisfactory evidence of his authorization. Such a corporation / company may be required before the contract is executed, to furnish evidence of its corporate existence.  
The tender shall contain no alterations or additions, except those to comply with instructions issued by the Tender Inviting Officer, or as necessary to correct errors made by the Tenderer, in which case all such corrections shall be digitally signed.
- 24.3. No alteration made by the tenderer in the contract form, the conditions of the contract, statements / formats accompanying the tender shall be recognized and in case of any alterations made by the tenderer, the tender will be void.
- 24.3.1. All documents furnished by the contractor along with the tender are to be digitally signed by the bidder.
25. **Clarification on and Amendment to DTCN Document:**
- 25.1. Contractor may request a clarification to any clause of the DTCN documents up to the number of days indicated in the Data Sheet before the proposal submission date. Any request for clarification must be sent online in the portal. The Employer will respond to this online through the same portal. Should the Employer deem it necessary to amend the DTCN as a result of a clarification, it shall do so following the procedure under para. 2(B) 25.2.
- 25.2. At any time before the submission of Proposals, the Employer may amend the DTCN by issuing an addendum/corrigendum which shall be published in the portal. The addendum/corrigendum shall be binding for the bidders. To give the bidders a reasonable time to take into account the amendment into their proposals the Employer may, if the amendment is substantial, extend the deadline for the submission of proposals. The purpose of this is to clarify issues on any matter, a tenderer may raise concerning the tendering of the works.

## **D. SUBMISSION OF TENDERS**

- 26 In view of adoption of e-procurement process pursuant to Government of Odisha in Works Department Office Memorandum No.FA-R-3/08-4657/W dated 12.03.08, 4666/W dated 12.03.2008, 1027/W Dt.24.01.2009 & 7885/W dated 23.07.2013 following changes/ modification/ addendum shall be effected.

26.1. **Bid Documents:**

Bid documents consisting of technical bid & price bid shall be provided in the portal. Submission of bids will be through the e-Procurement portal. The bidders shall prepare the documents & upload the scanned document to the portal in appropriate place in PDF format.

26.2. **Clarification of Bidding Documents:**

In case of submission of Bids through the e-Procurement Portal, the bidder can seek clarification within the period of seeking clarification as mentioned in tender call notice. The Employer's response for the queries raised by the bidder will be posted in the portal.

26.3. **Documents Comprising the Bids:**

In case of submission of Bids through the e-Procurement Portal, the bidder can submit the scanned copy of the documents in the designated locations of Technical Bid and Financial Bid. Submission of document shall be effected by using Digital Signature Certificate (DSC) of appropriate class and thus shall be in encrypted form.

26.4. **Bid Price:**

In case of submission of Bids through the e-Procurement Portal, **an intelligent Bill of Quantity in Microsoft Excel format** shall be made available to the bidder. The bidder shall download that particular Excel sheet and fill in rates in figures at the appropriate location. The line item total in words and the total amount in case of item rate tenders shall be calculated automatically and shall be visible to the bidder. In case of percentage tender, the bidder will only fill in the designated cell and activate "less" or "excess" to indicate whether his price offer is how much excess or less than the estimate amount. The contractor will write percentage excess or less up to one decimal point only. The bidder is not supposed to change or modify the format of the excel sheet in any form.

26.5. **Bid Security/EMD:**

- (i) The bidder shall remit bid security for the amount shown in Col. 4 of the table of Notice Inviting Tender (NIT) **on online mode.**
- (ii) The EMD will be forfeited in any of the following case.
  - a) If the Bidder withdraws the Bid after Bid opening during the period of Bid validity.
  - b) If the Bidder does not accept the correction of the Bid Price.
  - c) In the case of a successful Bidder, If the Bidder fails within the specified time limit to
    - i) Sign the Agreement / contract or
    - ii) Furnish the required ISD and Performance Security.
  - d) In case of submission of Bids through the e-Procurement Portal, if any of the statements, documents, and certificates uploaded by the bidder is found to be false/fabricated/bogus, the bidder will be blacklisted and his EMD/ Bid Security shall be forfeited.

26.6. **Submission of Bid:**

In case of submission of bids through e-Procurement portal on the bidder shall upload the scanned copy/copies of documents as required as per DTCN. The online bidder shall have to produce the original documents in support of scanned copies & statements uploaded in the portal on demand by the employer prior to award of contract-failing which action as per DTCN will be initiated.

In case of submission of Bids through the e-Procurement Portal, the bidder shall only submit single copy of the document. He is required to check the documents uploaded

with the requirement asked for in the bid. Only after satisfying that all the documents have been uploaded, he should activate submit button. His bids shall not be considered responsive and action as per relevant clause shall be taken if he does not provide the required documents or provided illegible document. Clarity of the document may be ensured by taking out a sample printing.

26.7. Bidder must submit the **Original Financial Instruments, Declarations/ Undertakings/ Affidavits, Solvency Certificate, etc.,** by **Registered Post/ Speed Post/ Courier/ By Hand** only to the specified address within **4 (Four) days** after last date of submission of Bid. **No need to upload / submit the entire DTCN.** The Client will not be responsible for postal delay / any consequence in receiving of the Original Documents.

26.8. **Late Bids:**

In case of submission of Bids through the e-Procurement Portal, the system shall reject submission of any bid through portal after closure of the receipt time. For all purpose the portal time displayed in the system shall be the time to be followed by the bidder.

27. **Modification & Withdrawal of Bid:**

In case of submission of Bids through the e-Procurement Portal, it is allowed to modify the bid. The bidder shall have to log on to the system and resubmit the documents as asked for by the system including the price bid. In doing so, the bids already submitted by the bidder will be removed automatically from the system and the latest bid only will be admitted. But the bidder should avoid modification of bid at the last moment to avoid system failure or malfunction of internet or traffic jam. If the bidder fails to submit his modified bids with in the designated time of receipt, the bids already in the system shall be taken for evaluation.

In case of submission of Bids through the e-Procurement Portal, withdrawal of bid is allowed. The bidder has to click on the "withdraw" button and record the necessary justification for the same in the space provided. In addition to this, he has to write a letter addressed to the Officer inviting the bid and up load the scanned document to portal in respective bid. The system shall not allow any withdrawal after expiry of the closure time of the bid.

28. **Bid Opening:**

In case of submission of Bids through the e-Procurement Portal, the bidders who participated in the online bidding can witness opening of the bid from any system logging on to the portal away from opening place. The bids can only be opened by the pre-designated officials only after the opening time mentioned in the bid.

29. **Award of Work:**

In case of submission of Bids through the e-Procurement Portal, the system shall generate the Award of Contract letter and intimate the bidders in his e-mail.

## **E. TENDER OPENING AND EVALUATION**

30. **Tender Opening:**

- 30.1 The **Engineer-in-Chief (PH), Odisha, Bhubaneswar** will open the tenders electronically on the date & time mentioned in the **Notice Inviting Tender (NIT)**.
- 30.2 (i) A tender shall be rejected if;
- a) Price Bid is not enclosed.
  - b) Cost of tender document has not remitted online on submission of bid.
  - c) EMD as per Clause 23.1, Section 2(B) has not remitted online.
- (ii) In case if the bidder has not submitted following document with the bid due to any reason, clarification may be sought and queries may be issued to the bidders for submission of the same with a stipulated period, failing which their offer shall be liable for rejection.
- d) Proof of eligibility and qualifications is not enclosed.
  - e) There are any criminal cases pending.
  - f) PAN is not enclosed.
  - g) Affidavit is not enclosed.
  - h) Power of Attorney is not enclosed.
  - i) Record of litigation and arbitration is not enclosed.
  - j) Other documents as required not enclosed.
  - k) GST Registration Certificate/ GSTIN.
- 30.3. Any such conditions shall be minuted and the price bid shall not be opened. The price bid shall be opened only for those bidders who qualify in the technical evaluation as described at Clause 33, Section 2(B). The date of opening of price bid shall be intimated by FAX/E-mail/Speed Post to the qualified bidder of technical evaluation.
- 30.4. The **Engineer-in-Chief (PH), Odisha, Bhubaneswar** may prepare, for his own record, minutes of the tender opening, including the tender opening summary which shall be posted in the portal.
31. **Clarification on Tenders from Tenderers:**  
To assist in the scrutiny, evaluation and comparison of the tenders, the **Engineer-in-Chief (PH), Odisha, Bhubaneswar** may ask contractor individually for clarification on their tenders. The request for clarification and response shall be in writing or by mail. However, no change in the tender amount/ rate shall be sought, offered or permitted by the **Engineer-in-Chief (PH), Odisha, Bhubaneswar** during the evaluation of the tenders.
32. **Determination of Responsiveness:**
- 32.1. Prior to the detailed evaluation of tenders, **Engineer-in-Chief (PH), Odisha, Bhubaneswar** will determine whether each tender has been submitted in the proper form and whether it is substantially responsive to the requirements of the tender documents. Tenders, which have not been submitted in the proper form, will be rejected.
- 32.2. Any tender which is not substantially responsive to the requirements of the tender documents will be rejected by the **Engineer-in-Chief (PH), Odisha, Bhubaneswar**. Such a tender shall not be allowed subsequently to be made responsive by the contractor by correcting or withdrawing the non-conforming deviation(s) or reservation(s).
- 32.3. **Bid Capacity:** These stipulations shall apply to all works above **Rs.3.00 Crores**.

Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the **total estimated cost of the works including GST**. The available bid capacity will be calculated as under:

**Assessed Available Bid Capacity = (A\*N\*2-B), where**

**A = Maximum value of works** executed in any one year during the last five years(updated to the current price level) rate of inflation may be taken as 10 percent per year (weightage factor) which will take in to account the completed as well as works in progress.

(**A'** value corresponding to **Schedule-B**, shall be audited for five years by Regd. Chartered Accountant or competent financial organization/authority).

**B= Value of current price level (updated with weightage factor)** of the existing commitments and ongoing works to be completed during the next years (Period of completion of works for which bids are invited)

For the shake of further clarity, it is made clear for all the intending bidders that the value of existing commitment(s) shall also include the work(s) for which, the corresponding bidder(s) has/have been declared as L1 bidder(s) for any work put to tender by this office irrespective of the status of acceptance/award of the corresponding tender(s) of/to the respective agency(s).

**N=** Number of years prescribed for completion of the works for which the bids are invited. (Minimum value of **N=1**)

Note:-

- (1) In case of a joint venture, the available bid capacity will be applied for each partner to extent of his proposed participation in the execution of the works.
- (2) Self declaration in shape of affidavit should be furnished towards the statement showing the value of existing commitments and ongoing works as well as the stipulated period of completion remaining for each of the listed works.
- (3) **In case of non-disclosure/ hiding/ omission of any existing commitments and ongoing works in the self-declaration affidavit, if detected later, the tender inviting authority may accept such bid for subsequent evaluation process if, the bidder still achieves the required bid capacity even after including such existing commitments duly detected and verified. Otherwise, the bid shall be rejected and in such a circumstance the bidder may attract punitive measures against it with/ without forfeiture of EMD. However, when such case (s) arise where, the corresponding bidder is found liable for punitive measures (with or without forfeiture of EMD), considered decision of "Tender Evaluation Committee" shall be final and binding.**

**32.4 When bids have been invited in a common notice for different works, the order of opening of the financial bids shall be in seriatim in which those works are mentioned in the notice of 'Invitation for Bids' unless otherwise required to be changed. Bid capacity of any bidder shall be progressive in nature depending upon the corresponding bidder being declared as L<sub>1</sub> in the preceding financial bid(s). In such case, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts.**

**Escalation Factor:**

Following enhancement factors will be used for the costs of works executed and the financial figures to a common base value for works completed in India.

<b><u>Year before</u></b>	<b><u>Multiplying factor</u></b>
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

(Applicant should indicate actual figures of costs and amounts for the work executed by them without accounting for the above mentioned factors)

In case the financial figures and value of completed works are in foreign currency the above enhanced multiplying factors will not be applied. Instead, current market exchange rate (State Bank of India BC selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of amount in foreign currency into Indian rupees.(Works Dept. OM No.FA-Codes-97/11-6300 Dt.16.06.2011.)

**33. Proposal Evaluation:**

33.1. From the time of the proposals are opened to the time, the contract is awarded, the contractor should not contact the client on any matter related to its Technical and/or Financial Proposal except any required in Clause 31, Section 2(B).

33.2. Any effort by a bidder to influence the client in any form directly or indirectly during the examination, evaluation, ranking of proposals, and recommendation for award of the contract may result in the rejection of the contractor's proposal.

33.3. Evaluation of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded.

**33.4. Evaluation of Technical Proposals:**

33.4.1. The Evaluation Committee shall evaluate the Technical Proposals on the basis of their responsiveness to the DTCN.

33.4.2. A Proposal shall be rejected at this stage if it does not respond to required aspects of the NIT / DTCN.

33.4.3. During technical evaluation, the tenderers may have to make a presentation on their technical proposal before the Evaluation Committee if felt necessary. The date of such presentation shall be intimated to them in writing or by mail.

**33.5. Evaluation of Financial Proposals:**

33.5.1. After the technical evaluation is completed, the Employer shall inform in writing or by mail to the contractors, who have qualified in the General and Technical bid (Part-I of DTCN), the date, time and location for opening the Financial Proposals (Price Bids).

33.5.2. Financial Proposals of the bidders who qualified in technical evaluation shall be opened.

33.5.3. Financial bids determined to be substantially responsive will be checked by the employer for any arithmetic error(s).

33.5.4. The Evaluation Committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount or between words and figures, the amount in words will prevail.

33.5.5. If the bid price increases as a result of these corrections, the amount as stated in the bid will be the bid price and any increase will be treated as rebate. If the bid price decreases, the decreased amount will be treated as bid price.

**33.6. Selection of contractor on the basis of Price Bid:**

Other condition being equal, the contractor bidding the lowest price will be considered for acceptance by competent authority.

**34. Negotiations:**

- 34.1. Negotiations will be held if required with the lowest valid tenderer. In the event of the L<sub>1</sub> tenderer has furnished any condition which grossly affects the tender value / contains such conditions which make the value of the offer indefinite, he may be given an opportunity to withdraw such condition(s) to make the tender definite. Failure to withdraw such condition(s) may lead to rejection of the tender as in consistent / non responsive. In such case the employer may explore the possibility of considering the next valid tender as **L<sub>1</sub>**.

## **F. AWARD OF CONTRACT**

**35. Award Criteria:**

- 35.1. After acceptance of price bid of the tender by competent authority selected contractor will be intimated about such acceptance.
- 35.2. The contractor is expected to commence the work on the date and at the location specified in the Data Sheet.

**36. Right to Accept or Reject any or all Tenders:**

Notwithstanding, Clause 35, Section 2(B), the **Chief Engineer, PH (Urban), Odisha, Bhubaneswar / Engineer-in-Chief, PH, Odisha, Bhubaneswar / Government of Odisha** reserves the right to accept or reject any tender, annul the tendering process, reject all tenders at any time or any stage prior to the award of contract without thereby incurring any liability to the affected bidders.

**37. Process to be Confidential:**

- 37.1. After the opening of tenders as per Clause 30 & 33, Section 2(B), information relating to examination, clarification, evaluation and comparison of tenders and recommendations, concerning to the award of contract shall not be disclosed to the contractor or any other persons, officially not concerned with the process, until the award of the contract to the successful contractor has been announced.
- 37.2. Any effort by any contractor to influence the Department officials in scrutiny, clarification, evaluation and comparison of tenders, and in any decisions concerning award of a contract, may result in the rejection of their Tender.

**38. Notification of Award & signing of Agreement:**

- a) The Employer/ Engineer-in-charge shall notify acceptance of the work prior to expiry of the validity period by cable, telex or facsimile or e-mail confirmed by registered letter. This Letter of acceptance will state the sum that the Engineer-in-charge will pay the contractor in consideration of the execution & completion of the works by the contractor as prescribed by the contract & the amount of performance security and additional performance security required to be furnished. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- b) The contractor after furnishing the required acceptable performance security and additional performance security, "Letter to Proceed" or "Work Order" shall be issued by the Engineer-in-charge with copy thereof to the procurement Officer-Publisher. The Procurement Officer-Publisher shall up load the summary and declare the process as complete.

- c) In the e-Procurement Portal, the system shall generate the template of award letter and the Officer Inviting the Bid shall mention the amount of Performance Security and additional security required to be furnished in the letter and intimate the bidders in his e-mail ID. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- d) The bidder shall within **7 days** of issue of letter of acceptance, furnish the Performance security & additional Performance security (if any) in the prescribed form & the work programme & shall sign the agreement in prescribed format within **15 days** of issue of LoA, failing which the Engineer-in-Charge shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the Bid Security absolutely. The agreement will incorporate all agreements between the officer inviting the bid and the successful bidder.
- e) If **L<sub>1</sub> bidder does not turn up for agreement** after finalization of the tender, then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. In that case, the L<sub>2</sub> bidder, if fulfils, other required criteria would be called for drawing agreement for execution of work subject to the condition that L<sub>2</sub> bidder negotiates at par with the rate quoted by the L<sub>1</sub> bidder otherwise the tender will be cancelled. In case a contractor is black listed, it will be widely published and intimated to all departments of Government and also to Govt. of India agencies working in the state.  
*(Amendment to Para-3.5.14 Note-I of OPWD Code Vol.-I , OM No.12366/W dated 8.11.2013)*
- f) Following documents shall form part of the agreement**
- i. The notice inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming the bid as issued at the time of invitation of bid and acceptance thereof together with any correspondence & documents leading thereto & required amount of performance security including additional performance security.
  - ii. Standard Bid Document **P.W.D. Form P-1.**
  - iii. The letter to proceed with the work shall be issued by Engineer-in-charge only after signing of the agreement. The notification of award will constitute the formation of the contract subject only to the furnishing of performance security and additional performance security in accordance with the provisions of the agreement.
  - iv. On acceptance of the composite bids by the competent authority the letter of award will be issued by the Engineer-in-Charge of the major component of the work on behalf of the Governor of Odisha.

**SECTION- 2(C)**  
**DATA SHEET**

Ref Cl. No.	Description
	Name of the Work: <b>Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town.</b>
Section-8	<p>i) Design, Drawing, Construction, Testing &amp; Commissioning of RCC Elevated Service Reservoirs (ESR)- 500 KL capacity with 25M staging, 1350 KL capacity with 25M staging ,1000 KL capacity with 30M staging, 1000 KL capacity with 25M staging at Balangir town along with supply, Installation, Testing &amp; Commissioning of DI Pilot Altitude Flow Control Valve, Electromagnetic Flow Meter, DI mechanical dismantling joint.</p> <p>ii) Design, Drawing and Construction of RCC framed structure single stored building for watchman room and other ancillary work</p> <p>iii) Laying of DI distribution pipe line network (DI K7) of 300 mm. dia. – 1020 mtr. ,250 mm. dia. – 340 mtr., 200mm. dia. – 800 mtr., 150 mm. dia. – 2170 mtr.,100 mm. dia – 580 mtr. (Excluding cost of D.I. pipe) but including transportation from store at Balangir Municipality to work site, tyton joints, Fixing of valves and specials, MS work, construction of Valve Chambers &amp; Thrust Blocks, repair of damaged road, repairing Household service connection, NH Crossing by Micro tunnelling (Horizontal Thrust Boring/ Pushing method) etc.</p> <p>iv) Construction of Boundary Wall, Approach Road and other ancillary works</p> <p>v) Providing new Household Service Connections</p>
2(B)33.6	Method of selection: <b>Qualifying in the Technical Bid and L<sub>1</sub> in the Price Bid.</b>
2(B)26.	Two Bid System: <b>Part-I: General &amp; Technical Bid and Part-II: Price Bid to be submitted as detailed at Clause 26, Section 2(B).</b>
2(B)15.	Proposals shall be submitted in the following language: <b>English</b>
2(B)21.	Offers must remain valid for <b>120 (One Hundred Twenty) days</b> from the date of opening of Price Bid.
2(B)25.1	Clarifications may be requested online till <b>17.00 Hrs. 09.07.2026.</b>
2(B)30	The tender (Technical Bid) will be opened on following date and time: <b>Dt.11.00 Hrs. of 18.07.2026.</b>
2(B)33.5	The date of opening of <b>Price Bid</b> shall be intimated separately by writing or by mail after the technical evaluation is over.

**SECTION –2 (D)**  
**LETTER FOR SUBMISSION OF TENDER**  
*[To be filled in by the Bidder]*

<i>Note:- (1) Additional conditions appended to the tender will make the tender liable for rejection. (2) Non-submission of EMD in proper shape and other required documents as detailed hereinafter shall make the tender liable for rejection.</i>
--

Ref. No. \_\_\_\_\_/Dated \_\_\_\_\_

To

**The Engineer-in-Chief (PH),  
Odisha, Bhubaneswar.**

Sub: **Tender for the Work: Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town."**

Ref: **Identification No.EICPH-02/2026-27 Dt.17/06/2026 published in the website [www.tendersodisha.gov.in](http://www.tendersodisha.gov.in).**

Dear Sir,

With reference to the above, we are to inform you that in response to your above referred NIT, we have downloaded the Detailed Tender Call Notice (DTCN) Part-I & II and that after having thoroughly examined the same, we hereby tender for the work to execute the work within the stipulated time and in conformity with the relevant clauses of the DTCN along with all related statutory rules and regulations for the amounts as quoted in the accompanying price bid.

2) I/We have studied, acquainted and satisfied ourselves with the site and its working conditions for the successful and timely completion of the work.

3) I/We are submitting herewith Bar Chart to complete the work in time.

4) **Our offer is unconditional and is in conformity with the requirements of the DTCN.** We understand that **any additional condition put by us in the tender shall make our tender liable for rejection.**

5) I/We understood that you are not bound to assign any reason in case of rejection of our tender.

6) I/We agree to keep our offer open for a minimum of 120 (One Hundred Twenty) days from the date of opening of the Price bid. Further extension of validity will be our prerogative.

Should this tender be accepted, we hereby agree to abide by and fulfil all the terms and provisions of this Detailed Tender Call Notice (DTCN).

Thanking you.

Yours faithfully,

**Name and Signature**  
of the authorised signatory  
along with seal and address of the firm.

## **SECTION-2 (E)**

### **TENDER DECLARATION**

**[To be filled in by the tenderer]**

I/We hereby tender for the execution for the Governor of Odisha of the work specified in the enclosed memorandum at the rates given in the price bid and will complete the said work in all respects within the period as specified in the Detailed Tender Call Notice and in accordance with the specifications, designs and drawings and other documents referred to therein, which shall have to be approved by the **Public Health Engineering Department (PHED), Odisha**, and such other written instructions as may be given by the PHED, Odisha from time to time for duly carrying out of the said works and with such materials as are provided for in accordance with the conditions and special conditions hereto attached. I/We have inspected the work site and studied its conditions, labour, materials and have understood the tender implications fully.

Should this tender be accepted I/We hereby agree to abide by and fulfil all the terms and provisions of the said conditions and special conditions of the contract annexed hereto or in default thereof to forfeit and pay to the Governor of Odisha the sums of money mentioned in the said conditions and in the event of such default the transaction effected by this tender shall cease and determine.

Signature of Tenderer /  
Contractor  
(Seal)

**SECTION-2(F)**

**LETTER OF ACCEPTANCE OF TENDER**

*(To be filled in by Engineer-in-Chief, P.H. (Urban), Odisha, Bhubaneswar)*

The above tender is hereby accepted by me on behalf of the Governor of Odisha.

**Engineer-in-Chief(PH)**  
**Odisha, Bhubaneswar**  
Signed on behalf of the  
**Governor of Odisha**

## **SECTION-2(G)**

### **MEMORANDUM**

**(To be filled in by the contractor during signing of Agreement)**

1.	Name of the work	:	<b>Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town."</b>
2.	Approximate Cost	:	<b>Rs.1534.37 Lakh (Excluding GST)</b>
3.	Accepted tender Value	:	<b>Rs. _____ Lakh</b>
4.	Security Deposit (Earnest Money Deposit) (Online remittance)	:	<b>Rs. 15.34 Lakh</b>
5.	Initial Security Deposit (@ 2% of the accepted tender value including EMD already submitted along with the bid) <b>in the shape as mentioned at Clause 23 of Section-2(B)</b>	:	<b>Rs. _____ Lakh</b>
6.	Percentage to be deducted from each Bill as security deposit	:	<b>@ 5 (Five)%</b>
7.	Time allotted for completion of the work (from the date of written order to commence)	:	<b>09 (Nine) Calendar Months</b>
8.	Date of written order to commence.	:	
9.	Total number of items of work tendered for (as per schedule attached hereto).	:	

**Signature of Tenderer / Contractor**

## **SECTION –3**

### **INFORMATION REGARDING TENDERER**

(To be filled in by the Tenderer)

**A. In case of individuals:**

- i. Name of Tenderer :
- ii. Whether his business is registered :
- iii. Date of commencement of business :
- iv. Whether he pays income tax each year. :  
If yes, furnish particulars.

**B. In case of Partnership Firm :**

- i. Names of Partners :
- ii. Whether partnership is registered. :
- iii. Date of establishment of the firm. :
- iv. In case, income tax is paid by each Partner, the details to be furnished. :

**C. In case of limited Liability Company :**

- i. Amount of paid up capital. :
- ii. Names of Directors. :
- iii. Date of registration of the Company. :
- iv. Copies of the last three year's balance sheets of the Company. :

**Signature of the Tenderer**

## **SECTION-4**

### **DECLARATION BY THE TENDERER**

1. I have visited the site and have fully been acquainted myself with the local situation regarding materials, labour and the factors pertaining to the work before submitting the tender.
2. I have carefully studied the conditions of the contract, specification and other documents of this work and I agree to execute the same accordingly.
3. I solemnly pledge that I shall be sincere in discharging my duties as responsible contractor and complete the work within the prescribed time limit. I shall submit detailed construction programme with target dates for various items and stages of work keeping in view the time limit and shall accordingly arrange for necessary labours, materials, and equipment etc., punctually. In case there are deviations from the construction programme, I shall abide by the decision of the Engineer-in-charge for revision of the programme and shall arrange for labour, materials, equipment etc
4. I shall follow all rules and regulations of the state in force with regard to engagement of labour for the work.
5. The documents furnished with the tender are correct to the best of my knowledge and belief and if any information found to be incorrect in future, the Department has the liberty to take any action as deemed fit.

**Signature of the Tenderer**

## SECTION – 5

### **FORM OF AGREEMENT**

This contract made the .....day of..... to  
..... between the Governor of Odisha acting through (designation) Ministry of  
..... Department of .....Government of Odisha (address) (name and  
address of employer) (hereinafter called "the employer" and  
..... (name  
and address of contractor ) (hereinafter called "the Contractor") of the other party).

WHEREAS the Employer is desirous that the contractor executes.

.....  
.....  
..... (Name and identification number of contract) (hereinafter called "the Works") and the  
employer has accepted the Bid by the contractor for the execution and completion of such works  
and the remedying of any defects therein, at a contract price of Rs.....

NOW, THEREFORE IT IS HEREBY AGREED BETWEEN THE PARTIES AS FOLLOWS:

1. In this contract, words and expressions shall assume the same meanings as are respectively assigned to them in the conditions of Contract hereinafter referred to and they shall be deemed to form and be read and construed as part of the Agreement.
2. In consideration of the payments to be made by the employer to the contractor as hereinafter mentioned, the contractor hereby covenants with the Employer to execute and complete the works and remedy the defects therein in conformity in all aspects with the provision of the contract.
3. The Employer hereby covenants to pay the contractor in consideration of the execution and completion of the works and in remedying the defects wherein the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this contract, viz:
  - i) Letter of acceptance
  - ii) Notice to proceed with the works
  - iii) Contractor's bid
  - iv) Bidding data
  - v) General conditions of contract (including special conditions of contract)
  - vi) Specifications
  - vii) Drawings
  - viii) Bill of quantities
  - ix) Any other documents listed in the contract data as forming part of the contract.
  - x) Drawing and design of structure(s) or part thereof submitted by the tenderer and duly approved by the competent authority after this Agreement.

IN WITNESS WHEREOF the parties have caused this contract to be executed the day and year first before written.

Binding signature of employer signed by.....  
(for and on behalf of the Governor of Odisha)

Binding signature of Contractor signed by.....(for and on  
behalf of .....duly authorised vide Resolution No.....  
dated..... of the Board of Directors of .....)

In the presence of  
(Witnesses)

1.

2.

Contractor

Executive/Superintending Engineer

## **SECTION-6**

### **CONDITIONS OF CONTRACT**

**6.1. Decision of Executive Engineer /Superintending Engineer is Final:**

The party whose tender is accepted hereinafter called the contractor is to provide everything of every sort and kind (with the exceptions noted in the schedule attached) which may be necessary and requisite for the due and proper execution of the several works included in the contract according to the true intent and meaning of the drawings and specification taken together, which are to be signed by the **Addl. Chief Engineer, P.H. Division, Balangir**, herein after called the Executive/Superintending Engineer and the contractor whether the same may or may not be particularly described in the specification or shown on the drawing provided that the same are reasonably and obviously to be inferred there from and in case of any discrepancy between the drawings and the specifications the Executive/ Superintending Engineer is to decide which shall be followed.

**6.2 Amendment of Errors during Progress of Work:**

The contractor is to set out the whole of the works in conjunction with an officer to be deputed by the Executive/Superintending Engineer and during the progress of the works to amend on the requisition of the Executive/Superintending Engineer any errors which may arise therein and provide all the necessary labour and materials for doing. The contractor is to provide all plant labour and materials (with the exception noted in Schedule), which may be necessary and requisite for the works. All materials and workmanship are to be the best of their respective kinds. The contractor is to leave the works in all respects clean and perfect at the completion thereof.

**6.3. Fair Wage Clause:**

The contractor shall not employ for the purpose of this contract any person who is below the age of fourteen years, and shall pay to each labourer, for the work done by such labourer, fair wages. Fair wages means wages whether for time or piecework, prescribed by the State P.W.D. provided that where higher rates have been prescribed under the minimum wages Act, 1948, wages at such higher rates should constitute fair wages.

The Executive/Superintending Engineer shall have the right to enquire into and to decide any complaint alleging that the wages paid by the contractor to any labourer for the work done by such labourer is less than the wages paid for similar work in the neighbourhood.

The Officer-in-charge of the work shall have the right to decide whether any labourer employed by the contractor is below the age of fourteen years and to refuse to allow any labourer whom he decides to be below the age of fourteen years, to be employed by the contractor.

**6.4. Approved Drawings & Specification of Site with Contractors Agent:**

Complete copies of the drawing and specifications signed by the Executive/Superintending Engineer and the same or copies thereof are to be kept with the works in-charge of the contractor's agent which is to be constantly kept on the ground by the contractor and to whom instructions can be given by the Executive/ Superintending Engineer.

6.5. **Work not to be Sublet:**

The work should not be sublet. During execution of work if it is found that the work/part of the work is sublet, the Executive/Superintending Engineer may there upon 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. In addition, the contractors shall not be entitled to recover or be paid for any work thereafter actually performed under the contract.

6.6. **Deviation from Approved Drawing and Specifications:**

The contractor is not to vary or deviate from the drawings or specifications or execute any extra work of any kind whatsoever unless upon the authority of the Executive/Superintending Engineer to be sufficiently shown by any order in writing, by any plan or drawing expressly given and signed by him as an extra or variation or by any subsequent written approval signed by him. In case of daily labour all vouchers for the same are to be delivered to the Executive/Superintending Engineer or the Officer-in-Charge at least during the week following that in which the work may have been done and no day work shall be allowed unless authorised by the Executive/Superintending Engineer and no such authority shall be given if the work is capable of being measured and being paid for at an agreed rate.

6.7. **Rate for Extra Work.**

Any authority given by the Executive/Superintending Engineer, for any alterations or additions in or to the works, is not to vitiate contract. But all additions, omissions or variations made in carrying out the works are to be measured and valued and certified by the Executive/Superintending Engineer and added to or deducted from the amount of the contract as the case may be for new items the same shall be paid at the rates, in accordance with the sanctioned schedule of rates, in force at the time, when the particular item of work was commenced. In those cases in which rates do not exist, the **Engineer-in-Chief, PH, Odisha, Bhubaneswar** will fix the rates to be paid and his decision shall be final.

6.8. **Extension of Time:**

If the contractor shall desire an extension of time for completion of the work on the ground of his having been come across with unavoidable hindrance in its execution or any other grounds he shall apply in writing to Executive/Superintending Engineer within 30 days of the date of the hindrance on account of which he desires such extension as aforesaid and the authority shall if in his opinion (which shall be final) as reasonable ground be shown thereof authorized such extension of time if any, as may in his opinion, be necessary or proper. The authority shall at the same time inform the contractor whether the authority claims compensation for delay, in case there is any delay in execution due to non-availability of stock materials or land or rise in cost of materials and labour or any reason whatsoever beyond the control of authority, the contractor is bound to execute the work as per the terms and rates in the contract and no monetary claim on such account will be acceptable to the authority but extension of time, proportionate to the delay in execution may be granted by the authority considering the merit of the case. The competent authority reserves the right to take any expert advice of any Committee/ Secretary/ Legal Advisor while considering the application of the contractor for extension of time and can impose any condition which shall be binding on the contractor.

6.9. **Works & Materials at Site to be Property of Government of Odisha.**

All works and materials brought and left at site by the contractor or by his orders for the purpose of forming part of the works are to be considered to be the property of the **Governor of Odisha** and the same are not to be removed or taken away by the contractor or any other person without the specific permission in writing of the Executive/Superintending Engineer but the Governor of Odisha will not be liable for any loss or damage which may happen to or in respect of any such work or materials either by the same being lost or stolen or injured by weather or otherwise.

6.10. **Supply of Materials:**

The contractor shall at his own expense provide all materials required for the work. The materials supplied by the contractor shall conform to relevant latest editions of the specification and codes of practices of the Bureau of Indian Standards or in their absence to other specifications as may be specified by the Engineer-in-charge. The contractor shall furnish necessary certificates in support of the quality of the materials as may be required by the Engineer-in-charge.

The Engineer-in-charge shall have absolute authority to test the quality of materials at any time through any reputed laboratory at the cost of contractor. The contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The Executive/Superintending Engineer has full power for removal from the premises of all materials which, in his opinion, are not in accordance with the specification and in case of default, the Executive/Superintending Engineer is to be at liberty to sell such materials and to employ other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Executive/Superintending Engineer is also to have full power to require other proper materials to be substituted and in case of default, the Executive/Superintending Engineer may cause the same to be supplied and all costs which may attend such removal and substitution are to be borne by the contractor and may be recovered from the sale proceeds of such rejected materials when necessary, the balance, if any, being kept in deposit in the contractor's favour.

6.10.1 **The successful bidder is to purchase materials necessary for execution of work contract from local SSI units & MS Enterprises having valid rate contract & ISI mark.**

6.11. **Execution with Defective Workmanship & Improper Materials.**

If in the opinion of the Executive/Superintending Engineer any of the works have been executed with improper materials or defective workmanship, the contractor is then required by the Executive/Superintending Engineer forthwith to re-execute the same and to substitute proper materials and workmanship and in case of default of the contractor in so doing within a week, the Executive/Superintending Engineer is to have full power to employ other agency to re-execute the work and the cost thereof shall be borne by the contractor.

6.12. **Rectification of Defects within Guarantee Period:**

Any defects, shrinkage or other faults which may appear within 12 (twelve) months from the completion of the work arising out of defective or improper materials or workmanship are upon the direction of the Executive/Superintending Engineer to be amended and made good by the contractor at his own cost unless the Executive/

Superintending Engineer for reasons to be recorded in writing shall decide that they ought to be paid for and in case of default, the Governor of Odisha may recover from the contractor the cost of making good the works.

**6.13. Responsibility of the Contractor during Execution of Work:**

From the commencement of the works to the completion of the same they are to be under the contractor's charge. The contractor is to be held responsible for and to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and they are to hold the Governor of Odisha harmless from any claims for injuries to persons or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any one of his employees during the execution of the works.

**6.14. Execution of Works in the Site by Other Workmen:**

The Executive/Superintending Engineer is to have full powers to send workmen upon the premises to execute fittings and other works not included in the contract for whose operations the contractor is to afford every reasonable facility during ordinary working hours provided that such operations shall be carried on in such a manner as not to impede the progress of the work included in the contract but the contractor is not to be responsible for any damage which may happen to or be occasioned by any such fittings or other works.

**6.15. Time Control:**

*(Vide Works Department Office Memorandum No.24716 dtd.24.12.2005 and No.8310 dtd.17.05.2006)*

**a) Progress of work and Re-scheduling programme.**

- i) The Executive Engineer / Superintending Engineer / Engineer-in-Charge shall issue the letter of acceptance to the successful contractor. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- ii) Within 15 days of issue of the letter of acceptance, the contractor shall submit to the Engineer-in-Charge for approval a Programme showing the general methods, arrangements, and timing for all the activities in the Works along with monthly cash flow forecast.
- iii) To ensure good progress during the execution of the work the contractors shall be bound in all cases in which the time allowed for any work exceeds one month, to complete one-fourth of the whole of the work before one-fourth of the whole time allowed under the contract has elapsed, 1/2 of the whole of the work before 1/2 of the whole time allowed under the contract has elapsed, 3/4th of the whole of the work before 3/4<sup>th</sup> of the whole time allowed under the contract has elapsed.
- iv) If at any time it appears to the Engineer-in-Charge that the actual process of the work does not conform to the programme to which consent has been given the Contractor shall produce, at the request of the Engineer-in-Charge, a revised programme showing the modifications to such programme necessary to ensure completion of the works within the time for completion. If the contractor does not submit an updated Programme within this period, the Engineer-in-Charge may withhold the amount of 1% of the contract value from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.
- v) An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

vi) The Engineer-in-Charge's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer-in-Charge again at any time. A revised Programme is to show the effect of Variations and Compensation Events.

**b) Extension of the Completion Date.**

i) The time allowed for execution of the works as specified in the Contract data shall be the essence of the Contract. The execution of the works shall commence from the 15th day or such time period as mentioned in letter of Award after the date on which the Engineer-in-Charge issues written orders to commence the work or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee / Security deposit absolutely.

ii) The Contractor shall submit the Time & Progress Chart for each milestone Quarter wise indicating each month and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestone given in contract data.

iii) In case of delay occurred due to any of the reasons mentioned below, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours 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.

(1) Force majeure, or

(2) Abnormally bad weather, or

(3) Serious loss or damage by fire, or

(4) Civil commotion, local commotion of workmen, strike or lockout affecting any of the trades employed on the work, or.

(5) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract.

(6) In case a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost, or

(7) Any other cause, which, in the absolute discretion of the authority mentioned, in Contract data is beyond the Contractors control.

iv) Request for reschedule and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen (14) days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

v) In any such case a fair and reasonable extension of time for completion of work may be given. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such

request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the contractor.

**c) Compensation for Delay**

If the contractor fails to maintain the required progress in terms of Clause-2 of P<sub>1</sub> Contract or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the **Addl. Chief Engineer (whose decision in writing shall be final and binding)** may decide on the amount of tendered value of the work for every completed day/ month (as applicable) that the progress remains below that specified in Clause-2 of P<sub>1</sub> Contract or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified. **Compensation for delay in completion of work is to be computed @ 1.5% per month on per day basis.** Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the Tendered Value of work or to the Tendered Value of the item or group of items of work for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Government. In case, the contractor does not achieve a particular milestone mentioned in contract data, or the rescheduled milestone(s) in terms of Clause-2.5, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of extension of time. Withholding of this amount on failure to achieve a milestone shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest whatsoever shall be payable on such withheld amount.

**d) Bonus for early completion**

For availing incentive clause in any project which is completed before the stipulated date of completion, subject to other stipulations it is mandatory on the part of the concerned **Executive/Superintending Engineer/ Additional Chief Engineer to report the actual date of completion of the project as soon as possible through fax or e-mail so that the report is received within 7 days of such completion by the concerned Additional Chief Engineer, Chief Engineer/Engineer-in-Chief & the Administrative Department.** The incentive for timely, completion should be on a graduated scale of one percent to 05 percent of the contract value. Assessment of incentives may be worked out for earlier completion of work in all respect in the following scale.

Before 30 % of contract period =	5 % of Contract Value
Before 20 to 30 % of contract period =	4 % of Contract Value
Before 10 to 20 % of contract period =	3 % of Contract Value
Before 5 to 10 % of contract period =	2 % of Contract Value
Before 5% of contract period =	1 % of Contract Value

**(Amendment to Para-3.5.5 (V) of Note-III of OPWD Code Vol.-I by inclusion vide O.M. No.5288 dt.04.05.2016)**

**e) Management Meetings**

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

**f) Rescission of Contract:**

To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Executive/Superintending Engineer shall be conclusive evidence), 20% of the value of leftover work will be realized from the contractor as penalty.

**(Amendment as per letter No.10639 dt.27.05.2005 of Works Department, Odisha)**

**PROJECT COMPLETION SCHEDULE  
(As per Clause 6.15(c) of DTCN)**

*[In order to closely monitor the execution of the project and to ensure quality, cost and time of the project are not compromised in any manner, the contractor shall provide bar chart & PERT Chart in such a realistic manner so that there will be balance between financial & physical progress with reference to cost & completion time.]*

**1 Project Completion Schedule**

During Construction period, the Contractor shall comply with the requirements set forth in this **Schedule-L** for each of the Project Milestones and the Scheduled Completion Date. Within 7 (Seven) days of the date of each Project Milestone, the Contractor shall notify the Authority of such compliance along with necessary particulars thereof.

**2 Project Milestone-I**

- 2.1 Project Milestone-I shall occur on the date falling on the 1/4 of the Whole Time allowed from the Commencement Date (the "Project Milestone-I").
- 2.2 Prior to the occurrence of Project Milestone-I, the Contractor shall have commenced construction of the Water Supply Project and submitted to the Authority duly and validly prepared a Work done Statements for a value of work not less than 20% (Twenty percent) of the Contract Price.

**3 Project Milestone-II**

- 3.1 Project Milestone-II shall occur on the date falling on the 1/2 of the Whole Time allowed from the Commencement Date (the "Project Milestone-II").
- 3.2 Prior to the occurrence of Project Milestone-II, the Contractor shall have continued with construction of the Water Supply Project and submitted to

the Authority duly and validly prepared a cumulative Work done Statements for a value of work not less than 45% (Forty-five percent) of the Contract Price.

**4 Project Milestone-III**

4.1 Project Milestone-III shall occur on the date falling on the 3/4 of the Whole Time allowed from the Commencement Date (the "Project Milestone-III").

4.2 Prior to the occurrence of Project Milestone-III, the Contractor shall have continued with construction of the Water Supply Project and submitted to the Authority duly and validly prepared a cumulative Work done Statements for a value of work not less than 75% (Seventy-five percent) of the Contract Price.

**5 Scheduled Completion Date**

5.1 The Scheduled Completion Date shall occur on the Whole Time allowed from the Commencement Date.

5.2 On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

*If the contractor fails to maintain the required progress in terms of each Project Milestone or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount as give in Clause No. 6.15 of the agreement.*

**6.16. Circumstances for Rescission of Contract:**

If the contractor shall become bankrupt or compound with or make any assignment for the benefit of his creditors or shall suspend or delay the performance of his part of the contract (except on account of cause mentioned in **Clause 6.15** or in consequence of not having proper instructions for which the contractor shall have duly applied) the Executive/Superintending Engineer may give to the contractor or his assignee or trustee as the case may be notice requiring the works to be proceeded with and in case of default on the part of the contractor for a period of seven days, it shall be lawful for the Executive/Superintending Engineer to rescind the contract, if necessary, and to enter upon and take possession of the work and to employ any other person to carry on and complete the same and to authorise him or them to use the plant, materials and property of the contractor upon the works and the costs and the charge incurred in any way in carrying on and completing the said works are to be paid to the Executive/Superintending Engineer by the contractor or may be set off by the Executive/Superintending Engineer against any money due or to become due to contractor. If the assignee or trustee of the Contractor proceeds with the work, the conditions of this contract shall be binding upon the said assignee or trustee.

**6.17. Payment Certificate.**

A Certificate of the Executive/Superintending Engineer or an award of the refer hereinafter referred to as the case may be showing the final balance due or payable to the contractor is to be conclusive evidence of the works having been duly completed and that the contractor is entitled to receive payment of the final balance, but without prejudice to the liability of the contractor under the provisions of **Clause-6.11**.

6.18. The Executive/Superintending Engineer shall make payment of work in full or part thereof those shall have been certified, subject to availability of Letter of Credit (LoC).

6.19. **Price Adjustment** (*vide Works Department Office Memorandum No.15847/W Dt.19.11.2019*)

1. Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with the following principles and procedures and as per formula given in following Paras.
  - (a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.
  - (b) The price adjustment shall be determined during each month from the formula given in following Paras.
  - (c) Following expressions and meanings are assigned to the work done during each month:  
 $R =$  Total value of work done during the month. It would include the amount of secured advance granted, if any, during the month, less the amount of secured advance recovered, if any during the month. It will exclude value for works executed for extra items under variations.
2. To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs

The formula (e) for adjustment of prices are:

**6.19(a) (i): Adjustment of Other Materials Component**

Price adjustment for increase or decrease in cost of local materials other than cement, steel, bitumen, pipe and POL procured by the contractor shall be paid in accordance with the following formula:

$$V_M = 0.85 \times P_m/100 \times R \times (M_1 - M_0)/M_0$$

$V_M =$  Increase or decrease in the cost of work during the month under consideration due to changes in rates for local materials other than cement, steel, bitumen and POL.

$M_0 =$  The all India wholesale price index (all commodities) on 28 days preceding the date of opening of Bids, as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

$M_1 =$  The all India wholesale price index (all commodities) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

$P_m =$  Percentage of local material component (other than cement, steel, bitumen and POL) of the work.

**6.19(a)(ii): Adjustment for Cement Component**

Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:

$$V_c = 0.85 \times P_c/100 \times R \times (C_1 - C_0)/C_0$$

- $V_c$  = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for cement
- $C_0$  = The all India wholesale price index for Ordinary Portland Cement (OPC) on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
- $C_1$  = The all India wholesale price index for Ordinary Portland Cement (OPC) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
- $P_c$  = Percentage of Cement Component of the Work.

**6.19(a)(iii): Adjustment for Steel Component**

Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s/100 \times R \times (S_1 - S_0)/S_0$$

$V_s$  = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel.

$S_0$  = The all India wholesale price index for steel (Mild Steel long products) on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi

$S_1$  = The all India wholesale price index for steel (Mild Steel long products) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

$P_s$  = Percentage of steel component of the work

*Note: For the application of this clause, index of (Mild Steel long products) has been chosen to represent steel group.*

**6.19(a)(iv): Adjustment of Bitumen Component**

Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

$$V_b = 0.85 \times P_b/100 \times R \times (B_1 - B_0)/B_0$$

$V_b$  = Increase or decrease in the cost of work during the month under consideration due to changes in the rate for bitumen.

$B_0$  = The official retail price of bulk bitumen at the IOCL/BPCL depot at nearest center on the day 28 days prior to date of opening of Bids.

$B_1$  = The official retail price of bulk bitumen at IOCL/BPCL depot at nearest center for the 15th day of the month under consideration.

$P_b$  = Percentage of bitumen component of the work

**6.19(a)(v): Adjustment towards differential cost of Pipes.**

Price adjustment for increase or decrease in the cost of pipe shall be paid in accordance with the following formula:

$$V_{pi} = 0.85 \times P_{pi}/100 \times R \times (P_{i1} - P_{i0})/P_{i0}$$

$V_{pi}$  = Differential cost of pipe i.e. amount of increase or decrease in rupees to be paid or recovered during the month under consideration.

$P_{pi}$  = Percentage of pipe component of the work

$P_{i1}$  = **All India Whole sale price index of pipe** for the period under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

$P_{i0}$  = All India Whole sale price index of pipe on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

#### **6.19(b): Adjustment of Labour Component**

Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$$V_L = 0.85 \times P_i/100 \times R \times (L_1 - L_0)/L_0$$

$V_L$  = Increase or decrease in the cost of work during the month under consideration due to changes in rates for local labour.

$L_0$  = The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last stipulated date of receipt of tender including extension, if any.

$L_1$  = The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last date of the Month previous to the one under consideration.

$P_i$  = Percentage of labour component of the work.

#### **6.19(c) : Adjustment of POL (fuel and lubricant) Component**

Price adjustment for increase or decrease in cost POL (fuel and lubricant) shall be paid in accordance with the following formula:

$$V_f = 0.85 \times P_f/100 \times R \times (F_1 - F_0)/F_0$$

$V_f$  = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for fuel and lubricants.

$F_0$  = The official retail price of High-Speed Diesel (HSD) at the existing consumer pumps of IOCL/ BPCL/ HPCL at nearest centre on the day 28 days prior to the date of opening of Bids.

$F_1$  = The official retail price of HSD at the existing consumer pumps of IOCL/BPCL/ HPCL at nearest centre for the 15th day of the month under consideration .

$P_f$  = Percentage of fuel and lubricants component of the work

*Note: For the application of this clause, the price of High-Speed Diesel oil has been chosen to represent fuel and lubricants group.*

#### **6.19(d): Adjustment for Plant and Machinery Spares Component**

(vi) Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the Contractor shall be paid in accordance with the following formula:

$$V_p = 0.85 \times P_p/100 \times R \times (P_1 - P_0)/P_0$$

$V_p$  = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for plant and machinery spares.

$P_0$  = The all India wholesale price index for manufacture of machinery for mining, quarrying and construction on 28 days preceding the date of opening of

Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P<sub>1</sub>- The all India wholesale price index for manufacture of machinery for mining, quarrying and construction for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P<sub>p</sub>- Percentage of plant and machinery spares component of the work.

*Note: For the application of this clause, index of manufacturing of machinery for mining, quarrying and construction has been chosen to represent the Plant and machinery Spares group.*

Regarding wholesale price Index (WPI) for appropriate commodity for payment of price adjustment, due to change of base year of WPI from 1993- 94 to 2004-05 & 2011-12, it is observed that, the commodity 'Bars and Rod', 'Cement', 'Heavy machinery and parts' included in the list of WPI 1993-94 series are not mentioned as such in the WPI 2004-05 & 2011-12 series. Therefore, the following items in the WPI 2004-05 & 2011-12 series shall be considered corresponding to items in WPI 1993-94 series:

Sl. No.	Item in WPI 1993-94 series	Item in WPI 2004-05 series	Item in WPI 2011-12 series
1.	Cement	Grey Cement	Ordinary Port land cement
2.	Bars & rods	Rebars	Mild steel long products
3.	Heavy Machinery & parts	Construction Machinery	Manufacture of machinery for mining, quarrying & construction.

#### **6.19(e): APPLICATION OF ESCALATION CLAUSE:**

The contractor shall for the purpose of **availing reimbursement/refund of differential cost of steel, bitumen, cement, pipe, POL and wages, keep such books of account and other documents as are necessary to show that the amount of increase claimed or reduction available and shall allow inspection of the same by a duly authorized representative of Government and further, shall at the request of the Engineer-in-Charge**, furnish documents to be verified in such a manner as the Engineer-in-Charge may require any document and information kept. The contractor shall within a reasonable time of 15 days of his becoming aware of any alteration in the price of such material, wages of Labour and/or price of POL give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition along with information relating to there to which he may be in a position to supply.

#### **Percentage Table**

Sl. No.	Category of works	% Component (cost wise)		
		Labour (P <sub>l</sub> )	P.O.L (P <sub>f</sub> )	Steel (P <sub>s</sub> )+ Cement (P <sub>c</sub> )+ Bitumen (P <sub>b</sub> ) + Pipes (P <sub>pi</sub> ) + Plant & Machinery Spare & Component (P <sub>p</sub> ) + Other Materials*
1.	Road works	5	5	90
	Bridge works	5	5	90

	R&B works (% of component)	Building works	5	5	90
2.	Irrigation works (% of component)	Structural work	5	5	90
		Earth, Canal & Embankment work	5	5	90
3.	P.H. Work	Structural work	5	5	90
		Pipeline work	5	5	Pipe – 70% * Machinery + Other material -20%
		Sewer line	5	5	Pipe – 70% * Machinery + Other material -20%

*\*Note: Further break up may be worked out considering the consumption of Cement, Steel, Bitumen, pipe and Plant & Machinery Spare Component in the concerned works and shall be provided in the bid document in shape of "Schedule of Adjustment Data" as an "Appendix to Bid". (enclosed herewith).*

### Appendix to Bid Schedule of Adjustment Data

**[For all works, adjustment factor for Labour and POL shall be considered at the rate of 5% each. Steel, Cement, Pipes, other Materials and Machinery shall contribute to 90% of Price Adjustment and shall be calculated for each work separately during preparation of estimate, shall be approved by the authority during technical sanction as a "Schedule of Adjustment Data" and shall form part of the Bid Document. The cases where the original technically sanctioned estimate gets revised, the technical sanction to the revised estimate will be obtained from the competent authority as provided under Para 3.11.2 (b) of OPWD Code, Volume-1 Based on the revised technically sanctioned estimate, the Labour & the POL component shall be given the weightage of 5% each as provided in OM No.15847/W dated 19.11.2019 of Works Department and the weightage of 90% on steel, cement, bitumen, pipes, other materials and plant and machinery spare component shall be given as per the technically sanctioned revised estimate excluding the extra items. The revised weightage of "Schedule of Adjustment Data" based on revised technically sanctioned estimate shall be included as an Addendum to the agreement. The technical sanctioning authority shall be the competent authority for this purpose.] (Works Deptt. OM No.1739/W Dt.03.02.2023)**

Cl. No.31 of F2/P1 Contracts Sl. No.	Index description	Source of index	Base value*	Base Date*	Weightage of Item**	
					Pipe line work	Structural works
31 (a)(i)	Other Materials	All India Whole sale price index (all commodities) as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			20%	30%
31 (a)(ii)	Cement	All India Whole sale price index for Cement (Ordinary Portland			Nil	20%

		Cement) as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.				
31 (a)(iii)	Steel	All India Whole sale price index for Steel (Mild Steel-Long Products) as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			Nil	20%
31 (a)(iv)	Bitumen (VG-30)	Official retail price of bulk bitumen at the nearest IOC/ HPCL Depot.			Nil	Nil
31 (a)(v)	Pipes	All India Whole sale price index for the <b>type of pipe under consideration</b> , as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			70%	Nil
31 (b)	Labour	Minimum Wage notified by the Labour and Employee's State Insurance Department of Government of Odisha, India.			5%	5%
31 (c)	POL	Official retail price of HSD at nearest IOCL/ HPCL/ BPCL Consumer Pump Depot.			5%	5%
31 (d)	Plant and Machinery	All India Whole sale price index for Manufacture of Machinery for Mining, Quarrying and Construction as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			Nil	20%
<b>Total :</b>					<b>100%</b>	<b>100%</b>

\* Values to be filled up at the time of drawl of contract.

\*\* Values to be filled up in the bid document.

- 6.20. If at any time after the commencement of the work the Governor of Odisha 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 did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alterations having been made in the original specification, drawings, designs and instruction which shall involve any curtailment or increase of the work as originally contemplated.
- 6.21. **Defects Liability Period:**  
The defect liability is **12 months** from the date of formal taking over of the work by the Engineer-in-charge.
- 6.22. **Contractor Liable for Damage done & for Imperfection for 6 (six) months after Certificate:**  
If the contractor or his work people or servants shall break, deface, injure or destroy any part of a building or structure in which they may be working or any building, road, fence, enclosure or grass land cultivated ground continue to the premises on which the work or any part of it is being executed or in any damage shall happen to the work while in progress from any cause whatsoever or any imperfection become apparent in it within six months from the date of the final certificate of its completion shall have been given by the Engineer-in-charge, as aforesaid, the contractor shall make the same good at his own expenses or in default the Engineer-in-charge may cause the same to be made good by other workman and deduct the expenses of which the certificate of the Engineer-in-charge shall be final from any sums that may be then or at any time thereafter may become due to the contractor or from his security or the proceeds of sale thereof or a sufficient portion thereof and the contractor shall be liable to pay of the expenses not so recovered by the Engineer-in-charge.
- 6.23. **Action where No Specification is mentioned:**  
In the case of any class or items of works for which there is no such specification as mentioned in file, if such work shall be carried out in accordance with the detailed standard specification of Odisha, as followed by the State PWD and in the event of there being no specifications born in the said standard specification of Odisha for such items of work, then in such case the said item of work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-charge after obtaining approval from competent authority.
- 6.24. **Payment on Intermediate Certificate to be regarded as Advance and Bill to be submitted Monthly:**  
A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge for all works executed in the previous month and the Engineer-in-charge and/or Assistant Engineer and/or Junior Engineer in immediate charge of the work shall take the requisite measurements for the purpose of having the same verified, and the claims for as admissible adjusted if possible before the expiry of ten 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 and/or his Engineering subordinates shall measure up the said work in the presence of the contractor, whose counter signature to the measurement list will be sufficient warrant, and the Engineer-in-charge and/or Assistant Engineer and/or his Engineering subordinates shall prepare a bill from such list which shall be binding on the contractor in all respects. Payment shall be made to the contractor in all respects.

The Engineer-in-charge will deduct @ 5% (five percent) of the value of each running bill prepared and submitted by the contractor, if any, on account of works done, and such sum or sums to be held in deposit as a further security for the due performance of the condition of the contract provided always that the Executive/Superintending Engineer may refuse to make such monthly payments if in his opinion, the progress of the work or the conduct of the contractor is not satisfactory or the contractor has in any other way done or neglect to do anything as to make it appear doubtful to the authority as to whether the works will be completed by the contractor in accordance with his contract, or has failed to comply with any instruction or order of Engineering personnel. All such interim payments from time to time shall be regarded as payments by way of advance against the final payment only and not as payments of work actually done and completed and shall not preclude the requirement of bad, unsound and imperfect or unskilful work to be removed and taken away and for reconstructed or re-erected, or be considered as an admission of the due performance of the contract, of any part thereof in any respect, or accrual of any claim not shall it conclude, determine or affect in any way the powers of Engineer-in-charge and/or Assistant Engineer and/or the Junior Engineer under these conditions or any of them as to the final settlement of adjustment of the accounts or otherwise or in any other way vary or affect this contract. The contractor shall submit the final bill within one month of the date for completion of the work failing which the Engineer-in-charge or his authorized representatives in the presence of the contractor shall prepare the final bill. For recording final measurement of the work, the Engineer-in-charge or his authorized representative shall serve a notice upon the contractor stipulating therein the date fixed for recording such measurement. If the contractor fails to attend the recording of final measurement by the Engineer-in-charge or his authorized representative on the date as stipulated, the Engineer-in-charge may at his discretion get the measurements recorded ex-parte or fix up another date as per his own convenience. Such measurements and the total amount payable to the contractor as certified by the Engineer-in-charge shall be final and binding on all parties.

**6.25. Black Listing:**

A Contractor may be black listed as per amendment made to **Appendix XXXIV to OPWD Code Vol.-II on rules for black listing of Contractors vide letter No.3365 Dt.01.03.2007 of Works Department, Odisha**. As per said amendment the Contractor may be blacklisted.

- a) Misbehavior/threatening of Departmental & supervisory officers during execution of work/tendering process.
- b) Involvement in any sort of tender fixing.
- c) Constant non-achievement of milestones on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out.
- d) Persistent and intentional violation of important conditions of contract.
- e) Security consideration of the State i.e., any action that jeopardizes the security of the State.
- f) Submission of false/ fabricated / forged documents for consideration of a tender.

**6.26.** If more than one bid is quoted (decimal up to two numbers will be taken for all practical purposes), either at the estimated cost put to tender or less than the estimated cost put to tender, the tender accepting Authority will finalize the tender through a transparent lottery system, where all the concerned bidders/their authorized representatives, the concerned SE/EE of the concerned Division and Divisional Accounts Officer (DAO) will remain present.

If the rate quoted by the SC and ST Category Contractors comes to the rate quoted by the L1 bidder(decimal up to two numbers will be taken for all practical purposes) after availing 10% price preference as per Para 2 of Works Department Resolution No. 27748 dated. 11.10.1977, the tender shall be finalized by the tender accepting authority through a transparent lottery system along with other categories of contractors.  
*(Works Department OM No.632/W Dtd.09.01.2026).*

- 6.27** If L<sub>1</sub> bidder does not turn up for agreement after finalization of the tender, then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. In that case, the L<sub>2</sub> bidder, if fulfils, other required criteria would be called for drawing agreement for execution of work subject to the condition that L<sub>2</sub> bidder negotiates at par with the rate quoted by the L<sub>1</sub> bidder otherwise the tender will be cancelled. In case a contractor is black listed, it will be widely published and intimated to all Departments of Government and also to Government of India agencies working in the State.

*(As included in Para 3.5.14 Note-I of OPWD Code Vol.I vide Works Department letter No.12366/W dt.18.11.2013).*

- 6.28.** Before acceptance of tender, the successful bidder will be required to submit a work programme and milestone basing on the financial achievement so as to complete the work within the stipulated time and in case of failure on the part of the agency to achieve the milestone liquidated damaged will be imposed.

*(As included in Para 3.5.18 Note-VIII of OPWD Code Vol.I vide Works Department letter No.12366/W dt.18.11.2013).*

- 6.29. Grant of Concession to Scheduled Caste & Scheduled Tribe Contractors:**

If the tender of the individual registered contractors belonging to Scheduled Caste and Scheduled Tribe is within 10% of the rate quoted by the lowest tenderer for any work, the work may be considered for award to him/her at the lowest tendered rate in the relaxation of Rule 18 of the O.G.F.R. Vol.I and Para 3.5.14 of OPWD Code Vol.I.

**(Resolution No.16/37 – 27748 Dated 11.10.1977 amended vide No.16262/W Dt.30.10.2018).**

\*\*\*

## **SECTION-7**

### **SPECIAL CONDITIONS OF CONTRACT**

**7.1. Changes in Constitution of Firm:**

In the case of tender by a partnership firm, any change in the constitution of the firm shall be forth with notified by the contractor to the [Executive Engineer/ Superintending Engineer/ Addl. Chief Engineer/Chief Engineer/Engineer-in-Chief](#) for his information. In case of failure to notify the change in the constitution within 15 days, the [Executive Engineer/ Superintending Engineer/ Addl. Chief Engineer/Chief Engineer/Engineer-in-Chief](#) may 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 the Governor of Odisha and the same consequence shall ensure as if the contract had been rescinded thereof and in addition the contractor shall not be entitled to recover or be paid for any work there for actually performed under the contract.

**7.2. Engineer's Access to Work:**

The Executive/Superintending Engineer is to have at all times access to the works, which are to be entirely under his control. He may require the contractor to dismiss any person in the contractor's employee upon the works who may be incompetent or misconduct him-self and the contractor is forthwith to comply with such requirements. Other supervising officers shall have all time access to the works.

**7.3. Workmen Compensation Act VIII of 1923:**

The Governor of Odisha shall be entitled to recover in full from contractor any amount that the Governor of Odisha may be liable to pay under Workman's Compensation Act VIII of 1923 to any workman employed in course of execution of any part of the work covered by this contract.

**7.4. Jurisdiction in the Event of Dispute:**

That for the purpose of jurisdiction in the event of dispute if any, the contract should be deemed to have been entered into within the State of Odisha and it is agreed that neither party to this agreement will be competent to bring a suit in regard to the matters covered by this contract at any place outside Odisha.

**7.5. Lighting & Sanitary Arrangement:**

Lighting & Sanitary arrangement and supply of drinking water will be made by the Contractor at his own cost for his labour camp.

**7.6. Payment of TAXES:**

The Contractor shall bear **Taxes** such as, [Income Tax, Royalties, Fair Weather Charges and Tollages](#) where necessary & **Government of Odisha** shall not entertain any claim whatsoever in this respect. [Statutory deduction of Taxes](#) as applicable shall be done from each running bill.

**7.7. The Building & Other Construction Workers Welfare Cess Act 1996.**

In accordance with the provisions under the said Act 1% (One) of the approved agreement value will be deducted from the R/A Bill at the time of making payment to the contractor and such amount shall be remitted in favour of The Odisha Building & Other Construction Workers Welfare Board.

**7.8. Site Clearance:**

After the work is finished or completed, surplus materials and debris are to be removed by Contractor at his own cost and preliminary works such as vats, mixing platforms, level pillars, temporary sheds and go-downs etc. are to be dismantled and all such materials

removed from site. The site involved in the construction activities should be cleared and dressed properly with outward slope away from the structure. After the work is completed in all respects as per the contract, the contractor shall vacate the site within three months from the date of completion & commissioning, by making good the damages if any.

7.9. **Works to be Carried Out:**

The work to be carried out under the contract shall include all materials, labour, tools and plants, equipment and transport which may be required in preparation of and for in the full and entire execution and completion of the works. The description given in the schedule of quantities/scope of work shall, unless otherwise stated, be held to include wastage on materials, carriage & cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

7.10. **Sufficiency of Tender:**

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of quantities (DTCN Part-II Price Bid), which rates and prices shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and commissioning of the works.

7.11. **Rates:**

The Tenderer shall quote their offer on '**Percentage Rate (excess or less) over the estimated cost in the Price Bid appended to the tender document**' for complete work in all respects. **The estimated cost is excluding GST. The rates of item basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates.** The offer shall be inclusive of cost of all materials, labour, T&P including the building and other construction workers welfare cess with surcharge, tollages, royalties, packing and forwarding, transportation, insurance, loading & unloading, storage, watch and ward, delivery of the materials to the site etc. and all other expenses incidental thereto for successful completion, testing & commissioning of the work.

**GST as applicable on works contract shall be paid over the bill amount at the time of Payment of Bill.**

7.12. **Transportation:**

The contractor shall be responsible for the transportation of all materials, tools and plant, equipment and machinery to the work site as may be required at site.

7.13. **Custody of the Materials:**

The contractor shall be responsible for safe custody of the materials at site and the Governor of Odisha will not be responsible for any loss or damage of the property at site.

7.14. **Construction Schedule:**

The contractor shall submit a detailed work schedule in the form of **Bar Chart** along with his tender indicating the detailed break-up of the job. This will include all operations from submission of design & drawing, procurement of materials, construction to final testing & commissioning at site to be indicated in detail with reference to the time period for each.

The construction schedule as submitted by the contractor shall be revised by the Executive/Superintending Engineer and approved with necessary modification if any after acceptance of the tender. However, the Engineer-in-Charge shall reserve the right to

modify the sequence of execution of different items/components/sub-items of the project as and when found necessary & in such cases it will be obligatory on the part of the successful bidder to abide by such changes in construction schedule/bar chart as per direction of EIC. No claim and/or condition should either be put forth in any manner by the successful bidder or shall be acceptable to the EIC.

#### 7.14(a) **Progress reports – submission by the contractor**

- (1) The contractor shall submit monthly progress report of the work in a computerised form. The progress report shall contain the following, apart from whatever else may be required as specified:
  - (i) Project information, giving the broad features of the contract.
  - (ii) Introduction, giving a brief scope of the work under the contract, and the broad structural or other details.
  - (iii) Construction schedule of the various components of the work through a bar chart for the next three quarters (or as may be specified), showing the milestones, targeted tasks and up to date progress.
  - (iv) Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative up to the month, with reasons for deviations, if any, in a tabular format.
  - (v) Plant and machinery statement, indicating those deployed in the work, and their working status.
  - (vi) Man-power statement, indicating individually the names of all the staff deployed in the work, along with their designations.
  - (vii) Financial statement, indicating the broad details of all the running account payments received up to date, such as gross value of work done, advances taken, recoveries affected, amounts withheld, net payments, details of cheque payments received, etc.
  - (viii) A statement showing the extra and substituted items submitted by the contractor, and the payments received against them, items pending for sanction /decision by the Department, broad details of the bank guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.
  - (ix) Progress photographs, in colour, of the various items/ components of the work done up to date, to indicate visually the actual progress of the work.
  - (x) Quality assurance and quality control tests conducted during the month, with the results thereof.
  - (xi) **Besides above contractor shall have to submit the information required as per the decision taken in the Kick-off meeting headed by the concerned Engineer-in-Charge.**
- (2) The progress report submitted by the contractor shall be checked and certified by the Junior Engineer/the Assistant Engineer and Asst. Executive Engineer and has to be reviewed by the Executive Engineer, Superintending Engineer and the Addl. Chief Engineer, over their dated signatures.
- (3) Work of unique importance and character irrespective of the value of the work, should have videography undertaken at various stages of construction right from the day of start of work to date of completion / occupation, covering all major events, inspections, visits by dignitaries, etc.

#### 7.15. **Initial Security Deposit/Security Deposit:**

The tenderer whose tender is selected for acceptance shall have to deposit **2% (Two Percent)** of the accepted tender amount (including EMD already submitted along with the bid) as **Initial Security Deposit (ISD)** within **7(Seven) Days** of receipt of Letter

of Acceptance (LoA) and sign the agreement in the prescribed form within **15 (Fifteen) Days** of receipt of Letter of Acceptance after depositing the ISD.

The ISD shall be deposited **in shape as mentioned at Clause 23, Section- 2(B) of DTCN**. No tender shall be accepted unless required amount of security money is deposited.

In addition to the **ISD, 5%** of the bill amount shall be deducted from each bill towards the security deposit. The earnest money deposit, the initial security deposit before and after acceptance of tender together with the subsequent deduction from the contractor's bill shall form part of the security deposit equivalent to **7%** of the contract value for the due fulfilment of the contract.

The security deposit of the contractor shall be refunded only 12 (twelve) months after the date of completion of the work provided the final bill has been paid and defects if any rectified.

If, however there is inevitable delay in payment of final bill, the earnest money deposit and initial security deposit forming part of the security deposit may be refunded on orders of competent authority.

**7.16. Monitoring of the Project:**

Time is the essence of the contract. The execution of the project shall be closely monitored to ensure that quality; cost & time of the project are not compromised in any manner.

The contractor shall submit monthly progress reports in a format as may be prescribed by the Engineer-in-charge. The monthly progress report shall be evaluated by the Executive/Superintending Engineer vis-à-vis the approved **Bar chart & PERT Chart** and any deficiency observed thereto shall be communicated to the contractor. The contractor shall have to make up the deficiencies within the specific time period communicated to him by the **Executive Engineer/Superintending Engineer/ Additional Chief Engineer** failing which the contractor shall be liable for action as per **Clause -7.26**.

In addition, the contractor shall submit monthly day-wise work program one month in advance to **Additional Chief Engineer /Superintending Engineer/ Executive Engineer, PH Division, Balangir** for approval under intimation to the **Addl. Chief Engineer, PH Circle, Bhawanipatna & Engineer-in-Chief, P.H, Odisha, Bhubaneswar** to ensure speedy implementation of the work and effective monitoring at all levels. Failing to do so shall also invite action under **Clause-7.26**.

**7.17. Site Order Book:**

A site Order Book shall be issued to the contractor by the Engineer-in-charge or his representative. The contractor shall keep this Book always at site and any special order or instruction to be issued to the contractor shall be recorded in this Book by the Engineer-in-charge or his representative. The contractor shall sign all orders and instructions as token of his knowledge about the same. The site Order Book shall be the property of the department but will remain during the period of the progress of the work with the contractor. The safe custody of the site Order Book during this period shall be the responsibility of the contractor. After completion of the work, the Book shall be returned back by the contractor to the Engineer-in-charge, which will be enclosed in the final bill.

**7.18. Guarantee:**

Defect liability period is **12 (Twelve) Months** from the date of final acceptance of the work conforming to provisions in scope of work. During this period, the contractor shall

replace the defective materials if any or rectify the defects if any at his own cost as pointed out by the Engineer-in-charge to the satisfaction of the later.

7.19. **Land:**

The Department may provide land if available for construction of site office to the contractor on payment of usual rent.

7.20. **Unilateral Stoppage of Work:**

Unilateral stoppage of work by the contractor without prior written permission of the Engineer-in-charge shall be considered as breach of contract and the Governor of Odisha reserves the right to take such actions as it may be deemed fit.

7.21. **Resident Engineer:**

The contractor shall engage for this work competent, qualified and authorised resident Engineers and Assistants to the satisfaction of the Engineer-in-charge. The Resident Engineer shall represent the contractor in his absence in receiving directions from officers of the Department, which will be binding on the contractor.

7.22. **Force Majeure:**

Neither the contractor nor the Executive/Superintending Engineer shall be considered in default in delayed performance of its obligation if such performance is prevented or delayed because of work to hostilities, revolution, civil commotion, epidemic, accident, fire, cyclone, flood, earthquake or because of any law and order proclamation, regulations or ordinance of the Government thereof or because of any act of God or for any cause beyond reasonable control of the party affected. Should one or both the parties be prevented from fulfilling their contractual obligations a state of force majeure lasting continuously for a period of 6 months, the two parties shall consult each other regarding the future execution of the contract for mutual settlement.

7.23. **Damages to Persons and Property:**

The contractor shall take every precaution not to damage or injure adjoining or other property of any persons. He shall indemnify and keep indemnified the employee against all claims for injuries or damages to any person or any such property (including surface or land or crops in site) which may arise out of or in consequence of any negligence or default on the representatives and against all claim, demands proceedings damages, costs, charges and expenses whatsoever in respect of or in relation thereto. The Department does not take any responsibility on this account.

7.24. **Attention to Urgent Works:**

If any urgent work in the opinion of Engineer-in-charge becomes necessary to be executed and the contractor is unable and unwilling at once to carry out, the Engineer-in-Charge may by his own or through other agency carry it out, as he may consider necessary. All expenses incurred on it shall be recoverable from the contractor or be adjusted against any sum payable to him.

7.25. **Safety Devices:**

- i) **Scaffolding:** Suitable scaffolding shall be provided for workmen for all works that cannot be safely done from the ground or solid construction except such short period of work as can be done safely from the ladders. When a ladder is used an extra labour shall be engaged for holding the ladder and if the ladder is used in carrying the materials, suitable foot holds and handholds shall be provided on the ladder.

The Engineer-in-charge will have the right to inspect the scaffolding and centring etc. for the work and can reject partly or fully such structure if found defective in his opinion.

- ii) **Working Platforms:** Working platforms, gangways and stairways shall be constructed such that they do not sag unduly or unequally. If the height of the platforms or gangway or stairway is more than 3.25 meters above the ground or floor level, it shall be closely guarded, have adequate width and suitably fenced.
- iii) **Safe means of access:** Safe means of access shall be provided to all working platform and other working places.
- iv) **Precaution against Electrical Equipment:** Adequate precaution shall be taken to prevent danger from electrical equipment. Hand lamps shall be provided with Mesh guard, wherever required.
- v) **Preventing Public from Accident:** No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or public. The contractor shall provide all necessary fencing and light to protect public from accident and shall be bound to bear expenses of defence or any suit action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precaution and to pay any damages and cost which may be awarded in any such suit action or proceedings to any such person or which may with the consent of the contractor, be paid to compromise any claim by any such person. The contractor not to come cause blockage of traffic /disruption of the traffic.
- vi) **Demolition:** Before any demolition work is commenced and also during process of work:
  - a) all roads and open areas adjacent to the work site shall either be closed or suitably protected,
  - b) no electric cable or apparatus which is liable to be a source of danger shall remain electrically charged,
  - c) all practical steps shall be taken to prevent danger to persons employed from the risk of fire, explosion or flooding,
  - d) no floor roof or other parts of the building shall be so over loaded with debris or materials as may render it unsafe.
- vii) **Personal safety equipment:** All personal safety equipment shall be made adequately available by the contractor for use of persons employed at the site of work and maintained in a condition suitable for immediate use. The contractor shall take adequate steps to ensure proper use of the equipment by persons concerned.
- viii) **Precaution against fire:** Suitable fire extinguishers, water and sand buckets shall be provided at the work site to tackle situations of fire.

#### 7.26. **Rescission of Contract:**

Subject to other provisions contained in this clause the Executive/Superintending Engineer of the Department may without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, recommend the accepting authority to rescind the contract in any of the following cases:

- i) If the **contractor** having been given by the Executive/Superintending Engineer a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workmen like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii) If the contractor being a company shall pass a resolution on the court shall make an order that the company shall be wound up or if a receiver or a **manager** on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle to court to make a winding up order.
- iii) If the contractor has, without reasonable cause, suspended the progress of the work with due diligence so that in the opinion of the Executive/Superintending Engineer (which shall be final & binding) he will be unable to secure completion of the work by the date of completion and continues to do so after a notice in writing of seven days from the Executive/Superintending Engineer.
- iv) If the contractor fails to comply with the provisions of **Clause-7.15** & other relevant clauses mentioned elsewhere in this DTCN.
- v) If the contractor fails to complete the work within the stipulated date or items of the work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Executive/Superintending Engineer.

When the contractor has made himself liable for action under any of the cases aforesaid, the **Accepting Authority shall have the powers to rescind the contract** (of which rescission notice in writing to the contractor under the hand of **Executive Engineer/Superintending Engineer/ Additional Chief Engineer** shall be conclusive evidence), **20% of the value of the left-over work** will be realized from the contractor as Penalty

7.26.1. In case of rescission of contract as per **Clause-7.26** the contractor shall have no claim to compensation for any loss sustained by him by regions of having purchased or procured any materials or entered any engagement on account of or with a view to execute the work / performance of the contractor.

**7.27(a) Conditions for Reimbursement of Levy/Taxes if Levied after Receipt of Tenders:**

- i) All tendered rates shall be inclusive of all taxes and levies payable under respect statutes. However, pursuant to the Constitution (46<sup>th</sup> Amendment) Act, 1982, if any further tax or levy 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 the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the **Engineer-in-Chief, P.H., Odisha, Bhubaneswar** (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 authorised 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, pursuant to the Constitution (Forty Sixth Amendment) Act, 1982, 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.

7.27(b) **Other statutory Taxes such as I.T. etc, will be deducted at sources from the bills of the contractor and deposited with concerned authority.**

7.27(c) Royalty at the prevailing rate on minerals will be deducted from the bills of the contractor and deposited with concerned authority.

7.28 **Fair Wages Clause:**

(a) The contractor shall not employ for the purpose of this contract any person who is below the age of fourteen years and shall pay to each labourer for work done by such labourers fair wages.

Explanation – “**Fair Wage**” means wages, whether for time or piece work prescribed by the State Public Works Department provided that where higher rates have been prescribed under the minimum wages Act 1948 wages at such higher rates should constitute fair wages.

The Executive/Superintending Engineer shall have the right to enquire into and decide any complaint alleging that the wages paid by the contractor to any labourer for the work done by such labourer is less than the wages as per sub-paragraph-I above.

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

(c) In respect of all labour directly or indirectly employed in the works for the performance of the contractor’s part of this agreement, the contractor shall comply with or cause to be complied with all regulations made by Government in regard to payment of wages, wage period deductions from wages, recovery of wages not paid and deductions unauthorisedly made, maintenance of wage register, wage cards, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of a like nature.

(d) The Executive/Superintending Engineer or Sub-Divisional Officer concerned shall have the right to deduct, from the money due to the contractor, any such required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers non-payment of wages or of deduction made from his or their wages, which are not justified by their terms of the contract or non-observance of the regulations. Money so deducted should be transferred to the workers concerned.

(e) Vis-à-vis, the Government of Odisha, the contractor shall be primarily liable for all payments to be made under and for the observance of the regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractor.

(f) The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be breach of this contract.

**Odisha PWD / Electricity Department Contractor’s Labour Regulations**

7.28.1. Short title – These regulations may be called “**The Odisha Public Works Department / Electricity Department Contractor’s Regulations**”.

7.28.2. Definitions – In these Regulations, unless otherwise expressed or indicated the following words and expressions shall have the meaning here by assigned to them respectively, that is to say -

- i) **"Labour"** means a worker employed by a contractor of the Odisha Public Works Department / Electricity Department directly or indirectly through a sub-contractor or other person, or by an agent on his behalf.
- ii) **"Fair Wages"** means wages whether for time or piece work prescribed by the State Public Works Department provided that where higher rates have been prescribed under the minimum wages Act, 1948 wages at such higher rates should constitute fair wages.
- iii) **"Contractor"** shall include every person whether a sub-contractor or headman or agent employing labour on the work taken on contract.
- iv) **"Wages"** shall have the same meaning as defined in the payment of Wages Act and include time and piece rate wages, if any.

**7.28.3. Display of Notices regarding Wages, etc.:**

The contractor shall:–

- (a) Before he commences his work on contract display and correctly maintain and continue to display and correctly maintain, in a clean and legible condition, in conspicuous places on the work, notices in English and in the local Indian language spoken by the majority of the workers, giving the rate of wage prescribed by the State Public Works Department / Electricity Department for the district in which the work is done.
- (b) Send a copy of such notices to the Engineer-in-charge of the work.

**7.28.4. Payment of wages:**

- (1) Wages due to every worker shall be paid to him direct.
- (2) All wages shall be paid in current coin or currency or in both

**7.28.5. Fixation of wage period:**

- (1) The contractor shall fix the wage period in respect of which the wages be payable.
- (2) No wage period shall exceed one month.
- (3) Wages of every workman employed on the contract shall be paid before the expiry of ten days, after the last day of the wage period in respect of which the wages are payable.
- (4) When the employment of any worker is terminated by or on behalf of the contractor, the wages earned by him shall be paid before the expiry of the day succeeding the one on which his employment is terminated.
- (5) All payments of wages shall be made on a working day.

**7.28.6. Wage book and wages cards, etc.:**

- (1) The contractor shall maintain a wage book of each worker in such form as may be convenient, but the same shall include the following particulars-
  - (a) Rate of daily or monthly wages.
  - (b) Nature of work on which employed
  - (c) Total number of days worked during each wage period
  - (d) Total amount payable for the work during each wage period.
  - (e) All deductions made from the wages with an indication in each case of the ground for which the deduction is made.
  - (f) Wage actually paid for each wage period.

- (2) The contractor shall also maintain a wage card for each worker employed on the work.
- (3) The Executive/Superintending Engineer may grant an exemption from the maintenance of wage bond, wage cards to a contractor who, in his opinion – may not directly or indirectly employ more than 100 persons on the work.

**7.28.7. Fines and deduction which may be made from wages:**

- (i) The wages of a worker shall be paid to him without and deduction of any kind except the following -
  - (a) Fines
  - (b) Deductions for absence from duty, i.e., from the place of places whereby the terms of his employment he is required to work. The amount of deductions shall be in proportion to the period for which he was absence.
  - (c) Deductions for damage to or loss of good expressly entrusted to the employed person for custody or for loss of money for which he is required to account where such damage or loss is directly attributable to his neglect or default.
  - (d) Any other deductions which the Odisha Government may from time to time allow.
- (ii) No fines shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deduction.
- (iii) The total amount of fines which may be imposed in any one wage period on a works shall not exceed an amount equal to five paise in a rupee of the wages payable to him in respect of that wage period.
- (iv) No fine imposed on any worker shall be recovered from him by instalments, or after the expiry of 60 days from the date on which it was imposed.

**7.28.8. Register of fines, etc.:**

- (i) The contractor shall maintain a register of fines and of all deduction for damage or loss. Such register shall mention the reason for which fine was imposed or deduction for damage or loss was made.
- (ii) The contractor shall maintain a list in English and in the local Indian language, clearly defining acts and omissions for which penalty of fine can be imposed. It shall display such list and maintain it in a clean and legible condition in conspicuous places on the work.

**7.28.9. Preservation of register:**

The wage register, the wage cards and the register of fines, deduction required to be maintained under the regulations shall be **preserved for 12 (Twelve) Months** after day of the last entry made in them.

**7.28.10. Powers of Labour Welfare Officers to make investigation or enquiry:**

The Labour Welfare Officers or any other persons authorized by the Government of Odisha on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the fair wage clauses and the provisions of these regulations. He shall investigate into any complaint regarding default made by the contractor, sub-contractor in regard to such provisions.

7.28.11. **Report of Labour Welfare Officers:**

The Labour Welfare Officer or others authorized as aforesaid shall submit a report of the results of his investigation or enquiry to the Executive/Superintending Engineer concerned, indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor bill be made and the wages and other dues be paid to the labourers concerned.

7.28.12. **Appeal against the decision of Labour Welfare Officer:**

Any persons aggrieved by the decision and recommendation of the Labour Welfare Officer or other person so authorized may appeal against such decision to the Labour Commissioner within 30 days from the date of decision forwarding simultaneously a copy of his appeal to the Executive/Superintending Engineer concerned but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

7.28.13. **Inspection of register:**

The contractor shall also allow inspection of the wage book and wage cards to any of his workers or to his agent at a convenient time and place after due notice is received, or to the Labour Commissioner or any other person authorized by the Government of Odisha on his behalf.

7.28.14. **Submission of return:**

The contractor shall submit periodical returns as may be specified from time to time.

7.28.15. **Amendments:**

The Government of Odisha may from time to time, add to or amend these regulations and on any question as to the application, interpretation of effect of these regulations, the decision of the Labour Commissioner or any other person authorized by the Government of Odisha in that behalf shall be final.

7.28.16. [The quoted rates must include cost towards DMF\(@10%of Royalty\), EMF\(@5%of Royalty\), Additional Charges as applicable in addition to royalty of minor minerals used in the project. The same shall be realised from the R/A Bills of contractors on failure to production of money receipt towards payment of same.](#)

**The terms and conditions of the agreement have been read by Me/Us and I/We certify that I/We clearly understand them and agree to abide by them.**

**Contractor**

## **SECTION-8**

### **SCOPE OF WORK**

#### **GENERAL**

The intent of this Section is to specify the work items to be covered on '**Percentage Rate Basis**' in conformity with the technical specifications as enumerated in the subsequent clauses for the work, "**Construction of ESR and other ancillary works in connection with the work Augmentation of water supply system along with ancillary works for Balangir town.**"

**Location:**

<b>Town :</b>	<b>Balangir Municipality</b>
<b>District :</b>	<b>Balangir</b>
<b>State :</b>	<b>Odisha</b>
<b>Connected to :</b>	<b>NH -26</b>
<b>Nearest Railway Station :</b>	<b>Balangir</b>

#### **8.1 Components of Work to be executed:**

- i. Design, Drawing, Construction, Testing & Commissioning of RCC Elevated Service Reservoirs (ESR)- 500 KL capacity with 25M staging, 1350 KL capacity with 25M staging ,1000 KL capacity with 30M staging, 1000 KL capacity with 25M staging at Balangir town along with supply, Installation, Testing & Commissioning of DI Pilot Altitude Flow Control Valve, Electromagnetic Flow Meter, DI mechanical dismantling joint.
- ii. Laying of DI distribution pipe line network (DI K7) of 300 mm. dia. – 1020 mtr. ,250 mm. dia. – 340 mtr., 200mm. dia. – 800 mtr., 150 mm. dia. – 2170 mtr.,100 mm. dia – 580 mtr. (Excluding cost of D.I. pipe) but including transportation from store at Balangir Municipality to work site, tyton joints, Fixing of valves and specials, MS work, construction of Valve Chambers & Thrust Blocks, repair of damaged road, providing and repairing Household service connection, NH Crossing by Micro tunnelling (Horizontal Thrust Boring/ Pushing method) etc.
- iii. Design, Drawing and Construction of RCC framed structure single stored building for watchman room and other ancillary work.
- iv. Construction of Boundary Wall, Approach Road and other ancillary works
- v. Providing new Household Service Connections

#### **8.1.1 Laying of Distribution pipe line network**

i.) Laying, fabrication, erection, supervision, testing & commissioning of **DI K-7 pipeline network and pipe** conforming to IS: 8329/2000 of following nominal diameter to required depth with supply of DI. specials as per IS: 9523/2000 & valves conforming to IS: 14846 – 2000. **DI K-7pipes** shall be inside cement mortar lining with bituminous coating suitable for push-on joint using rubber gasket, conforming to IS:8329/2000 (**Pipe will be supplied by the Department**) including earth work in excavation of pipe line trenches **in all kinds of soil** of required depth, with dewatering and back filling. The agency shall transport the pipes from departmental stores to the work site for laying of pipe line work

<b>1</b>	Pipe line details
	<b>100 mm dia DI K-7 Pipe – 580 m</b>
	<b>150 mm dia DI K-7 Pipe – 2170 m</b>
	<b>200 mm dia DI K-7 Pipe – 800 m</b>
	<b>250 mm dia DI K-7 Pipe – 340 m</b>
	<b>300 mm dia DI K-7 Pipe -1020 m</b>

- i) Excavation of trenches in all kind of soils, including shoring and shuttering, wherever required, as per the approved alignment up to the depth to maintain minimum one meter earth cover over crown of the pipe for laying of pipes and fittings, including proper stacking of excavated soil/material, backfilling and disposal of surplus material.
  - ii) Supply, laying & jointing of pipe lines as per IS: 8329, Socket and Spigot joint and ISI marked rubber gasket conforming to IS: 5382 as shown in relevant drawings and detailed specifications.
  - iii) Supply & laying of ISI marked Ductile Iron fittings (Tee, tail piece, bend etc.) of required sizes conforming to IS: 9523 with latest amendment.
  - iv) Supply, laying & jointing Mild Steel Pipes conforming to IS: 3589 Fe410 grade pressure pipes of required diameter and quantity for nallah and other crossing and special bends, etc. as per detailed specifications. If required as per opinion of Engineer-in-Charge, RCC columns are to be constructed for passing of pipe line across the canal.
  - v) Supply & erection of ISI marked double flanged **DI sluice valves**, scour valves as per IS: 14846 PN 1.6 and double acting kinetic air valve as per IS: 14845 PN 1.6. as per site requirement & as per instruction of Engineer-in-Charge Minimum size of scour valve shall be 80mm. Minimum size of air valves shall be 80mm.
  - vi) Construction of thrust blocks of required size as per approved drawing at all bends and other necessary locations in the pipeline & Brick Masonry Sluice Valve and Air Valve chambers as per PH specification, design and as per the direction of the Engineer-in charge shall be executed.
  - vii) Backfilling of the excavated trenches with selected excavated earth. Backfilling shall be done in layers of 150mm thickness and shall be watered and compacted as per detailed specifications.
  - viii) Repair to damages caused during construction to any existing road, bridge, culvert, water supply line, sewerage line, drain, electricity cable & pole, gas pipeline and telephone line, etc. shall be reinstated as per the original specification and satisfaction of concerned authorities / Engineer-in-Charge.
  - ix) Cutting of road surface for taking of pipeline at required depth will be done with making good to the damages by mending & repair to existing condition.
  - x) Testing and commissioning of raw water rising mains as per relevant IS code and to ensure minimum terminal head at the top of aerator 1.75 m.
- ii)** Supply, Fabrication, Construction, Erection, Supervision, Testing, Trial-Run, & Laying of **M.S pipe** line of following outer diameter conforming to IS: 3589/2001 with required cutting, welding, with supply of flanges, by using DG set, cutting & welding machineries including painting two coats with enamel paint over a coat of priming with steel primer, for all M.S and interconnection works including earth work in excavation of pipe line trenches in all kinds of soil of required depth, with dewatering and back filling.

Dia & thickness of M.S Pipe in mm	100 mm, 4.50 mm (in Mtr)	150 mm, 4.50 mm (in Mtr)	200 mm, 6.30 mm (in Mtr)	250 mm, 6.30 mm (in Mtr)	300 mm, 7.10 mm (in Mtr)	Total (in Mtr)
MS Pipe	60.00	220.00	80.00	35.00	105.00	<b>440.00</b>

**iii.) Valves and valve chambers:**

The following nominal dia and rating **D.I. D/F Sluice valve with wheel** are proposed. The agency shall have to supply & install the following **ductile iron sluice valves with wheel (P.N.1.6)** with double flanged ends including, fitting & fixing with supply of G.I. nuts, bolts, Rubber insertion Sheet etc., for water works purpose conforming to IS: 14846 – 2000.

**A) Valve chambers –**

- a) Internal size (0.9 mtr x 0.9 mtr x 1.1 mtr) and other sizes as specified in the BoQ should be provided for each sluice valve as per P.H. Specification.

**B) Sluice valves -**

- i) **D.I D/F Resilient type Sluice Valve with wheel (P.N.-1.6)**

- iv) Appropriate size Restraint joints/bends etc shall be provide at site including its testing and commissioning as per site requirement and direction of EIC.

- vi) **Dismantling of WBM / Cement Concrete / Asphalt Road/ Paver Block** should be taken up prior to earth work for laying of pipe line along / across the road where ever required and mending good to the damages should be taken up immediately after filling sand with well-watered and compaction, laying 150mm thick cement concrete (1:2:4) with 12mm C.B.H.G chips over 100mm thick cement concrete (1:4:8) using 40mm size C.B.H.G. metal otherwise if any case arises the specification of mending work shall also be adhered as per direction of Concerned road authority. **(Works to be done as detailed mentioned in BoQ)**

- vii) **1 No. NH/SH/Railway crossing by micro tunnelling (horizontal thrust boring/ pushing method).**

Supplying all material, labour, T&P for crossing of M.S pipe line across Railway line/ NH/ SH by Horizontal Trust boring/pushing method (in slope of 1 in 40 towards downstream including **encasing carrier pipe line by Casing Pipe** including excavation of Push pit, dewatering if any, laying & jointing of casing & carrier pipe, capping & sealing casing pipe, spacer etc. for carrier pipe & installation of sign boards on either side of railway track & direction of Engineer-in-charge & approved by Railway Department etc. all complete. **(Works to be done as detailed mentioned in BoQ)**

**viii) Households Service Connection (New & Repair):**

**House Service Connection** should be provided to the existing consumers from new distribution pipe by drilling the water main (D.I. pipes / pipe with metal straps) and should be repaired as specified in BoQ as per the specification given below.

- i) Uploading Photographs with latitude & longitude details towards inspection & supervision form submission with agreement from consumer end.

N.B.:- The item of works as detailed above will be done with the following conditions.

- i) Photographs have to be taken through Smart Phone prior to execution of work indicating road length & type of road.  
ii) Latitude & longitude of the work site has to be taken through mobile application

to be provided by PHEO.

- iii) After allocation of the consumer No. it should be marked on the wall of the specified household and photograph taken with the House owner.
- iv) Post work photo graph and other details has to be uploaded dynamically to the server through application of PHEO.
- v) Data of unwilling consumer who does not require water supply connection has to be captured & uploaded.
- vi) At the time of agreement, they will be provided with ID & Password to access the PHEO Software.
- vii) Indemnity Bond should be collected by the Agency/Executant with due consultation with the beneficiary.

**8.1.2 (i) Elevated Service Reservoirs (ESR):**

**Design, Drawing, Construction, Testing & Commissioning of 4 nos. RCC Elevated Service Reservoirs as mentioned below with required length and size of piping arrangement, valve arrangement and all ancillary works with pile/ raft foundation and shaft or column staging.**

SI No.	Item	Capacity (KL)	Staging Height (mtr)
01.	RCC ESR at Zone-02	500	25
02.	RCC ESR at Zone-04 & 06 combined	1350	25
03.	RCC ESR at Zone-14	1000	30
04.	RCC ESR at Zone-21	1000	25

**8.1.2(ii) Supply, Installation, Testing & Commissioning of DI Pilot Altitude Flow Control Valve, Electromagnetic Flow Meter, DI mechanical dismantling joint mentioned as below (Works to be done as detailed mentioned in BoQ).**

SI No.	Item	Dia (in mm)	Quantity (Nos.)
01.	DI Pilot Altitude Flow Control Valve	200	2
		250	2

SI No.	Item	Dia (in mm)	Quantity (Nos.)
01.	Electromagnetic Flow Meter	300	4
		500	1

SI No.	Item	Dia (in mm)	Quantity (Nos.)
01.	DI mechanical dismantling joint	300	4
		500	1

**8.1.3 Design, Drawing and Construction of RCC framed structure single stored building for watchman room and other ancillary work (details as mentioned in the BoQ).**

**8.1.4 Construction of Boundary Wall, Approach Road and other ancillary works. Works to be done as detailed mentioned in BoQ.**

**8.1.5 Providing new Household Service Connections (Please refer Clause No.8.1.1 (viii))**

**8.2 Site Plan:**

The site plan of the proposed infrastructures like ESRs is shown at **Section-10**. Intending bidders can see the drawings at the office of the **Additional Chief Engineer, PH Division, Balangir.**

**8.3 Soil Investigation Report:**

For structural design purposes, SBC at required depths and different locations below ground level at respective places for ESRs WTP& GSRs shall be found out by the agency through Govt./Govt. approved laboratory confirming to relevant IS code. The soil test shall include bore log, SPT, UDS test, Tri-axial test, Vane shear test, core sample test, plate load test depending upon requirement of the structure. Before detailed engineering & design the contractor shall submit detailed soil test report to the Engineer-in-Charge for approval of SBC to be adopted for structural design. Accordingly, the contractor has to design the structures. For design of GSR, ESR the maximum ground water table for design shall be taken as **1.5 M below virgin ground level unless otherwise mentioned elsewhere.** In case further data would be necessary before or after submission of tender / during execution of the work, the tenderer / contractor shall collect the same of his own & at his cost.

Ignorance of any data shall not relieve the contractor of his obligation to complete & commission the work as per the provisions of the DTCN.

While designing of the structures, it shall be ensured that the weight of the structure including foundation, water, over burden earth on foundation / slab / raft etc. as applicable shall be within the permissible limit of S.B.C. allowed by Department.

#### **8.4 Site Visit:**

The tenderer before tendering shall inspect the site at his own cost in consultation with Executive Engineer in Charge of work and shall satisfy himself with regard to the nature and extent of the work involved, the actual site conditions, existing facilities & shall collect any other information which may be required before submitting the tender. Any claim afterwards by the tenderer shall not be entertained on account of the ignorance of the site conditions.

#### **8.5 Format Language and Units:**

The language of all documents shall be in English. Units of measurement in the documents, on the drawings, and the submissions shall be in S.I/ Metric Units.

#### **8.6 Detailed Designs & Drawings of Works, their Submission and Approval:**

The contractor is supposed to have the best of the expertise available in the field of design & execution of ESRs, GSRs, Pump Houses, Pile Foundations, Thrust Blocks etc. The contractor shall be entirely responsible for the detailed design of GSRs, ESRs, etc including civil, process, structural, mechanical and electrical designs for the duties specified. The design submission and approval formalities are described below.

##### **1) Design Submission Guidelines:**

All designs shall be submitted in the form of booklets in complete shape along with relevant drawings & in a presentable manner neatly type written/ computer printed on **A4** size bond paper.

- (i) All design calculations / findings shall be supported with illustrative drawings in form of plans, sections etc. as applicable which shall form a part of the design booklet.
- (ii) All references made in the design shall be indicated in "Reference Chapter" of the design booklet. On demand, the contractor shall furnish reference materials to the Department to facilitate checking of the designs.
- (iii) All drawings shall be with black lines on white tracing paper in metric scale in size **560mm X 810mm** & shall be titled, cross referenced & fully explanatory with

the contractor's name, date, seal & signature on it. Additionally each drawing shall contain the title at the bottom right hand corner. Alternatively, the contractor may submit computer aided drawings drawn in different colours conforming to other specifications as described above.

- (iv) In case of computer aided designs, the firm shall also additionally submit the floppy containing the software & the design to the Department to facilitate checking of the designs. The contractor shall also furnish the design calculations through manual methods if demanded by Department.
- 2) **Design Basis:**  
All designs shall be based on the best modern practices enumerated in the Standard Text Books/ Reference Books & Handbooks by authors of International & National repute. Reference books like the Manual on Water Supply & Treatment by CPHEEO, Government of India, latest Indian Standards, Codes of Practices & Specifications, norms fixed by Pollution Control Boards of State/Central & Central Electricity Authority, European Union/ British/ **AWWA** Standards shall also be followed wherever required. In case of any contradiction, the decision of the Competent Authority of the Department shall be final.

For computer aided design, the contractor shall use only widely accepted standard software of International/ National repute.

**Thumb rule designs based on the contractor's own experience/ sub-standard books & literature/ sub-standard soft wares shall be outrightly rejected**

- 3) **Submission & Approval of Detailed Designs & Drawings:**
- i. The contractor shall submit to the Department two sets of designs & drawings & layout drawings in keeping with the specifications in this DTCN & in a manner as described in the preceding paragraphs within **20 days** of issue of letter of intent even if he fails to sign the agreement within stipulated 7 days provided the firm has deposited the Initial Security deposit. However, if the agreement is not signed eventually, the contractor shall have no claim of payment on account of whatever designs and drawings, the firm has furnished.
  - ii. The designs and drawings of different components of the Water Supply Scheme such as Intake Well, WTP, GSR/UGR/ESR/ MBR etc. shall be vetted by the Government Engineering Colleges of the State such as IIT Bhubaneswar, NIT Rourkela, UCE Burla, OTR, Bhubaneswar and other IITs or NITs of the country before accordance of approval by the competent authority.
  - iii. These designs and drawings shall be checked by the Competent Authority of the Department. After checking, these designs shall be preliminarily approved by the Department after incorporating the corrections/ modifications/ observations etc. as may be required and one set of preliminarily approved designs & drawings shall be communicated to the contractor for re-submission of **5 (Five) sets** of detailed corrected designs & **10 (Ten) sets** of detailed corrected drawings to Department within 10(ten) days of preliminary approval by Department. The time span between the receipt of the design & drawings by Department & the date of preliminary approval shall not normally exceed **30 (Thirty) days'** time.
  - iv. The final approval of the designs & drawings shall be communicated to the contractor within **15 (Fifteen) days'** time from the date of receipt of the final designs & drawings if all the corrections/ modifications/ observations as indicated during preliminary approval are duly incorporated.

- vi. To expedite the design submission & approval process, the contractor shall submit the complete structural designs & drawings of all the components with General Arrangement, Electrical, Process & Instrumentations and Mechanical designs & drawings based on the preliminarily approved process, hydraulic & layout designs & drawings within **15 (Fifteen)** days of communication of the preliminary approval. Submission of designs & drawings in piece meal shall not be accepted.
- vii. Same procedure shall be followed as described in Sl. 2 & 3 for approval of these designs & drawings.
- vii. The work shall start after final approval of all the designs & drawings.
- viii. **Soil Investigation Report:**

For structural design purposes, SBC at required depths and different locations below ground level at respective places for all units of the GSR & ESRs/Water Treatment plant, approved laboratory confirming to relevant IS code. The soil test shall include bore log, SPT, UDS test, Tri-axial test, Vane shear test, core sample test, plate load test depending upon requirement of the structure. Before detailed engineering & design the contractor shall submit detailed soil test report to the Engineer-in-Charge for approval of SBC to be adopted for structural design. Accordingly, the contractor has to design his structure. The maximum ground water table for design of WTP & ancillary structures shall be taken as **1.0 M below virgin ground level unless otherwise mentioned elsewhere**. In case further data would be necessary before or after submission of tender / during execution of the work, the tenderer / contractor shall collect the same of his own & at his cost. Ignorance of any data shall not relieve the contractor of his obligation to complete & commission the work as per the provisions of the DTCN. While designing of the structures, it shall be ensured that the weight of the structure including foundation, water, over burden earth on foundation / slab / raft etc. as applicable shall be within the permissible limit of S.B.C. allowed by Department.

- ix. **Equipment Drawings:**  
Prior to the delivery of any item of plant or equipment for the erection of treatment plant, the contractor shall, in triplicate, submit to the Department office for approval, accurately detailed mechanical and electrical drawings relating thereto together with spare parts, tests, references, drawings etc. for the plant. The make of all equipment shall have to be approved by Department.

### **8.9 Obligation to Provide Documentation:**

The contractor shall, as an integral part of the contract, supply detailed documentation and working drawings of the process and the equipment to be supplied by him within the specified periods and assist in checking the design calculations, other information or data relating to problems arising from the design of all components or supply of the process or the mechanical or electrical equipment.

The contractor shall supply all the documentation and drawings asked for or implied in this section or elsewhere in the specification.

Approval of designs, drawings, calculations, or equipment supplied by the contractor shall not relieve the contractor from any of his contractual responsibilities or obligations, if any rectification or replacement is felt necessary at a later stage.

### **8.10 Quality of Material and Workmanship:**

All the materials supplied by the contractor shall be best of their respective kinds and shall comply with latest revisions of Indian Standards/ International Standards/ Water Supply & Public Health regulations stipulated by Govt. of India, AWWA, State Pollution Control & Prevention Board, Indian Electricity Rules and other statutory requirements of Govt. of India and Govt. of Odisha.

The contractor shall be responsible for the design of the entire system and quality of materials and workmanship. The contractor shall guarantee the satisfactory functioning & performance of entire water treatment plant. If any modification/ replacement is necessitated during trial-run and guarantee period, the same shall be carried out immediately free of cost.

### **8.11 Construction & Erection Facilities:**

Water, power, accommodation and storage of materials for construction, erection and fabrication at site shall be arranged by the contractor at his own cost. The power supply & consumption during the construction stage shall be the responsibility of the contractor & no extra payment shall be made on account of this. Department will be responsible for supply of water for testing, trial running & commissioning of the water retaining structure. The power supply and consumption during testing and commissioning and trial running shall be the Department's responsibility.

### **8.12 Inspection & Testing:**

#### **A) For D.I. Pipes (Not applicable when the DI pipes are supplied by the Department)**

- i) The materials are to be inspected by the Quality Assurance Wing of CIPET/Projects & Development India Ltd. (PDIL)/ EP&M/ RITES Ltd. and the consignments are to be embossed with the CIPET/ Projects & Development India Ltd. (PDIL)/ EP&M/ RITES Ltd inspection mark. 100% Pre-delivery Inspection shall be undertaken by above agencies. 1% Post-delivery inspection shall be undertaken by departmentally through the concerned Executive Engineer/ Superintending Engineer.
- ii) The materials without CIPET/ Projects & Development India Ltd. (PDIL)/ EP&M/ RITES Ltd inspection and without CIPET/ Projects & Development India Ltd. (PDIL)/ EP&M/ RITES Ltd stamping shall not be accepted. All the materials should also be ISI Marked.
- iii) Materials found defective at the time of delivery and/or verification at the site by the concerned Executive Engineer/Consignee shall not be accepted and the same shall have to be replaced by the supplier at his/her/their own risk and cost within a reasonable time period from the date of issue of written information to that effect by the concerned Consignee failing which the Consignee will be at liberty to take any action deemed fit in the interest of Govt. Work(s) and the supplier will have no option but to abide by the decision of the Consignee(s).

#### **B) For other materials**

For all other materials, the contractor shall furnish Manufacturer's test certificate with each consignment. At site, Testing and inspection shall be carried out as per Indian standards/International Standards in presence of Engineer-in-Charge, contractor and manufacturer. The contractor shall detail out the codes and standards in accordance with which the testing shall be carried out.

Inspection by the Engineer-in-charge of the Department shall not relieve the contractor of his liability for rectifying the defects which may subsequently appear or be detected during testing and commissioning or subsequent operation. After rectification of the defects or replacement, the equipments shall be re-tested to the satisfaction of the Department.

All equipments, labour, tools & tackles, instruments and other facilities for testing shall be provided by the contractor. He shall also maintain records of all the tests and furnish copies of the same to the Department.

Whenever untested materials are used, written permission from the Engineer-in-Charge shall be obtained. Manufacturer's test certificates shall be furnished by the contractor for such equipments and materials used.

The Department reserves the right to test any material at any of the reputed laboratories if necessity arises & the cost of such test(s) shall be borne by the contractor & rejected materials shall have to be replaced by the contractor by approved material at his cost.

### **8.13. Completion Schedule:**

The time is the essence of this contract. The entire job is to be completed within a time frame of **12 (Twelve) Months** from the date of issue of work order by the **Addl. Chief Engineer, PH Division, BALANGIR**. The tenderer shall submit a Bar Chart indicating starting and completion dates of each activity such as submission of designs & drawings, site mobilization, procurement of materials and equipments, transportation, execution, assembly/erection, testing, trial running and commissioning without which the tender shall be liable for rejection.

On approval, the Bar Chart shall form a part of the contract as detailed in the Section-6 & 7 of this DTCN. The successful tenderer shall submit PERT network based on above Bar Chart for monitoring of the project as per relevant clause of "Conditions of Contract/Special Condition of Contract".

### **8.14. Tendering:**

Ordinarily, modifications of technical specifications during execution of the work shall not be permitted excepting in cases where such a modification is warranted due to technical requirements.

### **8.15. Tender Drawings:**

The tender drawings submitted by the contractor/firm in their offer are subjected to change during detailed design if so required from technical considerations without extra financial implications.

\*\*\*\*\*

## **SCOPE OF WORK (Operation & Maintenance)**

**(DELETED)**

## SECTION – 09

### **TECHNICAL SPECIFICATIONS & DESIGN CRITERIA**

❖ **Design Standards**

CPHEEO manual on Water Supply & Treatment and relevant I.S. Specification & Standards

❖ **Specifications and Standards for Construction**

All the structure shall be designed conforming to state-of the art technology& practice to produce and maintain output water quality hygienically safe and palatable in an economical manner. The output quality of water shall conform to physical and chemical standards stipulated in the manual on Water Supply and Treatment (latest edition) published by **Central Public Health & Environmental Engineering Organization (CPHEEO)** and **Indian Standard Code of Practice (ISCP)**. Similarly, the **RCC Intake Well, RCC UGR/ OGR/ MBR/ CWR, RCC ESR and WTP** shall be designed based on the latest concepts & principles enumerated in the standard text books conforming to latest **BIS Code**.

❖ **General Conditions:**

1. Cement shall not be less than O.P.C.-43 grade of reputed manufactures confirming to relevant IS.
2. Reinforcement to confirm Fe-415/Fe-500 and IS specification (SAIL/TATA/RINL). The steel used for reinforcement shall be Corrosion resistance high yield strength deformed bars confirming to IS:1786.
3. As & when required, the steel/cement & other building materials will be tested by Department at the cost of contractor to ensure proper quality as per IS specification.
4. Testing of water tightness shall be conducted as per relevant IS Codes.
5. Machine mix shall be used in concrete work for all structure. Design mix of concrete will be preferred. Vibrator of appropriate type shall be used for compaction of concrete.
6. All the structures are to be designed as permanent type and shall have aesthetic elevation.
7. Form work shall be of steel plates and frame, sound seasoned timber or any approved materials as decided by Engineer-in-charge to be used for the centring and shuttering of the structures.
8. Painting of all steel / MS structure to be done as per approved quality of enamel paint over a coat of primer.
9. All electrical work / earthing including wiring of pump house to be done as per relevant IS specification and Indian Electrical Rules. Single phase wiring shall be done for lighting purpose & three phase wiring shall be done for running pump motors & wherever necessary.
10. All the valves are to confirm with relevant IS specification and of reputed make.

11. The surplus earth and debris should be lifted after completion of work and proper levelling of site as directed by Engineer-in-charge without any extra claim.
12. Pumps and motors to be of reputed and approved make.
13. All the work including supply of materials to be executed as per relevant IS specification and direction of Engineer-in-charge.
14. Foundation of all structure including supply of materials shall be designed depending on Ground water table / subsoil condition. In no case the Depth of foundation below virgin soil shall be less than 1 mtr. at respective places.
15. All equipments, accessories, auxiliaries, piping, electrics, instruments, installations, construction, buildings etc. including all mechanical, electrical & civil engineering works covered under the scope of work of contractor shall be subjected to inspection & testing by the Department for its material, quality, workmanship and the performance. The contractor shall arrange and carryout all such inspection, testing, trial run etc. and demonstrate in presence of the Engineer-in-charge of the Department.
16. The cost of such inspection, testing, trial run, demonstration etc. shall be borne by the contractor. All responsibility of such inspection, testing, trial run, demonstration etc. and any damage/loss that may cause directly or indirectly shall exclusively rest with the contractor.
17. Such inspection, testing, trial run, demonstration etc. shall, however, not relieve the contractor of their liability for replacing/rectifying any defects, which may subsequently appear or be detected during erection and guarantee period.
18. All equipments, sub-assembly and components, auxiliaries and accessories shall be tested at manufacturer's workshop/site in accordance with relevant Indian Standards/International Standards. The contractor shall furnish all test certificates etc. related to the quality of all the materials to the Department along with the delivery of the materials at site without which no payment shall be released. However, such test certificates, quality assurance certificate shall not relieve the contractor of it's obligation to replace forth with any instrument/materials found defective during tests at works / trial running period/guarantee period.
19. Testing for performance of equipments shall be carried out and be checked with the approved parameters and performance characteristic curves for the purpose of acceptance.
20. Reinforced cement concrete **Grade M-30** in all members in contact with water and members close to water like roof slab/dome etc.
21. Any other RCC members shall be of minimum of **Grade M-25**.
22. **Design Criteria and Specification for Water retaining structures:** All the RCC Water Retaining structures shall be designed as per IS456-2000 ,IS: 3370-2021 and IS 1893 (Part 2)-2014 (Earthquake Resistant Design). The structural design shall be done by **Limit State Method**. The concrete grade for the water retaining members shall be M-30. The steel used for reinforcement shall be Corrosion resistance high yield strength deformed bars confirming to IS:1786 (with latest revision).

23. **Design Criteria and specification for other RCC Structures :** Concrete structures should be designed as per IS:456 -2000 **using Limit State Method of design.** For RCC works the Grade of concrete shall not be less than **M25** Machine mix shall be used in concrete works of the structures. Vibrators of appropriate type shall be used for compaction of the concrete. The contractor shall give at his own cost concrete cubes to the department made from fresh concrete prepared for the work taken as per IS:1199 cured for 7 days and 28 days for testing by the department at any recognized/Govt. testing laboratory, and the testing charges shall be borne by the contractor.
24. **Electrical equipment/installation:** All the Electrical equipment/ installations shall be energy efficient and confirm to star rated/ BEE as applicable. **The Electrical Power Factor should not be less than 0.92.**
25. **The Manufacturer or Product brand provided are indicative only. The Engineer-in-Charge may add, delete, or modify any approved vendor and/or product during the execution of the work, subject to the prior approval of the Competent Authority**

❖ **Construction of RCC MBR/UGR/GSR/OGR**

➤ **Scope, Design Criteria and Specification(MBR/UGR/GSR/OGR):**

- Excavation of foundation includes dressing and levelling the bed all kinds of soil/ rock up to the required depth including shoring, shuttering, dewatering, if necessary, depositing the excavated materials at a suitable place as per direction of Engineer-in-Charge.
- Plain cement concrete of Grade-M-15/M-20 under RCC floor slab and footings shall be used as per clause 13.3.1.1 of IS 3370 (PART 1) : 2021. In case water table is found at site, design shall be done taking into account the uplift force as per clause 8 of IS 3370 (PART 2) : 2021.
- Foundation should be Pile/Raft as per soil condition.
- Reinforced cement concrete Grade-M-30 in all member in contact with water and members close to water like roof slab / dome etc.
- Any other RCC members shall be RCC Grade-M-30.
- The tank shall be ventilated by providing ventilators over the roof. The openings of the ventilators shall be protected with mosquito proof copper wire netting made of copper wire mesh. Adequate ventilation area shall be provided in relation to the area of water face and aesthetic requirement.
- In case of Roof Slab having no slope, necessary protection measures shall be provided as per clause 7.3 & 7.4 of IS 3370 (PART-2) : 2021.
- The following appurtenances shall be provided by the contractor.
  - a. Stainless steel ladders from ground level to top of the tank and from top of the tank into the bed of reservoir shall be provided along with hand rails made of series of stainless steel bars. The stainless steel ladders shall be sturdy and should be fastened and anchored to the concrete by means of anticorrosive inserts and bolts.
  - b. One set of water level indicator consisting of copper / polythene float guide pulleys, nylon cord and enamel coated gauge calibrated to indicate depth of water in meter or equivalent amount of water in kilolitres.

- c. CI lockable hinged type manhole covers 600mm diameter with frame and cover fixed at suitable places in the roof of the tank not less than two numbers of manhole covers shall be provided.
  - d. A lightning arrestor of copper shall be provided on the roof of the tank as per IS 2309. The top of the lightning arrestor shall be above the highest point of the roof. The arrestor shall be suitably earthed with aluminium tape conductor.
- **Minimum Requirements for Construction of MBR/UGR/GSR/OGR.**
- a. The UGR should be constructed such that the maximum water level in the reservoir is within 600mm to 1000mm above the finished ground level.
  - b. Minimum floors of thickness – 250 mm
  - c. Minimum wall thickness – 200 mm
  - d. Minimum roof slab thickness – 125 mm (Dome)/ 150mm (Flat)
  - e. Minimum free board - 300mm & Minimum dead storage- 150mm
  - f. Minimum floor slope – 1 in 150
  - g. Minimum roof slope – 1 in 150
  - h. Minimum one no sludge outlet chamber with valve arrangement outside the OGR /UGR for easy cleaning & desludging. The chamber has to be well covered with slab and minimum 20 mm dia step iron to be provided for easy access into the chamber.
  - i. Minimum thickness of plain cement concrete of Grade-M-15/M-20 under RCC floor slab and footings shall be 100mm.
  - j. Pipe & valve arrangement, wash out & overflow of proper size as per direction of EIC.
  - k. Limit of contract for pipe & valve arrangement up to 15m away from Structure for each pipe line.
  - l. Roof slab & beam shall be simply supported on walls and walls are to be designed with top free condition.
  - m. All members of the reservoir are to be designed as per the design method in the latest version of IS 3370 code.
  - n. Design shall conforming relevant IS codes.
  - o. Minimum size of pipe - Inlet – 250 mm dia, Outlet – 250 mm dia, Overflow – 300 mm dia & Washout – 200mm dia.
  - p. The suction Pit of minimum size 2.50 mtr x 1.00 mtr to accommodate standby pumps pumping arrangement.
- Supply / erection / laying/ hoisting, fitting and fixing of CI/ DI pipes specials and valves of various sizes including concrete, bonding in RCC floor or wall or Over Head Reservoir or at Ground level wherever necessary, excavation of pipe line trenches, providing necessary supports and staging including supply of all jointing materials required for flange or lead joints. (All pipes, specials and valves required will be supplied by the contractor at his cost). The limit of contractor for laying the pipe lines shall not be less than 15 meters from the edge of the foundation footing (Inlet, Outlet & Over flow).
- a. All RCC works shall be finished perfectly smooth and no plastering shall be allowed except in the inside surface of walls and floors which shall be finished with a coat of epoxy paint and cement punning with water proof compound over 20mm thick cement plaster in cement mortar.(1:3)

- b. All exposed faces of the concrete and plaster over masonry shall be given two coats of water proofing cement paint of approved shade.
- c. All exposed iron works outside the reservoir shall be painted with two coats of approved synthetic enamel point. All exposed iron works inside the reservoir shall be painted with two coats of anticorrosive paint.
- d. All masonry works shall be plastered with 12mm thick cement plaster in 1:6 cement mortar.
- e. All construction joints in floor or wall shall have PCI which should be provided in the slab.

❖ **Construction of RCC ESR (RAFT/ PILE FOUNDATION with SHAFT/ COLUMN TYPE STAGING)**

**Design Criteria and Specification of ESR**

- Capacity of the reservoir shall be the volume of the water stored between the full supply level and the invert of the outlet pipe. Due allowance shall be made for plastering the inside surface of the wall and the floor while calculating the net capacity of the reservoir (E.S.R.).
- Height of the staging of the ESR shall be as mentioned above from finished ground level to bottom of the container.
- Free board shall be minimum 450mm in case of ESR. The elevated RCC reservoir shall be with **RCC Shaft /Column Bracing** staging and circular container and the foundation of ESR shall be designed as **Raft/Pile type**. The container and column shall be so proportioned to give architecturally aesthetic view.
- Minimum dead storage of 150mm shall be provided in the reservoir.
- Design shall be based on accepted norms and methods of design and the provisions contained in the latest versions of I.S. 456, I.S. 3370, I.S. 875, IS 1893, IS 11682 etc.
- No age factor shall be allowed in the design of the structure.
- Plain cement concretes of grade M-15/M-20 ( as per clause 13.1.1. of IS 3370 (part 1) : 2021) of thickness not less than 100mm shall be provided below the footings/ foundations.
- A. The minimum thickness of the structural members shall be as follows.
  - **Wall of reservoir**
    - Upto 5 m water depth 200mm
    - Upto 6 m water depth 215mm
    - Upto 7 m water depth 250mm
  - **Floor of reservoir**
    - Floor of the reservoir (container) 200mm
  - **Wall of load bearing RCC shaft**
    - In case of elevated reservoir 200mm
  - **Top Roof Slab of Reservoir**
    - Roof slab, if designed as shell 125mm
    - Roof slab flat 125mm

- **E.S.R.** - All the member of the reservoir shall be of RC.C. minimum M - 25 grade except the container with its components like walls, base slab, roof slab and ring beam etc. which shall be of minimum M-30 grade.
- The water retaining component/ member including members subject to condensation like roof slab shall be designed as section with M- 30 grade concrete as per the latest IS 3370 Code.
- The design calculation and drawing shall be worked out either in metric or in S.I. unit.
- The minimum depth of the foundation for elevated reservoir shall be 1.50m below virgin ground level.
- For access to the elevated storage reservoir there shall be RCC staircase with RCC landings at suitable intervals. The width of the stair and landings shall not be less than 1000 mm. The stairs shall be provided with SS railings of approved design for a minimum height at 1000 mm with two rows of horizontal runners at each side holding the vertical posts.
- There shall be either a central access inside the tank or a catwalk with suitable guard rails all around. In both the cases access to the roof & inside bed of the reservoir shall be provided. Inlet & outlet pipe shall be as per pump motor & field requirement. Overflow pipe dia shall be more than inlet dia. 100mm dia wash out pipe. Each pipeline shall be provided with required puddle collars, expansion joint, dismantling joint, duck foot bend, DI/DF valves, valve chambers etc., as required for completeness. The limit of contract of each pipeline for ESR is up to foundation trench from outer face of staging shaft/column.
- The roof of the overhead reservoir shall be provided with minimum 800 mm wide walk with hand rail at the edges by means of Stainless Steel posts and railings for a minimum height of 1000 mm with two rows of horizontal runners holding the vertical posts. Walkway of minimum 1000 mm width with SS railing to be provided at outside of ESR container at the bottom & top level of vertical wall(outside) of the container.
- For access to the E.S.R. there shall be stainless steel ladder from the top of the tank into the bed of the reservoir. The ladder should be provided with hand railing. The ladder shall be sturdy and should be fastened (anchored) to the concrete by means of anticorrosive clamps and bolts.
- The E.S.R shall be provided with suitable ventilation arrangements at the roof. The opening of the ventilators shall be protected with mosquito proof wire net made out of aluminium wire mesh.
- The roof of the E.S.R. shall be provided with handrails at the edges by means of S.S. railings for a minimum height of 1000mm with two rows of horizontal runners holding the vertical posts.
- One set of mechanical water level indicator (Float type) shall be provided to indicate the water level of the E.S.R.
- One lightning arrestor shall be provided on the roof of the elevated reservoir as per IS 2309. The same shall be suitably earthed with aluminium flat/ GI flat conductor as per IS specifications.



- The schedule of breakup of payment has been given on annexure - I which is binding upon the contractor.
- C.I./D.I double flanged pipes, valves, and specials shall be of reputed make confirming to I.S specifications.

### **I) SITE DEVELOPMENT AND BEAUTIFICATION**

- I. The selected area for ESR site shall have to bring to suitable condition by cutting, filling, brush cutting & cleaning.
- II. The agency shall have the provision of digging holes in all kinds of soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8 %) flooding with water, dressing including removal of rubbish and surplus earth if any with all leads and lifts (cost of manure, sludge etc.).
- III. Required quantity of good earth for the entire landscaping area to achieve adequate elevation for aesthetic as well as drainage purposes shall be brought and spread. Unsuitable earth shall be removed from the site if required.

### **❖ Clear Water Pump House**

- The pump house should be constructed at proper level above HFL as well as providing positive suction of the pump sets. The pump house should be of RCC frame structure with R.C.C. roof slab of 150mm thick with RCC M-25, wall shall be of fly ash brick with cement mortar (1:6), provision for MS girder with EOT/Monorail System of required capacity, floor should be of 25mm thick A.S. flooring over 0.075m thick cement concrete (1:2:4) using 12mm size CBHG chips and under layer should be 100mm thick P.C.C (1:3:6) using 40mm size CBHG metal, along with provision for construction of platform for fitting fixing of pump sets and M.S rolling shutters, windows, ventilators, painting both inside and outside, internal electrification etc all complete.
- The pump house shall be RCC M-20 grade framed structure with 250mm thick brick filler walls. Sufficient doors & windows shall be provided in the building. The foundation for pumps and motors shall be designed for machine foundation in accordance with relevant.
- I.S. specifications. The pump foundation shall be separated from the adjoining floors by 25mm thick Neoprene Rubber. The floor shall be suitably sloped and drains provided to let out any leakage water so as to keep the floor dry. The floor of panel room and utility spaces shall be 150mm higher than the pump floor.
- Floorings of the Pump Houses shall be of A.S flooring. All other items including electrical shall be standard PWD/Electrical specification unless otherwise mentioned specifically elsewhere.
- Internal electrification should be done for pump motor, proper illumination and Ventilation and it has to be done by the contractor without any extra claim.
- External & internal lighting by doing wiring and installing luminaries e.g. suitable Wattage LED light fittings with standard lumen in pump house, Campus and fitting and fixing of required numbers of exhaust fans in pump houses for proper ventilation.

### **❖ Laying of different diameter D.I., C.I. and M.S. pipe lines at different places.**

- i) Excavation of foundation in all kinds of soil including rocks of any kind shoring, shuttering and dewatering where ever required, site dressing and levelling the pipeline trenches. The minimum width of the trench shall not be less than (d + 40cm) and minimum depth of the trench shall not be less than (d + 90cm) in any case. Where d is the diameter of pipe in cm.
- ii) Supplying all materials labour T&P and construction of Brick masonry (i) Sluice Valve Chamber (ii) Air Valve Chamber including earth work in excavation in all types of soil, Providing minimum 15cm thick PCC (1:3:6), Brick work in Cement Mortar (1:4) using KB brick of size 25x12x8cm size having crushing strength not less than 75kg/sqcm, Cement plastering in Cement Mortar (1:4) at inside surface, 12 mm thick cement flush pointing (1:3) at the outside surface, and providing RCC top slab of 100mm. thick (minimum) using M-20 cement concrete in RCC as per the PWD/ PH and relevant IS specification and direction of the Engineer-in-charge and as per the tender schedule.
- iii) Supplying all materials, labour and T&P for laying of MS ERW/SAW pipeline including fabrication work at site for the canal crossing, culvert crossings, drain-crossing or at low level lands including making bends/ offsets where ever required as per site condition. The MS pipes to be used are of TATA/SAIL make having wall thickness not less than 8 mm. Painting of the pipe both inside and outside with two coats of black anticorrosive paint over a coat of red oxide primer.
- iv) The D.I. pipes conforming to IS:8329/2000 shall be laid in the trenches as per P.H. specification.
- v) Brick Masonry Valve chambers of size 1m.x1m.x1m.mtr (size as specified in BOQ) for sluice valve / NR valve shall be provided as per P.H. specification and design.
- vi) D.I. Sluice valve P.N.-1.6, NR valve P.N.-1.6, D.I Kinetic Air valve P.N.-1.6 conforming to relevant IS specification shall be fitted at appropriate locations on the alignment as per direction of Engineer-in-charge.
- vii) RCC thrust blocks/ anchorage blocks / trestles /columns shall be provided as per the design and requirement at the site basing on the direction of the Engineer-in-charge.
- viii) The Cement Concrete roads shall be required to cut to lay the pipe line, which shall be mended with sand filling , laying Cement Concrete (1:4:8) as base and Cement Concrete M20 at top after filling the trenches with excavated earth.
- ix) Other Criteria shall follow Manual on Water Supply and Treatment by CPHEEO, Government of India.

❖ **SPECIAL CONDITIONS AND TECHNICAL SPECIFICATION FOR EXTERNAL /INTERNAL ELECTRICAL INSTALLATIONS WORK:**

i) **General Requirement**

The installations shall generally be carried out in conformity with the requirements of Indian Electricity Act 1910 as emended up to date and Indian Electricity Rules, 1956 framed there under, the relevant regulations of the Electric Supply Authority concerned and also with the specifications laid down in the Indian Standard IS:732/1963 "Code of Practice (Revised) for Electrical

Wiring Installations (System Voltage not exceeding 650-V)". The work shall be executed as per the National Electrical Code and if any item is not covered there under or there is any doubt, the specification approved by the Engineer-in-Charge will be final and binding.

**Ambient Conditions:**

All Electrical installations and equipment shall be suitable to work in following ambient conditions.

Maximum temperature	:	50 degree Celsius
Relative humidity	:	100%
In the vicinity of	:	<b>Balangir Municipality</b>

**System Conditions:**

The Electrical installation and equipment shall be suitable for operation in the following system conditions.

Supply voltage	:	415 volts $\pm 10\%$
Supply frequency	:	50Hz $\pm 5\%$
Number of phases	:	Three

ii)

**Scope:**

**a. Materials**

All the materials, fittings, appliances used in electrical installations shall conform to Indian Standard Specifications wherever these exist. A list of approved materials is attached in Annexure-I. Materials not included in the list as well as any particular made not included in the list should be approved by the Consultant or Engineer-in-Charge before use. All required materials covered under this specification shall be supplied and installed by the contract complete in all respect except in cases where it is clearly mentioned otherwise. The materials and accessories required for completing the work will form part of the work although they have not been specified separately.

Selection of Materials and installation work shall be such as to simplify operation, inspection, maintenance and testing. The work shall include all reasonable pre-cautions and provision for safety of operation and maintenance personnel.

**b. Standard:**

Unless otherwise specified, all materials covered under this specification shall be designed, manufactured, tested and installed in conformity with the latest Indian Standard specifications. In case such Indian Standard Specifications are not published equivalent British Standard Specifications shall be followed. All equipment shall conform to latest Indian Electricity Rules, PWD and Local / State laws or bye-laws as regards to safety, earthing and other essential provisions specified therein.

All equipment and materials selected shall also be supplied and installed taking into consideration the Factories Act, Fire Regulations and Local laws or bye-laws. All light fittings and equipment selected shall be of well tied out design. All materials used in the assembly of fittings and their accessories shall be of high quality and manufactured in accordance with the best modern practice.

All the materials supplied by the contractor according to the contract conditions will be subject to inspection and approval by the consultant or / and Engineer-

in-charge or their authorized representative from time to time. The contractor shall extend all required facilities for such inspection free of cost. At the time of inspection, the inspecting officer shall have full liberty to reject any such material, which does not confirm to specifications or the requirements. The owner shall not entertain any claim for the rejected materials. The contractor shall remove all rejected materials from the site at his own cost.

**The owner shall not accept any surplus materials procured by the contractor.**

The contractor will be responsible to get electrical installations inspected by the Electrical Inspector of the State Govt. and to obtain the statutory clearance for energisation. The owner will reimburse the necessary inspection fees on production of documentary evidences.

The contractor should possess valid electrical contract license and labour license issued by the appropriate statutory authority of the State Govt. during the execution of the Contract. The contractor shall be registered with provident fund Department for engagement of Labourers / Employees.

**c) Inspection & Approval**

The contractor shall put up samples of all major items for inspection and testing the consultant and or Engineer-in-Charge for which the contractor shall furnish minimum 10 days clear notice in advance to enable them to depute their Inspecting Officer. Similar procedure shall be adopted for the approval of samples of minor materials / accessories to be used for the work.

iii. **LIST OF APPROVED MAKE\***

<b>SN</b>	<b>MATERIAL DESCRIPTION</b>	<b>MAKE OF MATERIALS</b>
1	Non-Metallic conduit & accessories	Berlia /Uniflow /Sudhakar
2	Switch, socket, Holder, Ceiling Rose etc.	Anchor /Cona
3	PVC Insulated wires	Finolex/ KDK/ Rajanigandha/ Anchor/ NICCO/ L&T(Lauritz Knudsen) / Havells
4	Bakelite sheets	Hylam /Formica
5	PVC Insulated cables (ISI Mark only)	NICCO/ Finolex/ Crystal/ Fort Gloster/ Poly Cab
6	Cable lugs	Dowells/ Ismal/ Clipon
7	Cable joining Kits	M. Seal
8	Switchgears viz., Isolator Switches, SFU, Starter, changeover switch, HRC fuse holder etc.	Siemens, Schneider, ABB, L&T (Lauritz Knudsen), LEGRAND
9	MCB RCCB & Associated Distribution Board	HPL/ Havells/ Standard /Indo Asian
10	MCCB	Seimens/ L&T(Lauritz Knudsen)/ ABB/ Legrand
11	Instrument viz colmeter etc	AE/IMP/ Meco/ Cosmo
12	Selector Switch	Kaycee/ Saltzer
13	Timer /Time switch	L&T/ Hanger/ Legrand

14	Energy Meter	GEC/ Capital Jaipur
15	LT Distribution Board(Fabricated)	ESS/ Technocrat/ Utkal
16	Kit Kats	BPC/ Anchor
17	HRC Fuses	Siemens/ L&T(Lauritz Knudsen)
18	CTs & PTs	AE/ Kappa/ Eastern Switchgear
19	Metal Clad plug Socket	Crompton/ Havells
20	Fluorescent Fixtures	Philips/ Crompton/ Bajaj/ PAC
21	HPSV/HPMV/LPSV Luminaries & PL/SL Lamp Luminaries /LED luminaries	Philips/ Crompton /Bajaj
22	Incandescent lamp Luminaries	Decon/ Philips/ Crompton/ Bajaj
23	Lamps (HPSV/ HPMV/ LPSV/ Fluorescent/ Incandescent)	Philips/ Bajaj/ Crompton/ Sylvania
24	Ceiling Fans	Crompton/ Khaitan/ Usha/ Bajaj/ Polar/ Orient/ Ortem/ Almonard
25	Exhaust Fan	Almonard/ Crompton/ Khaitan
26	Call Bell & Buzzers	Anchor/ Cona/ Rider
27	Electronic Regulator & Dimmer	Anchor/ Cona/ Rider
28	Adhesive & Insulating Tapes	Streel grip
29	GI Pipes	TATA/ Jindal/ Prakash
30	Transformer	Alfa/ OTPL/ OEU/ Bright
31	AB Switch	S&S/ Motison/ Odisha Electrum /Sigma
32	HG Fuse	S&S/ Motison/ Odisha Electrum /Sigma
33	Lightening Arrestor	Oblum/ WS/ IGE

\* **N.B: The Manufacturer or Product brand provided are indicative only. The Engineer-in-Charge may add, delete, or modify any approved vendor and/or product during the execution of the work, subject to the prior approval of the Competent Authority.**

iv. **Power Supply:**

Standard voltage shall be as follows :

- i) 415V ( $\pm 6\%$ , 3-Ph, 4-wire, 50 ( $\pm 5\%$ ) Hz AC available line for A.C. motors and illumination/Ventilation.
- ii) 230V, 1-ph, 50Hz. AC for control power and lighting.

❖ **Design Criteria and specification for RCC Structures.**

Machine mix shall be used in concrete works of the structure. Vibrators of appropriate type shall be used for compaction of the concrete. The contractor shall give at his own cost concrete cubes to the department made from fresh concrete prepared for the work taken as per IS:1199 cured for 7 days and 28 days for testing by the department at any recognized/Govt. testing laboratory, and the testing charges shall be borne by the contractor. Besides the above arrangements, contractor shall also carry out such tests as required by the department at regular intervals at his own cost. Samples shall be taken from the concrete prepared for use in the following

components of the structure. The concrete mix as per approved design will be tested in the Govt. Laboratory through the Department at cost of the Contractor and design mix test report will be submitted to the Department before starting the work.

- i) Foundation
- ii) Each lift of supporting structure (column/shaft)
- iii) Supporting beams/ Floor beams/ Tie beams/Bracings.
- iv) Floor .
- v) Each lift of the wall.
- vi) Roof slab.
- vii) Any other portion of the structure as desired by the Engineer-in-charge.

In the event of deviation from the desired strength, the contractor shall dismantle the defective parts of the construction and make good the same at his own cost and no extra payment will be made by the department for the same.

- All pipes, valves & fittings required, shall be of best quality confirming to relevant IS specifications which shall be provided by the contractor at his own cost as per P.H. specification and direction of Engineer-in-charge.
- The safe bearing capacity of the soil is to be ascertained before preparation of drawing & designs for construction of CWR, ESR, UGR, Each component of WTP, all types of buildings and Intake Well etc.
- On receipt of letter of intent, the contractor shall submit within one month. Two sets of design calculation and drawings to the Authority's Engineer. The design and drawings shall be scrutinized and preliminary approval will be communicated by the competent authority.
- On receipt of preliminary approval, the contractor shall furnish within fifteen days, ten sets of clearly typed design calculations and drawings for final approval and communication to all concerned.

❖ **Soil Investigation Report:**

For structural design purposes, SBC at required depths and different locations below ground level at respective places for all units of the Clear Water Reservoir, Intake well, Back wash Tank, Each component of WTP and Footway bridge shall be found out by the agency through Govt./Govt. approved laboratory confirming to relevant IS code. The soil test shall include bore log, SPT, UDS test, Tri-axial test, Vane shear test, core sample test, plate load test depending upon requirement of the structure. Before detailed engineering & design the contractor shall submit detailed soil test report to the Engineer-in-Charge for approval of SBC to be adopted for structural design. Accordingly, the contractor has to design his structure. In case further data would be necessary before or after submission of tender / during execution of the work, the tenderer / contractor shall collect the same of his own & at his cost. Ignorance of any data shall not relieve the contractor of his obligation to complete & commission the work as per the provisions of the Agreement. For detail structural design of the intake well and footway bridge, the agency has to collect all the required hydraulic & flow parameters of the river/water way where the intake well to be constructed from the irrigation/concerned Department, and other data as will be required at his own cost and risk & shall submit to the Engineer-in-charge of work for approval. Then based on the approved data the agency has to prepare detail design & drawing of intake well.

While designing of the structures, it shall be ensured that the weight of the structure including foundation, water, over burden earth on foundation / slab / raft etc. as applicable shall be within the permissible limit of S.B.C. allowed by Department.

❖ **Civil Works:**

**General:**

- i) All the building and structures shall be of permanent type. The Treatment Plant buildings shall have good aesthetic and imposing elevation and architecture with the grounds attractively landscaped and well maintained. Reinforced cement concrete fins, decorative "**Arch type**" windows, boxes, pebble dash/ rough cast plaster, grills etc. may be proposed to elevate the look.
- ii) Sufficient consideration shall be given for the design of the buildings for **aesthetic look**. Ordinary configurations without aesthetic shall not be accepted.
- iii) Foundations for all the buildings and structures of Treatment Plant Complex shall be designed depending on Ground water table, sub-soil condition and bearing capacity of soil. In no case the depth of foundation below the virgin soil shall be less than **1.0 mtr.**
- iv) Provision of pressure relief valves/earthen overburden for countering full or part of uplift pressure shall not be allowed.

❖ **General for all Buildings & Structures:**

- a) All tanks for alum & lime, aerator, Rapid mixing unit, flocculation, sedimentation, filtration units, elevated water tank etc., backwash tank and all channels carrying raw, coagulated, settled or filtered waters shall be of M<sub>30</sub> grade and shall be designed as water retaining tanks without considering any age factor. All water retaining structures shall be tested for water tightness before installing the equipment, media etc. All channels of the Water Treatment Plant shall be cladded with white glazed ceramic tile of approved make. Required type of foundation as required with respect to actual soil condition & soil parameters, SBC bore log, position of maximum subsoil water table in worst rainy season condition shall be provided for the units of WTP, Intake well, UGR/ ESR, footway bridge, buildings and other structures as per actual design requirements satisfying the requirements of books of reputed authors & IS codes maintaining safety.
- b) Minimum free board (FB) of 150mm shall be provided for channels unless specified separately and the Filter Boxes in which case it shall be 500 mm.
- c) All channels, launders, conduits etc. shall be designed for 50% overload.
- d) No age factor shall be allowed in the design of the structures.
- e) The plinth level of all the buildings shall be **0.75 m** above the general ground formation level unless otherwise specified.
- f) The room height (between finished floor level and ceiling) of the office and laboratory building shall be not less than **3.60 m** and Pump house shall be not less than **5.00 mtr.**
- g) Plain cement concrete of grade **M10** of thickness not less than **100 mm** shall be provided below the RCC floor slab and the footings and foundation unless otherwise specified specifically.

- h) Mechanical type water level indicator shall be provided in reservoirs. All other related items required for completeness of the reservoirs for smooth functioning shall be provided.
- i) In case of Overhead tank of shaft staging there shall be an entrance door at plinth level and ventilators at suitable locations. The plinth shall be provided with suitable flooring over a base course.
- j) All Iron works shall be painted with two coats of approved anticorrosive synthetic enamel paint over a coat of primer. All wood works shall be painted with two coats of approved paint over a coat of primer.
- k) All External surfaces shall be painted with two coats of Weather proof acrylic emulsion paint of approved colour over a coat of primer. The Engineer-in-charge shall approve the computerized colour code prior to application of paint.
- l) The specification of **building works** shall be as below:
  - i) **Brick work:**  
Bricks should conform to IS 1077. First class KB Bricks/ Fly Ash Bricks in cement mortar (1:4) in foundation and plinth. All non-load bearing outer walls shall be minimum 250 mm thick & inside partition walls shall be minimum 125 mm thick. First class KB bricks/Fly Ash Bricks in cement mortar (1:6) in superstructure. The thickness of plaster shall not be more than 20 mm for outside face & 15 mm for the inside face.
  - ii) **Plastering :**  
All brick works with 16 mm thick cement mortar in 1:6 & all RCC exposed surfaces & roof ceilings except for the Water retaining structures shall be with 12mm thick cement mortar in 1:4 unless specifically mentioned.
  - iii) **PCC :**  
Minimum 100mm thick **M-10** under RCC foundation and flooring.
  - iv) **Painting / Colouring over Plastering:**  
All External surfaces shall be painted with two coats of Weather proof acrylic emulsion paint of approved colour over a coat of primer. All internal surfaces of all the buildings/Room shall be given with two coats of distemper paint over a coat of primer. Ceiling of all round of building shall be painted with two coats of white distemper over a coat of primer.
  - v) **Flooring :**  
Level of flooring shall be 0.75m above the virgin soil at respective structures. There shall be sand filling between the virgin soil & the floor. The flooring shall be of ceramic tile flooring. The dado in all types of flooring shall be of 0.3mtr height.
    - a) The contractor shall provide necessary sun shades/ Chajja etc. wherever necessary.
    - b) The contractor shall provide ramp with gentle slope to the buildings wherever required.
    - c) Plinth protection for a width of 1.00 m around all the buildings shall be provided. It shall be C.C. checkered floor over 100 mm PCC.
    - d) All roofs shall be provided with grading plaster of 25 mm thick in 1:4 cement plasters with required grading for drainage. There shall be drainage pipes of 110 mm PVC pipes with all fixtures and specials extending up to the surface

drain for disposal of rainwater. The number of pipes shall be as per the roof drainage plan to be approved by the Department. A DPC coarse in 1:2:4 concrete shall be provided at plinth level for a thickness of 40mm for all buildings.

- e) There shall be parapet walls of 250 mm brick masonry up to 600 mm height above the roof of all buildings.
- f) Expansion joints shall be provided in exposed pipelines as per standard practice & in conformity with relevant IS Specification.
- i) In the event of any deviation from the desired strength, the contractor shall dismantle the defective parts of the construction and make good the same at his own cost. All the building materials including steel rods shall be tested in recognized testing laboratory to be selected by Department at the cost of the contractor. Any material found defective/not to specification shall be replaced forth with by the contractor without any extra financial implication.
- ii) **All reinforcement shall be checked and recorded** prior to concreting by the Engineer-in-charge or his representative and the contractor shall countersign this. Entire concreting work shall be done in the presence of an officer not below the rank of Assistant Engineer, The contractor shall, therefore, give notice of at least two days to the Engineer-in-charge or his representative so that the works can be checked by him or his authorised representative.
- iii) 1) The form work shall be of steel plates of steel frame, sound and seasoned timber or of any approved materials, having sufficient strength to hold the concrete and withstand ramming and vibrations. If timber shuttering is used it shall be constructed in such a way that none of the concrete grout leaks away and shall be such as to leave a clean smooth surface not requiring further plastering. The surface of all forms in contact with concrete shall be clean, rigid, tight and smooth. Before a piece of work on formwork is concreted, the formwork shall be cleaned of all mortar, shavings, concrete from previous work and all other dirt. It shall then be covered with thin coat of Mobil oil.
  - 2) The joints in the form work shall be arranged in a regular pattern
  - 3) Shuttering shall be provided to concrete faces where the slope exceeds 1: 2½.
  - 4) The stripping time of all form work shall be in accordance with recommendations contained in **IS:456**.
- g) **Concrete face work:**
  - The exposed faces of concrete shall be true to line have smooth surface and without roughness occurring between successive sections of shuttering. In removal of forms, minor uneven surface defects shall be picked out to such a depth, refilled and properly replaced with such class concrete as necessary. All pin holes shall be plugged.
  - The surface of non-shuttered faces of concrete shall be finished with a wooden float to give a finish equal to that of the rubbed down shuttered faces. The top faces of slabs not intended to be surfaced shall be levelled and floated to a smooth finish.
- h) **Embedment and Anchorages:**

All the embedment and anchorages shall be provided by the contractor and shall be rigidly fastened. Anchor bolts and other anchorages or inserts shall be set to template and /or firmly secured in position.

i) **Grouting :**

Nominal minimum strength of grouting concrete shall be 40 N/mm<sup>2</sup> or such other values as may be shown on the approved drawings. The nominal maximum size of aggregate for grouting concrete shall be 10 mm.

In case 'Dry' concrete or mortar is used, slump shall not exceed 6 mm.

If 'Wet' expanding concrete or mortar is used, slump shall be at least **125mm** or more but not exceeding 225 mm. An expanding grouting admixture shall be of approved type and in accordance with the manufacturer's instruction.

j) **Doors/Window/Ventilators/Grills :**

1. There shall be adequate nos. of doors & windows in all the buildings/structures.
2. The area of openings shall not be less than 25% of floor area.
3. All windows shall be with aluminium frame & 5 mm thick reinforced glass panels provided with all related aluminium hardware fittings. The shutters shall be of sliding type in two folds.
4. All doors except for those specified separately shall be with aluminium frame & 12mm thick pre laminated plywood panels provided with all related aluminium hardware fittings.
5. There shall be adequate nos. of ventilators of size 750mm x 300 mm fitted with decorative RCC Jally.
6. There shall be a **3.0mtr.** wide **2.4 mtr.** height rolling MS shutter of standard thickness with all hardware fittings suitably located to facilitate conveyance of chemical bags in to the storage area. There shall be an additional outside door for general thoroughfare.
7. There shall be MS grills of member thickness not less than 5 mm of decorative designs fitted to all the windows of the office & laboratory building, chemical storage area for safety. Similarly the Grill Gate to be fixed to the boundary wall shall be approved design and of 2.0m. height.
8. The panels of all external doors, toilets, filter house shall be of waterproof pre-laminated plywood shutter of minimum 12 mm thickness. For chemical house, the panels should be of chemical resistant materials.
9. The specifications of aluminium frames for doors & windows shall be as per relevant ISS & suitable from aesthetic point of view to be approved by Department.
10. All other materials used in doors & windows shall conform to relevant ISS & to be approved by Department.
11. The fixing of doors & windows shall conform to relevant ISS.

❖ **Steel & Structural Fabrication:**

i) **Method and Material for construction:**

Steel structures shall generally be of welded construction. Structural steel shall conform to IS:226 or IS:2062 as required from design considerations. In welded construction plates up-to and including 20 mm thickness and rolled section shall be of grade St.42 conforming to IS:226. Plates above 20 mm thickness, where welding is employed shall

be of steel grade St.42 conforming to IS:2062. Electrodes, bolts, nuts, washers etc. shall conform to relevant Indian Standards. Only tested materials shall be used and all test certificates are to be submitted by the Contractor.

ii) **Fabrication:**

The fabrication of structures shall be carried out as per relevant India Standards and also according to latest practices. Steel structures shall be fabricated to suit transport requirement and minimum site work.

All steel structural works shall be subjected to inspection by the engineer-in-charge.

**All permissible tolerance in workmanship shall be as per IS:7215.**

iii) **Erection:**

The erection shall be carried out as per relevant Indian Standards. The minimum tolerance for alignment and level of the steel work shall be + 3 mm on any part of the structure. The structure shall not be out of plumb by more than 10 mm. These tolerances shall apply to all parts of the structure.

iv) **Painting:**

- ❖ All the steel works shall be painted.
- ❖ Painting operation and paint schedules shall be as per IS:1477 (part-II).
- ❖ All steel structural other than in chemical house shall receive one coat of red oxide zinc chromate primer conforming to IS:2239 after fabrication and one coat of the same primer after erection. Steel structures in chemical house shall receive acid / alkali resistant epoxy based primer.
- ❖ Priming coat shall be followed by two coats of painting by approved quality colour shade paints. Steel structure in chemical house shall be painted with acid/alkali resistant epoxy-based paint.
- ❖ Before starting actual painting operation, the members to be painted shall be thoroughly cleaned of all dirt, grease, rust, scales etc.

v) **Walkway work:**

- i) The walkway shall be paved with Chequered tile and of 1 mtr wide and constructed with the following specification.
- ii) The base shall consist of 150mm thick sand layer & above 100mm thick PCC layer, paved with Chequered tile of approved design uniformly jointed by 1:4 mixed cement mortar.

vi) **Disposal of Surplus Earth & Debris after construction:**

The surplus left over earth and debris after completion of erection work and levelling the site shall be transported and dumped in areas as directed by the Department's Engineer without any extra claim.

**Suction & Delivery pipe line for Clear Water Pump Sets**

Suitable MS Suction / Delivery pipe having wall thickness of **7.9 mm** shall be provided as per the specification of required diameter and length. Required size of Foot valve, Sluice valve, NR valve and pressure gauge shall be provided individually for above pump sets

**Piping & Valves:**

Specifications for C.I. pipe	:	IS:1536-1989 Class-A flanged and Tested.
Specifications for C.I. fittings	:	IS:1538-1976 (part-1 to 24) tested.
Type of joint	:	Flange Joint.
Code of practice for laying	:	IS:3114
Test pressure	:	1.5 times the working pressure subject to minimum 1.0 kg/cm <sup>2</sup> for 24 hrs.
Specifications for <b>D.I. pipe K-9</b>	:	Socket & Spigot ended Centrifugally Cast (Spun) Ductile Iron (K-9) Pressure Pipes for water main and distribution line of different sizes conforming to I.S: 8329/2000 & subsequent amendments, in standard lengths suitable for Rubber Gasket ('Push-on' flexible joint) jointing with inside cement mortar lining and with an external bituminous coating and duly ISI marked.
Specifications for <b>D.I. pipe K-7</b>	:	Socket & Spigot ended Centrifugally Cast (Spun) Ductile Iron (K-7) Pressure Pipes for water main and distribution line of different sizes conforming to IS 8329:2000 & subsequent amendments, in standard lengths suitable for Rubber Gasket ('Push-on' flexible joint) jointing with inside cement mortar lining and with an external bituminous coating and duly ISI marked.
<b>MS pipe work :</b>		
<b>Specifications</b>	:	I.S:5504/1997 for spirally welded pipes, I.S:3589/2001 : Seamless or electrically welded ERW / SAW steel pipes.
In-lining & out coating	:	As given in IS:10221-1982/IS:5822-1986 as applicable
Laying	:	IS:5822/1986
Flange thickness	:	As per relevant ISS
H.D.P.E pipes & fittings	:	For internal water supply/sewerage : Relevant ISS.
DI pipes & fitting & their laying	:	As per IS:8329/2000, IS:9523/1980 & IS:12288/1987
<b>G.I. Pipe Work :</b>		
Specification for pipe	:	IS:1239 (Part-I) G.I. Screw/Socket end tested (Heavy)
Specification for fittings	:	IS:1239 (Part-II), GI, Screw end tested.
Valves, stop cocks, bib cocks	:	IS:778, Gun Metal Construction, screwed.
Pillar Cocks/Taps	:	IS 1795/ 1982 Chromium Plated.
<b>Chemical Pipe Work :</b>		
Specification & material for chemical dosing pipe.	:	IS : 4985/2000 H.D.P.E.
Specification & material for chemical scour/ drain pipe	:	IS : 3006 chemically resistant stoneware
Valves	:	Teflon, Double flanged Diaphragm type.
Regulating throttle valve	:	S.S. Slim seal type butterfly valves.

## **VALVES FOR WATER APPLICATION**

### **SLUICE VALVES**

Shall generally conform to IS 14846, with length over flanges as per PD of IS 14846 corresponding to BS EN – 558 / ISO 5752 Basic Series 3 in DI construction having metal seating (IS 318 Gr. LTB 2). **Upto 600 mm diameter should essentially be glandless design.**

<b>Component</b>	<b>Material of construction</b>
Body / Door / Dome	Ductile Iron IS 1865 Gr. 400/15 or 500/7
Spindle	Non rising; Stainless Steel AISI 410 / 420
Body seat / Door face	Gun metal: IS 318 Gr. LTB 2 / BS 1400 LG 2 Upto 350 mm – press fitted or deposited 400 mm and above - press fitted and riveted; no screws allowed The body seat / door face width shall be equal, and allowing for reasonable wear travel as specified in IS 14846, or more.
Rivets	Soft annealed brass
Spindle Nut	Gun metal: IS 318 Gr. LTB 2 / Al – bronze
Stem seal	EPDM (GLANDLESS – upto 600 mm) 700 mm and above - Gland & Stuffing box type with hemp packing
Fasteners	Carbon steel (IS 6603 Class 4 / 4.6)
Flange Drilling	IS 1538 Table 4 & 6 or BS EN 1092-2
PN	1.0 / 1.6
Accessories (400 mm and above)	(i) Ball thrust bearings to be housed above the wet chamber ie. above the gland / glandless adaptor. (ii) Enclosed Spur Gear Box for ease of operation. (iii) Air Plug
Painting / Coating	Inside & Outside epoxy <b>liquid coated</b> DFT minimum 250 micron, shade RAL 5005 / 5015 (BLUE)
Hydro-test (Open Ended only)	Seat: 10 / 16 Kg/cm <sup>2</sup> ; Body: 15 / 24 Kg/cm <sup>2</sup>
Operation	Manual operation by handwheel. Motorised operation by means of electrical actuator.

### **RESILIENT (SOFT) SEATED GATE VALVES**

These will be heavy duty with a proven track record of having worked successfully for 10 years in Indian condition, approx. while flange to flange distances may be as per IS – 14846, the valves may generally conform to EN 1171(.)

<b>Component</b>	<b>Material of construction</b>
Body (Pocket less)/Bonnet	Ductile Iron IS 1865 Gr. 400/15 or 500/7
Door	EPDM vulcanized with a DI core, sufficiently strong to withstand PN 1.6 pressure
Spindle	Non rising; Stainless Steel AISI 420
Spindle Nut	Gun metal: IS 318 Gr. LTB 2 / Al – bronze / Brass

Stem seal	EPDM, Toroidal, minimum 3 Nos.
Fasteners	Carbon steel, galvanized/ SS 304
Flange Drilling	IS 1538 Table 4 & 6 or BSEN 1092-
PN (Mpa)	1.0 / 1.6
Painting / Coating	By fusion bonded Epoxy powder, Inside & Outside, DFT minimum 250 micron m., shade RAL 5005 / 5015 (BLUE)
Hydro-test by Closed end method	Seat: 10 / 16 Kg/cm <sup>2</sup> ; Body: 15 / 24 Kg/cm <sup>2</sup>

**Note:**

1. These valves may be used for only clean, filtered, potable water distribution lines, clear water pumping stations.
2. These should not be used for pumping of sewage and raw water.

**CHECK VALVES**

Valves upto 600 mm dia. shall conform to IS 5312 Part 1 & above to IS 5312 Part 2. Valves shall be in graded DI with metal to metal (IS 318 Gr. LTB 2) seating; SS AISI 410 stub pins & inclined seat design. The door shall be integral with the hinges and shall have a flat seating face. Valves above ø600 mm must be of multi – door design. For multi-door non return valves, minimum two(2) sets of suspension lugs shall be cast integrally on the diaphragm plate, sufficiently apart from each other, shall be of adequate strength for assembly with corresponding door hinges, two numbers for each door. In other words, each door must have two integral hinges, sufficiently apart and of adequate strength.

Valves shall have quick closing non – slam characteristics in-built without any external or internal dampening arrangements.

Valves shall be rated PN 1.0 / PN 1.6 (as per final design & BOQ) and flanges faced and drilled as per IS 1538 Table 4 & 6 / IS 9523 / BS EN 1092 – 2. Shall be coated internally and externally with epoxy liquid coating (minimum DFT 250 micron) – Shade: BLUE (RAL 5005/ 5015)

<b>Component</b>	<b>Material of construction</b>
Body / Door (& Diaphragm)	Ductile Iron IS 1865 Gr. 400/15 or 500/7
Hinge pin (for single door type) / Stub pin (for multidoor type)	SS AISI 410
Seat & Face rings	Gun metal: IS 318 Gr. LTB 2
Rivets	Soft annealed brass
Fasteners	Carbon steel (IS 6603 Class 4 / 4.6)
Flange Drilling	IS 1538 Table 4 & 6/ BS EN 1092 – 2
PN	1.0 / 1.6
By – pass arrangement	Optional
Painting / Coating	Inside & Outside epoxy liquid coated; DFT minimum 250 micron, shade RAL 5005 / 5015 (BLUE)
Hydro-test	Seat: 10 / 16 Kg/cm <sup>2</sup> ; Body: 15 / 24 Kg/cm <sup>2</sup>

## **COMBINATION AUTOMATIC AIR VALVE - SINGLE CHAMBER TYPE**

**Air valve for clean, cold potable water up to 50°C**

**PN 1.0 / 1.6**

**DN 80 - 200**

Single-chamber valve - automatic operation with water.

Two-orifice venting system with 3 functions (supply and release of air as well as automatic venting during operation)

Flange connection dimensions to BS EN 1092 - 2/ IS 1538 Table 4 & 6

Body and Cover made of Ductile Iron IS 1865 Gr. 400 / 15

Inner parts made of stainless steel grade 304

Seal made of EPDM

### **Corrosion protection:**

**Inside and outside with epoxy powder coating;** thickness >250 µm, colour: RAL 5005 blue

### **BUTTERFLY VALVE**

The butterfly valves shall generally conform to IS 13095 / BS EN 593, with length over flanges as per **Double flanged Short** (BS EN 593 / BS EN 558 / ISO 5752 Basic Series 13).

50 to 200 mm: Concentric design

<b>Component</b>	<b>Material of construction</b>
Body	Ductile Iron IS 1865 Gr. 400/15 or 500/7 with EPDM liner in the inside acting as the seat
Disc	Ductile Iron IS 1865 Gr. 400/15 or 500/7
Shaft & Pin	SS AISI 420
Bush	Polymer
'O' ring	NBR
Flange Drilling	EN 1092 – 2, Table 9
PN	1.0 / 1.6
<b>Mandatory accessories:</b>	
Enclosed worm gear box	Required: DI with IP 54 protection
Mechanical Position Indicator	Yes
Limit stops	Yes
Operation	Manual operation by handwheel. Motorised operation by means of electrical actuator.

### **COATING:**

Outside coated with **epoxy powder;** DFT not less than 250 microns. Shade: RAL 5005 (Blue)

250 mm and above: Eccentric Valves

<b>Component</b>	<b>Material of construction</b>
Body / Disc	Ductile Iron GGG 40 / IS 1865 Gr. 400/15 or 500/7
Stub Shafts	SS AISI 431
Bearings	Steel backed Teflon

	(co-efficient of bearing friction not more than 0.1)
Body seat	Integral (Monel 60) Ni – Cu alloy weld deposited
Disc seal	EPDM
Disc seal retainer	SS 304 / Ductile iron
Shaft seal	Halprene/ Elastomer
Internal Fasteners	SS
Flange Drilling	IS 1538 Table 4 & 6/ BS EN 1092 – 2
PN	1.0 / 1.6
<b>Mandatory accessories:</b>	
Enclosed worm gear box with additional spur gear boxes, if required	Required: DI with IP 54 protection
Mechanical Position Indicator	Yes
Limit stops	Yes
Operation	Manual operation by handwheel. Motorized operation by means of electrical actuator.

**PAINTING:**

Inside and outside quoted with liquid epoxy; DFT not less than 250 microns. Shade: RAL 5005 (Blue)

**PRESSURE REDUCING / RELIEF / SUSTAINING / ALTITUDE CONTROL VALVES**

SIZE RANGE (PN 1.0 / 1.6)

NB: 80, 100, 150, 200, 250, 300, 350, 400, 450, 500 & 600 mm

**CONSTRUCTION:**

Body / Bonnet / Cover / Internal Valve: DI / S G Iron IS 1865 Gr. 500/7 or 400 /15

Valve Seat: Bronze IS 318 Gr. LTB2

Valve Face / Joint / Membrane: Elastomer

Stem / Disc: SS AISI 304 / 316

Spring: SS AISI 304

Diaphragm operated relay (assembly): Manufacturers standard

Throttling Cock / Needle valve (optional): Gun metal (Manufacturers standard) / SS

Isolating Valve: Manufacturers standard

Strainer: SS or Bronze with Copper Wire Cloth

Pressure gauge: Manufacturers standard

Connecting Pipes: Copper / Stainless Steel / Fabric reinforced rubber with cadmium plated steel connection

Fasteners: Carbon Steel, Galvanized

Coating: Liquid epoxy primer followed by liquid epoxy paint (inside and outside) or fusion bonded epoxy powder coating, min DFT 250 microns; RAL 5005 / 5015 (Blue).

Flange standard: EN 1092 – 2, Table 9. Drilling may be as per IS 1538 Table 6.

**\***(CLA/AVK/SINGER/HAWLE/BERMAD-700/DOROT-S300)

Manufacturer should be able to demonstrate on their shop floor pressure reduction to a preset value in the downstream side other than hydro-static

tests.

**\* N.B: The Manufacturer or Product brand provided are indicative only. The Engineer-in-Charge may add, delete, or modify any approved vendor and/or product during the execution of the work, subject to the prior approval of the Competent Authority."**

### **PLUNGER FLOW CONTROL VALVES**

Plunger valves shall be double flanged. The flow path with annular flow cross section in any open position shall be rotationally symmetric. The movement of piston / plunger by means of crank / shaft / spindle drives shall be Axial / Linear along with irreversible worm gear box including position indicator. The material of construction shall be as under:

Body / End Cover	Ductile Iron GGG 40 / IS 1865 Gr. 400 / 15
Plunger / Needle / Piston	Stainless Steel AISI 304
Guide	Bronze
Shaft / Crank	Stainless Steel with 13% Chromium (AISI 420) OR AISI 304
Seal (on body)	EPDM
Seal Retainer	SS AISI 304 / CF 8 / CF 8M
Bush	Bronze / Gun Metal to IS 318 Gr. LTB 2 / Engineered Plastic
Pinion	SS AISI 304
Pinion Bush	PTFE
Worm Gear Box	Manufacturer's standard
Internal fasteners	SS AISI 304
External fasteners	Carbon Steel (hot dip galvanized)

The valves shall be designed for flow control applications for providing precise 1 control over the flow rates. The valves shall be designed to cause minimum head loss.

The valves may preferably be provided with electrical actuators having the control facility for intermediate valve positioning by connecting external signal. The electric actuator shall be complete with integral starter, push button station, local / off / remote selector switch, adequate nos. of intermediate limit switches, thermal overload relay, space heater, local position indicator (LCD display). Shall be of regulating duty (with continuous duty motor) complete with positioner / inching duty (max 150 starts per hr) complete with electronic position transmitter (4 – 20mA). Commands / electric signals for positioning of the control valve actuators will be from local PLC unit. The Contractor shall comply with the compatibility requirements of the flow control valves with local PLC unit by providing industry standard digital communication protocol. The electric actuators shall be designed to provide the required torque for operations in the flow and pressure conditions of the water transfer system. Gear assembly shall be provided as necessary.

A hand wheel shall be provided so that the valve can be operated even when the power supply of the control valve has failed. The torque requirement at the handwheel shall be such that one person can operate the valve against the maximum unbalanced head.

The body shall be protected from corrosion by providing epoxy powder/ liquid coating; Shade RAL 5005 (Blue), min. DFT 250 microns.

The body of the valve shall be designed and tested for the applicable pressure rating of the system i.e., PN 1.0 / 1.6. Flanges to be drilled as per IS 1538 Table 4 & 6 or BS EN 1092 – 2.

General

1. Hydro – testing:

	PN 1.0	PN 1.6	Criterion
Seat test (Kg/cm <sup>2</sup> )	10	16	Drop - tight
Body test (Kg/cm <sup>2</sup> )	15	24	No leakage and deformation

2. Torque / Operating effort / Operating time: Manufacturer to furnish data and if required supporting calculation for review / approval.
3. Motorised Valves to be operated with AUMA Epac / Rotork Syncropak/ Equivalent electrical actuator complete with integral starter, suitable for hooking on to SCADA system. If inching duty is required for butterfly valves to be used for throttling, actuators shall additionally include electronic position transmitter (for 4-20 mA feedback signal)
4. All Electrically operated valves must be operated fully at least 2 times to demonstrate trouble free and smooth operation. Additionally, 10 % of such valves must be cracked open with Electric actuator with the closed seat under full differential/ working pressure to demonstrate proper selection of Gear box (where applicable) and Electric actuator.

❖ **Technical Requirement:**

All the valves shall confirm to relevant **BIS/BS/AWWA** and bear such embossed certification mark.

Valves, wherever required, shall be provided with extended spindle (AISI-410/420 material) and head stock so that hand wheels can be provided at 1.2 m level for manual operation.

All valves for water supply & air applications shall be DI body with 13% Chrome-steel (AISI-410/420) spindle and seat & seat ring made of gun metal. All valves for chemical & corrosive application shall be Teflon body & internals.

The valves shall be double flanged body with 'raised-face' flanges and drilling to conform IS: 1538.

RCC Valve chambers/CI surface box as required shall be provided for the valves with CI lockable manhole of standard size.

Suitable anchor blocks shall be provided at bends and other locations where unbalanced forces may develop under normal operation, during power failures, during reverse flow or during testing of pipe line that tend to cause movements in the pipe line.

Valves of size NB 300 and above shall be installed with a dismantling joint or short-piece in the pipe line to facilitate easy replacement.

On completion of erection, trial-run and testing all the pipelines, valves and fittings shall be cleaned thoroughly and painted with 2 coats of enamel paint over by 1 coat

of primer. The colour code shall conform to Department's norms for identification of raw water/ clear water/ spent water/ wash water/ air etc. The flow direction shall also be stencilled on the pipe lines.

The scope of work for the tender includes entire piping work & valves of all types as per actual requirement at site for the completeness of the project. Any variation in piping work & valves shall be borne by the contractor and shall not be entertained for extra payment.

### **Inspection and Testing**

#### **Procurement, Inspection & Testing of MS Pipe/DI pipes and fittings: (In case, where procurement of pipe is in the scope of work)**

- The successful bidder shall source all **ISI Marked Ductile Iron Pipes & Fittings** and **MS Pipe** from;
  - The manufacturer who has not been blacklisted by any Govt./Govt. Undertaking for supply of DI Pipes in India and
  - The manufacturer is having valid BIS License for marking ISI Mark on their products for at 1.0 (one) year and
  - The manufacturer's DI Pipes and Fittings are in satisfactory performance in Indian Projects for at least one year.
- The D.I. pipes are to be inspected by the quality assurance wing of **PDIL/ CIPET/ RITES Ltd.**, and the consignment are to be embossed with the PDIL/CIPET/ RITES Ltd., inspection mark.
- The materials without PDIL/CIPET/RITES Ltd., inspection and without PDIL/ CIPET/ RITES Ltd., inspection mark shall not be accepted. All the materials should also be ISI Marked.
- The DI pipe should confirm IS:8329/2000 & its subsequent amendments and DI Fittings should confirm IS:9523:2000 and its subsequent amendments, if any.
- The HDPE pipe shall be confirming to IS:4984/1995 or subsequent amendment if any. The materials are to be get inspected by the Quality Assurance Wing of CIPET and the consignments are to be embossed with the CIPET inspection mark. All the materials should also be ISI Marked. The pipe and fittings shall be ensured with pre-delivery as well as post-delivery inspection by CIPET following relevant IS specification.
- The CI/DI fittings confirming to relevant IS shall be procured from SSI unit products.
- All items of machinery, including instruments, apparatus and appliances, auxiliary equipment and their components/parts required for setting up of water treatment plants.

#### **❖ Inspection, Testing, Trial-Run, Guarantee Test, Operation and Maintenance Manual, Completion Drawings, Guarantee & Acceptance:**

(i) **General:**

- All equipment, accessories, auxiliaries, piping, electrics, instruments, installations, construction, buildings etc. including all mechanical, electrical & civil engineering works covered under the scope of work of contractor shall be subjected to inspection & testing by the Department for its material, quality, workmanship and the performance. The contractor shall arrange and carry-out

- all such inspections, testing, trial-run etc. and demonstrate in presence of the Engineer-in-Charge of the Department.
- The cost of such inspection, testing, trial-run, demonstration etc. shall be borne by the contractor. All responsibility of such inspection, testing, trial-run, demonstration etc. and any damage/loss that may cause directly or indirectly shall exclusively rest with the contractor.
  - Such inspection, testing, trial-run, demonstration etc. shall, however, not relieve the contractor of their liability for replacing/ rectifying any defects which may subsequently appear or be detected during erection and guarantee period.
  - Copies of certificates for materials test, hardness, balancing test along with other routine shop's quality assurance tests shall be furnished by the contractor prior to carrying out of the inspection and testing.
- (ii) **Tests at works:**
- All equipment, sub-assembly and components, auxiliaries and accessories shall be tested at manufacturer's works in accordance with relevant Indian Standards/International Standards. The contractor shall furnish all test certificates etc. related to the quality of all the materials to the Department along with the delivery of the materials at site without which no payment shall be released. However, such test certificates, quality assurance certificates shall not relieve the contractor of it's obligation to replace forth with any instrument/materials found defective during tests at works/ trial running period/ guarantee period.
  - Testing for performance of equipment shall be carried out and be checked with the approved parameters and performance characteristic curves for the purpose of acceptance.
- (iii) **Tests at Site:**
- On completion of erection, all equipment, accessories, auxiliaries, pipings, electrics, controls, instruments etc. covered under the scope of work of the contractor shall be tested to demonstrate their smooth operation and proper functioning. All instruments, gauges, interlocks etc. shall be for calibration and for proper functioning during the test. All testing requirements specified elsewhere in this specifications and mentioned in relevant Indian standard / International Standards shall be carried out by the contractor. All defective items or any defects observed during the test shall be replaced and/ or rectified by the contractor and test shall be repeated.
  - All the water retaining structures shall be tested for **water tightness** as per relevant IS code of practice before starting of Trial run.
  - The contractor shall also carry out at site, any tests, which may be required by the State/ Central Government, State Pollution Control and prevention Board and/or any other Statutory Body.
- (iv) **Trial Run & Hydraulic testing:**
- On completion of erection and testing at site the Tenderer shall carry out trial-run & hydraulic testing of all individual items one after another. The duration of trial run & hydraulic testing for individual items shall be not less than 24 hours in continuous operation. On satisfactory performance of individual items, trial-run & hydraulic testing of composite units, one after another and then of complete 'Installation' shall be carried out. The duration of each trial run' for

each composite unit shall not be less than 48 (forty eight) hours continuous operation, and the duration of trial run for complete 'Installation' shall not be less than ninety six (96) hours continuous operation. All defective items or any defect is observed during trial run shall be replaced and/or rectified by the Tenderer.

- The detailed schedule of trial-run and procedure shall be furnished by the Contractor to be approved by Department. Proper record shall be maintained by the contractor for all such testing and trial run.

(v) **Performance Guarantee Test:**

- On satisfactory completion of trial run the complete 'Installation' shall be tested for demonstration of guaranteed performance. The duration for such '**Performance Guarantee Test' shall not be less than continuous twenty day(480 hours).**

- The performance guarantee test by the Contractor shall demonstrate satisfactory operation of all individual items, equipment, controls, instruments, electrics, auxiliaries & accessories, piping.

(vi) **Operating Log Sheets:**

Record Books of operating log sheets shall be handed over by the contractor to the Engineer-in-charge in an approved form before the completion of the trial run period.

(vii) **Completion Drawings:**

A set of approved process, hydraulic, structural, mechanical, electrical, equipment drawings basing on the actual execution of the plant shall be handed over by the contractor to the Engineer-in-charge before completion of trial run and performance guarantee test. The record drawings shall be on best quality on polyester tracing papers.

(viii) **Penalty for non-submission of completion drawings:**

A penalty @ **0.3 % of 10 %** meant for "**inspection, testing, trial-run, guarantee test, training, operation & maintenance manual, completion drawings, guarantee & acceptance**" per day shall be imposed per each day of non-submission of the manual & completion drawings beyond 7 days of date of completion of successful performance guarantee test up to a maximum ceiling of 2% of the 10% meant for the aforesaid item, after which 1% of ISD shall also be forfeited.

ix) **On completion of construction:**

The contractor shall clear all the left over surplus earth, bricks, boulders, debris, scrap, temporary structures etc. from the construction site and present the entire premises in a neat and tidy manner. All units, equipment, tanks, reservoirs, pipelines etc. shall be cleaned thoroughly and disinfection shall be done. **On completion of finishing work, colour wash & painting work, the contractor shall provide name plates on the main units and shall stencil in bold letters the equipment code nos. & direction of flow on all the units, equipment, pipelines, valves etc.** The code nos. scheme shall be worked out in consultation with the Department.

x) **Acceptance of the Project:**

On completion of successful testing, trial running, satisfactory performance guarantee test, successful training, submission of Manual, operating log sheets and completion drawings, the 'Installation' shall be accepted by the Department.

❖ **Approach road :**

All the roads of the WTP should be unreinforced plain cement concrete pavement thickness as per design over a prepared sub base of cement concrete (1:3:6) with 40mm CBHG metal with 43 grade cement M30 concrete for 4.00mtr wide road and pathway along with cast in situ curve block in cement concrete M30.

❖ **Disposal of Surplus Earth & Debris after construction**

The surplus left over earth and debris after completion of erection work and leveling the site shall be transported and dumped in areas as directed by the Department's Engineer without any extra claim.

❖ **Make of Electrical & Mechanical Equipment:\***

**The following makes\*** shall only be allowed unless specifically mentioned elsewhere in this Agreement.

- (a) **Pumps:** Kirloskar / Mather & Platt / Voltas / Greaves/KSB/WPIL/ Flowmore
- (b) **Motors:** Kirloskar / Siemens / CGL / Alsthom / GEC/KSB/WIPL
- (c) **Sluice Valves/ Air Valves:** (Kirloskar/ VAG/Talis/Hawle make)
- (d) **Butterfly valves:** (Kirloskar/ VAG/Talis/Hawle make)
- (e) **Liquid level indicators:** Krohne/MEI
- (f) **Cable:** NICCO/ Finolex/ Havells/ Reliance/ OMEGA/ CCI/ Uniflex
- (g) **Laboratory instruments:** Polymetron/ Zellweger Analytic/ Hach make
- (h) **Laboratory glass wares :** Borosil
- (i) **Weighing machine:** Avery
- (j) **Flowmeter:** Full bore Electro-magnetic type flow meter shall be designed, manufactured and calibrated according to ISO 4185 (Mass) standard. The manufacturer shall have the ISO 17025(NABL) accredited facility in India. The flow meter shall be capable of measuring bi-directional flow.(ABB, Krone, Immersion, Bermad, E&H, SBEM, Adept Fluidyne)
- (k) **Parshel flume:** Reliable
- (l) **Blowers:** K-International/ Swam/Everest
- (m) **MS pipes:** ERW / SAW pipes from SAIL/TISCO/Jindal
- (n) **CI pipes:** KIW/ Electrosteel/ IISCO/ Kesoram/ any other make conforming to IS 1536: 2001 & its subsequent amendment if any shall be allowed.
- (o) **DI Pipe:** Electrosteel/ Jindal/ Electrotherm/Jay Balaji/ TATA Kubota/ Any other make confirming to IS 8329: 2000 & its subsequent amendment if any shall be followed
- (p) **GI pipes and fittings:** TATA/Jindal
- (q) **Sanitary wares:** Parryware/ Nycer/ Hindware
- (r) **Sanitary fitting:** Jaquar/ESS

- (s) **All furniture:** Godrej
- (t) **All Luminaries and ceiling fans, exhaust fans:** Phillips/Bajaj/Crompton
- (u) **Paints, distemper:** Johnsons Nicholsons/ Asian Paint/ Berger paints
- (v) **All locks and locking arrangements, hydraulic door closures:** Godrej.
- (w) **Other Accessories:** The firm shall clearly state the make which shall be approved by Department.

\* **N.B: The Manufacturer or Product brand provided are indicative only. The Engineer-in-Charge may add, delete, or modify any approved vendor and/or product during the execution of the work, subject to the prior approval of the Competent Authority."**

- ❖ The following Special Specifications are applicable for construction and commissioning of water supply scheme and other structures and shall be treated as part and parcel of the clauses of contract, conditions of contract, general specifications and special conditions and scope of work and all are to be read together, unless otherwise specified.
- ❖ **Sound Engineering Practice to be followed**  
The work shall have to be executed according to relevant IS code and OPWD specification and detailed specification but if at any point these IS code/OPWD specifications are silent, then work can be executed according to sound engineering practices after obtaining written approval of Engineer-in-Charge.
- ❖ **Cement Concrete**  
The minimum grade of structural concrete shall be M-25 conforming to IS: 456. blinding concrete below water retaining structures, foundations, cable trenches etc shall be of minimum grade of M<sub>20</sub> conforming to IS:456. Minimum thickness of blinding concrete shall be 100mm.
  - Admixture in concrete shall conform to IS: 9103 and shall be of approved manufacturer
  - The surface of the RCC/ concrete work obtained after removal of shuttering shall be smooth and even and without honey combing/pin holes/undulations such that it does not require any plastering. If at all any pin hole/ undulations are required to be made good, this shall be done with cement mortar 1:2 using coarse sand and finished smooth with steel trowel.
- ❖ **Sand/Fine Aggregates**  
Only good, washed, coarse sand shall be used for the concrete and masonry work. The sand will not contain more than 8% silt.
- ❖ **Stone/Coarse Aggregates**  
Clean, hard, strong, dense and non-porous stone aggregate of good quality shall be used for all R.C.C. and concrete work and shall be graded suitably. All building materials shall be got approved from the Engineer-in-charge. Various materials to be used in the work shall be subject to the mandatory tests in accordance with latest IS Specifications.
- ❖ **Vibrators**  
Vibrators shall be used for all concrete and R.C.C work.

#### ❖ **Form Work for Reinforced Concrete**

- Formwork for concrete shall be of steel, properly designed and easily removable. Joints should be sufficiently tight to prevent loss of cement slurry from the concrete. All joints and holes in the formwork shall be caulked with putty, jute, cloth or other approved material, and care shall be taken that such coating is kept away from contact with the reinforcement. All form shall be leveled and aligned and all rubbish particularly chipping, wood shavings, sawdust and adhered grout shall be removed from the interior of the forms before the concrete is placed.
- All formwork shall be removed without causing shock, damage or vibration to the concrete.

#### ❖ **Providing and Fixing Galvanised Steel/M.S./S.S. Gate**

All Elevated Service Reservoir compound shall be provided and fixed with M.S. gate of Fe 410 grade/ 304 Grade SS/ Galvanised Steel according to the design to be submitted by the contractor and approved by the Engineer-in-Charge. Weight of MS gate should not be less than 40 kg per sq.m. The height of the gate will not be less than the height of boundary wall and fabrication shall be done aesthetically to suit the surroundings. Width of the main gate will be minimum 6.0 m x 1.8 M height at ESR Site and a single lobe gate of Size 1.3m x 1.8m.

#### ❖ **Providing and Fixing of Rolling Shutters**

- All pump houses shall be provided and fixed with M.S. rolling shutters of standard thickness and approved manufacture, conforming to the requirements specified in IS: 6248.
- The type of rolling shutter shall be self-coiling type (manual), gear operated type (mechanical). Rolling shutters shall be suitable for operation from both inside and outside with the crank handle or chain gear operating mechanism duly considering the size of wall/column.
- Rolling shutters shall be supplied duly considering the type, specified clear width/height of the opening and the location of fixing as indicated in the drawings prepared by the Contractor and duly approved by Employer.
- Shutters shall be made of cold rolled steel strips built up of interlocking laths 75 mm width between rolling centre formed. The thickness of the steel strip shall not be less than 0.90 mm for shutters up to 3.50m width and not less than 1.20 mm for shutters above 3.50 m width. Each lath section shall be continuous single piece without any welded joint.
- The guide channels out of mild steel sheets of thickness not less than 3.15 mm shall be of either rolled, pressed or built up construction. The channel shall be of size as stipulated in IS: 6248 for various clear widths of the shutters.
- Hood covers shall be of mild steel sheets not less than 0.90 mm thick and of approved shape.
- Rolling shutters shall be provided with a central hasp and staple safety device in addition to one pair of lever locks and sliding locks at the ends.
- All component parts of the steel rolling shutter (excepting springs and insides of guide channels) shall be provided with one coat of zinc chrome primer conformity to IS: 2074 at the shop before supply. These surfaces shall be given an additional coat of primer after erection at the site along with the number of coats and type

of finish paint as specified in the respective items of works prepared by the Contractor and duly approved by Employer.

- Guide channels shall be installed truly plumb at the specified location. Bracket plate shall be rigidly fixed with necessary bolts and holdfasts. Workmanship of erection shall ensure strength and rigidity of rolling shutter for trouble free and smooth operation to the full satisfaction of Engineer.

❖ **Painting of Rolling Shutters, M.S. Grill, M.S. Gate G.I. Pipe Railing, Ductile Iron and other Steel Work etc.**

All items mentioned above shall be painted with 3 coats of superior quality, synthetic enamel paint of approved shade and quality prior to which priming coat after rubbing and removal of rust shall be provided.

❖ **Water Proof Treatment over the Roof**

Roof of all the buildings shall be provided with integral cement based waterproofing treatment as per OPWD specifications, after preparation of surface.

❖ **Grading plaster over the Roof**

The roof surface shall be provided with Grading plaster as per standard specifications.

❖ **PVC Rain Water Pipe**

For draining rain water from all roofs, PVC rain water pipes of 100 mm dia from roof to plinth protection level shall be provided. The number of places shall be as per drawing.

❖ **Site Clearance**

Before the commissioning the site shall be cleared of all left over materials, temporary hutments and debris etc.

❖ ***Specifications and Standards for House Service Connection***

- i) Drilling in the DI Distribution Pipe (100 mm / 150 mm) and fixing of the Ductile Iron Tapping Saddle with PVC Wrap. The thread dimension shall confirm to IS 554/ISO7. Seal & pressure activated hydro-mechanical design. It shall be counter gasket to provide a positive initial seal which increase in line of pressure.
- ii) Fixing of compression fittings, Brass/Gunmetal Ferrule confirming to IS.2692-1978 of 1/8" size with the Ductile Iron Tapping Saddle with PVC Wrap.

**Note:**

1. **Any item or any provision/requirement if not included in the **BoQ/Scope of Work/Specification**, but is necessary to be provided for the completeness of the project and for its functional necessity, the contractor shall provide the same. No extra payment shall be admissible on this account.**
2. Notwithstanding anything to the contrary contained in Paragraph 1 above, the following Specifications and Standards shall apply to the Water Supply Project, and for purposes of this Agreement, the aforesaid Specifications and Standards shall be deemed to be amended to the extent set forth below:

[Deviations from the aforesaid Specifications and Standards shall be listed out here. Such deviations shall be specified only if they are considered essential in view of project-specific requirements.]

**All provisions of the technical scope of work & terms & conditions of the contract have been read by Me/Us and I/We certify that I/We clearly understand them & agree to abide by them.**

**Witness**

**Contractor**

**SECTION – 10  
DRAWING**

**Uploaded Separately**

**[For any other Queries & Drawings Contact to the  
Addl. Chief Engineer, PH Circle, Bhawanipatna– 9438061511  
&  
Addl. Chief Engineer, PH Division, Balangir - 9438061511**

## **SECTION – 11**

### **PAYMENT BREAK-UP SCHEDULE** **Price Break-Up for Individual Item of Work**

<b>(1)</b>	<b>Building</b>		<b>A8</b>
ii.	On completion up to plinth level	25%	
iii.	On completion up to lintel level	20%	
iv.	On completion of casting of roof slab	30%	
v.	On completion of finishing work of civil items	25%	

#### **(2) Payment Break-Up Schedule for Pump Sets, VFD Control Panels, PLC System, Pilot Altitude Flow Control Valve/Actuator Valves, Electric Operated Electromagnetic Flow Meter**

Sl.No.	Description of item (payment after completion of item)	Percentage breakup of Price Bid.
1	On Supply of materials with all original test/ guarantee certificates & other required documents	70%
2	On Completion of Installation, Testing & Commissioning	30%

#### **(3) Payment Break-Up Schedule of ESR**

Sl.No.	Description of item (payment after completion of item).	Percentage breakup of Price Bid.
1	On submission and final approval of design & drawing.	01%
2	Earth work excavation with P.C.C.	05%
3	<b>Casting of raft foundation/ Pile Foundation.</b>	22%
4	On casting of 50% of staging height.	15%
5	On casting of 100% of staging height.	15%
6	On completion of container wall, floor & roof.	15%
7	On completion of Piping arrangement with valves to ESR.	07%
8	On completion of all finishing work including fitting & fixing of S/S ladder, water level indicator, lightening arrestor etc.	10%
9	On completion of Testing & Commissioning	10%

#### **(4) Laying of DI pipe line, fittings, valves etc.**

Sl.No.	Description of item (payment after completion of item)	Percentage breakup of Price Bid.
1	Laying of pipe line, fittings, valves etc	90%
2	On Completion of Testing & Commissioning	10%

**SCHEDULE – A**

**STRUCTURE & ORGANISATION**

**1. General Information**

a) Name of Applicant

b) Head Office Address

e-Mail Address:

Telephone No.

Fax :

Mobile Phone No.

c) Regional Office Address (if any)

e-Mail Address:

Telephone No.

Fax :

d) Local Office (if any)

e-Mail Address:

Telephone No.

Fax :

e) Class of contractor / firm and year of incorporation  
(attach copy of certificate of registration)

f) Name and Address of Bankers

g) Main Lines of Business

## 2. STAFF PROPOSED FOR EXECUTION OF THE WORKS

### a) Office

Name(s)	Educational qualification	Designation	Relevant Experience	Remarks

### b) Key Engineering Personnel to be deployed at the site

Sl. No.	Name of Engineering Personnel to be deployed	Educational qualification	Experience	Remark
1.				
2.				
3.				
4.				
5.				

**Note:** BIO-DATA of each personnel shall be attached related with the proposed site.

A summary of the work experience of each key staff shall be attached.

## SCHEDULE – B

### **FINANCIAL STATEMENT**

**[To be given separately for each constituent Firm]**

Financial statement shall be audited for five years by Regd. Chartered Accountant or competent financial organization / authority. The audit certificate should be included with the document.

- 1) Name of Applicant:
  
- 2) Total Annual turnover & **Annual turnover in Construction Works including GST**, undertaken for each of the last five financial years.

**(Rs. In lakh)**

FINANCIAL YEAR	Home		Abroad		Total	
	Total Turnover (Including GST)	Turnover in Const. Works (Including GST)	Total Turnover (Including GST)	Turnover in Const. Works (Including GST)	Total Turnover (Including GST)	Turnover in Const. Works (Including GST)
<b>2024-25</b>						
<b>2023-24</b>						
<b>2022-23</b>						
<b>2021-22</b>						
<b>2020-21</b>						

3. Applicant's specific financial arrangements (mention amount in Indian Rupees)
    - a) Own Resources
    - b) Bank Credits
    - c) Others (specify)
  4. Credit Facilities :
- To be supported by certificate for the Bank in **Scheduled 'H'**.

**SCHEDULE – C**

**LIST OF TOOLS, PLANT & EQUIPMENT**

**Proposed to be deployed by the Applicant for use on the work**

<b>Sl. No.</b>	<b>List of plants &amp; equipments</b>	<b>Minimum Requirement</b>	<b>Owned</b>	<b>Leased / Hired</b>	<b>Remarks</b>
			<b>Nos. / qnty</b>	<b>Nos. / qnty</b>	
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
1.	Concrete Hopper Mixer (tilting hopper type)	2 Nos.			
2.	Plate / Skid Vibrator	2 Nos.			
3.	Needle Vibrator	2 Nos.			
4.	Water Tank	2 Nos.			
5.	Levelling instrument	1 No			
6.	Dewatering Pump set from 5 to 20 HP capacity	1 No.			
7.	Steel shuttering plates (600 x 1200mm) with steel scaffoldings	100 Sqm.			
8.	Transportation trolley	2 Nos.			

**SCHEDULE – D**  
**WORK EXPERIENCE**

1. Name of the firm :
2. Total number of years of experience in **Construction Work** :
3. List of the similar works executed during last 5 years. (Rs. in lakh)

Sl. No.	Name of the work/ location Agmt. No. & Dt.	Name of the employer	Value of Contract price (Excluding GST)	Total Value of work executed (Including GST)	Financial year-wise Computed amount (Including GST)	Stipulated date of commencement	Stipulated date of completion	Actual date of completion	Reasons for delay	Remarks
1	2	3	4	5	6	7	8	9	10	11

NB: Certification of the employer not below the rank of Executive/Superintending Engineer/equivalent is to be furnished in support of the above claim.

4. Approximate value of existing commitment and ongoing works:

(Rs. in lakh)

Description of work	Place	Name of employer	Contract No	Contract value (Excluding GST)	Stipulated period of completion (indicate date of commencement & completion)	Balance value of work to be executed (Including GST)	Remarks
1	2	3	4	5	6	7	8

**NB: Self declaration in shape of affidavit in support of the above claim should be furnished.**

5. Bid Capacity Calculation (Refer clause 32.3 of Section 2 (B) of DTCN).

A = Maximum value of works executed **including GST** in any one year during the last five years (updated to the current price level)= Rs.. \_\_\_\_\_ lakhs.

B= Value of current price level of the existing commitments and ongoing works **including GST** to be completed during the next years = Rs. \_\_\_\_\_lakhs(Period of completion of works for which bids are invited)

N= Number of years prescribed for completion of the works for which the bids are invited = **1.0**

**Assessed Available Bid Capacity = (AxNx2-B) ≥Amount put to tender plus GST**



**SCHEDULE –E**

**INFORMATION REGARDING CURRENT LITIGATION,  
DEBARRING / EXPELLING OF TENDER ORABANDONMENT OF  
THE WORK BY THE TENDERER**

1.(a) Is the applicant currently involved in any **Litigation** relating to any contract works -  
**Yes/No**

(b) If yes, give details

2.(a) Has the applicant or any of its constituent partners have been **Debarred / Expelled** by  
any agency in India during the last 5 years - **Yes/No**

(b) If yes, give details

3.(a) Has the applicant or any of its constituent partners **failed to Perform/ Absconded/  
Rescinded** on any contract work in India during the last 5 years - **Yes/No**

(b) If yes, give details

*Note :* *If any information in this schedule is found to be incorrect or concealed pre-qualification application will be summarily rejected.*

## **SCHEDULE – F**

**(Applicable where the proposed works covers Electrical Items of works only)**

1. The contractor shall have appropriate class of electrical license for External & Internal Electrical Works.
2. If not, collaboration with contractor having Electrical license of equivalent capacity issued by licensing authority is to be furnished.

**SCHEDULE – G**

**AFFIDAVITS / DECLARATION**

1. I/We have read the instructions appended in the DTCN.
2. I/We agree that the decision of the Govt. of Odisha in selection of contractors will be final and binding upon me/us.
3. All the information furnished herewith are correct to the best of my/our knowledge and belief. In case of any information or documents furnished found to be false or incorrect, I / we have no objection if my / our tender is rejected.
4. I/We agree that I/We have no objection if inquiries are made about construction work and its related areas regarding all projects and works listed by us in the accompanying sheets or any other enquiry on information furnished herewith in the accompanying sheets.
5. I/We agreed that I/We have no objection if our past construction works are inspected by any authority of Govt. of Odisha to assess the quality of construction.

Date:

Place:

Signature  
Name & Designation  
Name of the organisation

**SCHEDULE – H**

**(Refer: Schedule "B" Item – 4)**

**FORM OF SOLVENCY CERTIFICATE FROM A SCHEDULE BANK**

This is to certify that to the best of our knowledge and information M/s./Sri..... having marginally noted address a customer of our bank and are/is respectable and can be treated as good for any engagement upto a limit of Rs..... (Rupees ..... ) ..... ) (Minimum 10% of the Value of work)

Signature

For the Bank

*Note : (i) In case of partnership firm, certify names of all partners as recorded with the Bank.  
(i) Submit the Solvency Certificate for this tendered work.*

**SCHEDULE – I**

**Format for Seeking Clarification**

**(to be furnished in both MS Word/Excel & PDF Format)**

**Name of the Firm with e-mail & Mobile No.:** \_\_\_\_\_

---

<b>Sl. No.</b>	<b>Reference to DTCN/ Clause/ Page</b>	<b>Existing Description &amp; Subject</b>	<b>Clarification Sought</b>	<b>Remarks</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

## SCHEDULE-J

### FORM OF BANK GUARANTEE [ISD/APS/Any Other Security Deposit]

To  
The Executive Engineer/ Superintending Engineer  
\_\_\_\_\_.

WHEREAS:

- (A) \_\_\_\_\_ [name and address of contractor] (hereinafter called the "**Contractor**") has executed an agreement (hereinafter called the "Agreement") with the [**Addl. Chief Engineer, PH Division, Balangir** representing Engineer-in-Chief, PH, Odisha], (hereinafter called the "**Authority**") for the construction of the work "**Construction of ESR and other ancillary works in connection with the work "Augmentation of water supply system along with ancillary works for Balangir town."**" subject to and in accordance with the provisions of the Agreement.
- (B) The Agreement requires the Contractor to furnish **ISD/APS/Any Other Security Deposit** for due and faithful performance of its obligations, under and in accordance with the Agreement, during the {Construction Period & Defects Liability Period} (as defined in the Agreement) in a sum of Rs. \_\_\_\_\_ Lakh (Rupees \_\_\_\_\_ Lakh) (the "**Guarantee Amount**").
- (C) We, \_\_\_\_\_ through our branch at \_\_\_\_\_ (the "Bank") have agreed to furnish this bank guarantee (hereinafter called the "Guarantee") by way of Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period & Defects Liability Period} under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority

shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [**Addl. Chief Engineer, PH Division, Balangir**], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final and binding on the Bank, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/ or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance,

indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The Guarantee shall cease to be in force and effect on \*\*\*\*\$. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be

---

*§ Insert date being (contract period+ defect liability period+ 60 days min,) from the date of issuance of this Guarantee (in accordance with Clause 23.4 of the Section 2(B) & Clause 6.22 of Section 6).*

sufficient to prove that the envelope containing the notice was posted and a certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at \_\_\_\_\_.

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.
- (iii) The stamp papers of appropriate value shall be purchased in the name of bank who issues the "Bank Guarantee".
- (iv) The bank guarantee shall be from a Nationalised/Scheduled Indian Bank with **counter guaranteed** by its branch at **Balangir/Bhubaneswar**.

**Executive Instruction regarding calling for and acceptance of tenders in e-Procurement in Govt. of Odisha.**

**Government of Odisha  
Works Department**

\*\*\*

**Office Memorandum**

**File No.07556900042013 (Pt-II) – 7885/W Dated 23.07.2013**

**Sub: Codal Provision regarding e-Procurement**

After introduction of e-procurement in Government of Odisha, necessary guidelines / procedures has been issued in Works Department Office Memorandum No.1027 dt.24.01.2009 which consists of the procedural requirement for e-procurement of tenders. After careful consideration Government have been pleased to make following modifications to codal provisions by way of addition as Appendix – IX(A) of OPWD Code Vol.II) as follows:

**(Appendix-IX (A) of OPWD Code, Vol-II)**

**Executive instructions regarding calling for and acceptance of tenders in e-Procurement.**

1. This office memorandum consists of the procedural requirement of e-procurement and shall be made part of the Detailed Tender Call Notice or Instruction to Bidder for all “works” tenders hoisted in the portal.
2. The e-procurement portal of Government of Odisha is “<https://tendersodisha.gov.in>”.
3. Use of valid Digital Signature Certificate of appropriate class (Class II or class III) issued from registered certifying authorities (CA) as stipulated by Controller of Certifying Authorities (CCA), Government of India such as n-Code, Sify, TCS, MTNL, e-Mudhra is mandatory for all users.
4. The DSC issued to the Department users is valid for the period of two years only. All the Department users are responsible to revalidate their DSC prior to expiry.
5. For all purpose, the server time displayed in the e-Procurement portal shall be the time to be followed by all the users.
6. Government after careful consideration have decided to hoist all tenders costing 10 lakhs or above in the e-procurement portal. This will be applicable across all Engineering Departments such as Works Department, Department of Water Resources, Rural Development and Housing & Urban Development Department. Government of Odisha also welcomes hoisting of tenders by any other departments, authority, corporations, local bodies etc. of the State with prior approval from Works Department. Works Department is the Nodal Department for the implementation of e-Procurement in the State.

7. The e-procurement shall be operated compliant to relevant provisions of OGFR/ OPWD code/ Accounts code/ Government statues including any amendments brought from time to time to suit to the requirement of the best national practice.
8. Registration in the e-procurement portal is without levy of any charges but Government reserves the right to levy any charges for such value added services in future.
9. Contractor not registered with Government of Odisha, can participate in the e-Procurement after necessary enrolment in the portal but have to subsequently register themselves with the appropriate registering authority of the State Government before award of the work as per prevalent registration norms of the State.
10. For the role management "Department" is the Administrative Department, Organisation or wing is the Chief Engineer or highest tender accepting authority or equivalent officer, Division is the Executive Engineer or equivalent Officer and Subdivision is the Assistant Engineer or equivalent officer.
11. The e-Procurement software assigns roles for operation of the module for specific function. The terminologies used in the portal and their respective functions in the software are as follows.
  - 11.1 Application Administrator (NIC & State Procurement Cell)
    - i. Master Management
    - ii. Nodal Officer Creation
    - iii. Report Generation
    - iv. Transfer of Officer's login ID.
    - v. Blocking & unblocking of officer's and bidder's login ID.
  - 11.2 Nodal Officer (At organization level not below the Superintending Engineer or equivalent rank)
    - i. Creation of Users
    - ii. Role Assignment
    - iii. Report Generation
    - iv. Transfer of Officer's login ID.
    - v. Blocking & unblocking of officer's Login ID.
  - 11.3 Procurement Officer Publisher (Officer having tender inviting power at any level)
    - i. Publishing of Tender
    - ii. Publishing of Corrigendum / addendum / cancellation of Tender
    - iii. Bid Clarification
    - iv. Uploading of Pre-Bid minutes.
    - v. Report generation.
  - 11.4 Procurement Officer Administrator (Generally sub-ordinate officer to Officer Inviting Tender)
    - i. Creation of Tender
    - ii. Creation of Corrigendum / addendum / cancellation of Tender
    - iii. Report generation.

- 11.5 Procurement Officer Opener (Generally sub-ordinate officer to Officer Inviting Tender)
  - i. Opening of Bid
- 11.6 Procurement Officer Evaluator (Generally Sub-Ordinate Officer to Officer Inviting Tender)
  - i. Evaluating Bid
- 11.7 Procurement Officer-Auditor (Procurement Officer Publisher and/or Accounts Officer / Finance Officer)
  - i. To take up auditing

**12. NOTICE INVITING BID (NIB) or INVITATION FOR BID (IFB):**

- 12.1 The Notice Inviting Bids (NIB) and Bid documents etc., shall be in the Standard formats as applicable to conventional Bids and will be finalized / approved by the officers competent as in the case of conventional Bids.
- 12.2 The officers competent to publish NIB in case of conventional Bids will host the NIB in portal. Simultaneously, a notification should also be published in the newspapers, as per existing rules preferably, in the following format, to effect economy:-

Government of Odisha "e" procurement Notice	
<b>Bid Identification No.</b> -----	
1.	Name of the work: .....
2.	Estimated cost: Rs.....
3.	Period of completion -----
4.	Date & Time of availability of bid document in the portal _____
5.	Last Date / Time for receipt of bids in the portal _____
6.	Name and address of the O.I.T.:.....
Further details can be seen from the e-procurement portal " <a href="https://tendersodisha.gov.in">https://tendersodisha.gov.in</a> "	

- 12.3 The tender documents published by the Tender Inviting Officer (Procurement Officer Publisher) in the website <https://tendersodisha.gov.in> will appear in the "Latest Active Tender". The Bidders/ Guest Users can download the Bid documents only after the due date & time of sale. The publication of the tender will be for specific period of time till the last date of submission of bids as mentioned in the 'Notice inviting Bid' after which the same will be removed from the list of "Latest Active tenders".

**13. ISSUE OF ADDENDA/ CORRIGENDA/ CANCELLATION NOTICE:**

- 13.1 The Procurement Officer Publisher (Officer Inviting Tender) shall publish any addendum/ corrigendum/ cancellation of tender in the website <https://tendersodisha.gov.in>, notice board and through paper publication and such notice shall form part of the bidding documents.
- 13.2 The system generates a mail to those bidders who have already uploaded their tenders and those bidders if they wish can modify their tenders. The bidders are

required to watch the website till last date and time of bid submission for any addendum/ corrigendum/ cancellation thereof. Tender Inviting Authority is not responsible for communication failure of system generated mail.

**14. CREATION AND PUBLISHING OF BID:**

14.1 All the volumes/documents shall be uploaded in the portal by the tender creating officer (Procurement Officer Administrator) and published by the Officer Inviting Tender (Procurement Officer Publisher) using their DSCs in appropriate format so that the document is not tampered with

14.2 The tender document comprise the notice inviting tender, bid document/ SBD, drawings in .pdf format and the schedule of quantities / BoQ in .xls format to be uploaded by the Officer Inviting Tender.

14.3 Procurement Officer Administrator creates tender by filling up the following forms:

i. BASIC DETAILS

ii. COVER CONTENT: The Procurement officer Administrator should briefly describe the name and type of documents to be uploaded by the bidder in the following format:

(a) For Single Cover/Packet:

SI No	Cover Type	Document Description	Type
1	Fee/ Prequal/ Technical/ Finance	Tender Cost, EMD, VAT, PAN, Contractor RC	.pdf
		Affidavits, undertakings and any other document as per SBD/DTCN.	.pdf
		BoQ	.xls

(b) For Two Cover/Packet:

SI No	Cover Type	Document Description	Type
1	Fee/ Prequal/ Technical	Tender Cost, EMD, VAT, PAN, Contractor RC	.pdf
		Affidavits, undertakings and any other document as per SBD/DTCN.	.pdf
2	Finance	BoQ	.xls
		Special condition if any specifically mentioned by Officer Inviting Tender	.pdf

iii. TENDER DOCUMENT: The Procurement Officer Administrator should upload the NIT in .pdf format.

iv. WORK ITEM DETAILS

v. FEE DEATILS: The Procurement Officer Administrator should mention the cost of tender paper and EMD amount as laid down in DTCN/SBD.

vi. CRITICAL DATES: The Procurement Officer Administrator should mention the critical dates of tender such as publishing date, document download start date & end date, seek clarification start date & end date (optional), bid submission start date & closing date, bid opening date as per DTCN/SBD.

- vii. **BID OPENER SELECTION:** The Procurement Officer creator can select two / three / four bid openers for a particular bid. If required the bid openers can also be selected within an organization from other procurement units (Circles /Divisions).
- viii. **WORK ITEM DOCUMENTS:** The Procurement Officer Administrator should upload the digitally signed tender document (SBD/DTCN) or any other addition document/drawings in .pdf format and Bill of Quantities in .xls format.
- ix. **PUBLISHING OF TENDER:** The Procurement Officer Publisher shall publish the tender using his/her DSC after detail scrutiny of the fields created and documents uploaded by the Procurement Officer Administrator. Procurement Officer Publisher can publish tenders for multiple procurement units using multiple DSCs procured for each post separately. After being relieved from the additional charges he has to surrender the additional DSCs to the Nodal Officer of the concerned organisation.

## 15. **PARTICIPATION IN BID:**

15.1 **PORTAL REGISTRATION:** The Contractor/Bidder intending to participate in the bid is required to register in the portal using his/her active personal/official e-mail ID as his/her Login ID and attach his/her valid Digital signature certificate (DSC) to his/her unique Login ID. He/ She has to submit the relevant information as asked for about the firm/contractor. The portal registration of the bidder/firm is to be authenticated by the State Procurement Cell after verification of original valid certificates/documents such as (i) PAN and (ii) Registration Certificate (RC) / VAT Clearance Certificate (for procurement of goods) of the concerned bidder. The time period of validity in the portal is at par with validity of RC/ VAT Clearance. Any change of information by the bidder is to be re-authenticated by the State Procurement Cell. After successful authentication bidder can participate in the online bidding process.

15.1.1 Bidders participating through Joint Venture shall declare the authorised signatory through Memorandum of Understanding duly registered and enrol in the portal in the name and style of the Joint venture Company. It is mandatory that the DSC issued in the name of the authorised signatory is used in the portal.

15.1.2 Any third party/company/person under a service contract for operation of e-Procurement system in the State or his/their subsidiaries or their parent companies shall be ineligible to participate in the procurement process that are undertaken through the e-Procurement system irrespective of who operates the system.

15.2 **LOGGING TO THE PORTAL:** The Contractor/Bidder is required to type his/her *Login ID* and password. *The system will again ask to* select the DSC and confirm it with the password of DSC as a second stage authentication. For each login, a user's DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective CAs stored in system database. The system checks the unique Login ID, password and DSC combination and authenticates the login process for use of portal.

15.3 DOWNLOADING OF BID: The bidder can download the tender of his choice and save it in his system and undertake the necessary preparatory work off-line and upload the completed tender at his convenience before the closing date and time of submission.

15.4 CLARIFICATION ON BID: The bidder may ask question related to tender online in the e-procurement portal using his/her DSC; provided the questions are raised within the period of seeking clarification as mentioned in tender call notice/Bid. The Officer Inviting the Bid / Procurement Officer-Publisher will clarify queries related to the tender.

#### 15.5 PREPARATION OF BID

15.5.1 The bids may consist of general arrangements drawings or typical or any other drawings relevant to the work for which bid has been invited. Bidder may download these drawings and takeout print for detail study and preparation of his bid. Any other drawings and documents pertaining to the works available with the Officer Inviting The bid will be open for inspection by the bidders.

15.5.2 The Bidder shall go through the Bid carefully and list the documents those are asked for submission. He shall prepare all documents including cost of Bid Document, Bid Security, Declaration form, price bid etc. and store in the system.

#### 15.6 PAYMENT OF EMD/BID SECURITY AND COST OF BID DOCUMENTS:

15.6.1 The Bidder shall furnish, as part of his Bid, a Bid security for the amount mentioned under NIT/Contract Data. The bidder shall scan all the written/printed pages of the bid security and up load the same in portable document format (PDF) to the system in designated place of the technical BID. Furnishing scanned copy of such documents is mandatory otherwise his/her bid shall be declared as non-responsive and liable for rejection.

15.6.2 The EMD or Bid Security payable along with the bid is 1% of the estimated contract value (ECV) or as mentioned in the bid document. The validity period of the EMD or Bid Security shall be as mentioned in the bid document. Any bid not accompanied by an acceptable Bid Security and not secured as indicated in the bid document shall be rejected as non-responsive. The bid security shall be retained till such time the successful bidder furnishes Initial Security Deposit (ISD) or Performance Security acceptable to the Officer Inviting the Bid. Failure of the successful Bidder to comply with the requirements shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security. The Bid security in the form of FD / BG shall be from a Nationalized Bank valid for a period of 45 days beyond the validity of the bid. Bid security in other form is acceptable if the bid documents provides for it.

15.6.3 The Fixed Deposit / Bank Guarantee or any other form as mentioned in detailed tender call notice in respect of Earnest Money Deposit / Bid Security and the Bank Draft in respect of cost of Bid are to be scanned and up loaded in portable document format (PDF) along with the bid.

15.6.4 The tender accepting authority will verify the originals of all the scanned

documents of the successful lowest bidder only within 5 days of opening of the tender. In the eventuality of failure on the part of the lowest successful bidder to produce the original documents, he will be debarred in future from participating in tender for 3 years and will be black listed by the competent authority. In such a situation, successful L-2 bidder will be required to produce his original documents for consideration of his tender at the negotiated rate equal to L1 bidder.

15.6.5 Contractor exempted from payment of EMD will be able to participate in the tender directly by uploading documentary evidences towards his eligibility for such exemption

15.6.6 Government of Odisha has been actively considering integrating e-payment gateway in to the portal for payment of Cost of Bid and Bid Security/ Earnest Money Deposit. The process of using e-payment gateway shall be issued separately after it is established.

## 16. **SUBMISSION OF BID:**

16.1 The bidder shall carefully go through the tender and prepare the required documents. The bid shall have a Technical Bid & a Financial Bid. The Technical bid generally consist of cost of Bid documents, EMD/ Bid Security, VAT, PAN / TIN, Registration Certificate, Affidavits, Profit Loss statement, Joint venture agreement, List of similar nature of works, work in hand, list of machineries, and any other information required by OIT. The Financial Bid shall consist of the Bill of Quantities (BOQ) and any other price related information/undertaking including rebates.

16.2 Bidders are to submit only the original BoQ (in .xls format) uploaded by Procurement Officer Publisher (Officer Inviting Tender) after entering the relevant fields without any alteration/ deletion / modification. Multiple BoQ submission by bidder shall lead to cancellation of bid. In case of item rate tender, bidders shall fill in their rates other than zero value in the specified cells without keeping it blank. In the percentage rate tender the bidder quoting zero percentage is valid and will be taken at par with the estimated rate of the work put to tender.

16.3 The bidder shall upload the scanned copy/copies of document in support of eligibility criteria and qualification information in prescribed format in Portable Document Format (PDF) to the portal in the designated locations of Technical Bid.

16.4 The bidder shall write his name in the space provided in the specified location in the Protected Bill of Quantities (BoQ) published by the Officer Inviting Tender. The bidder shall type rates in figure only in the rate column of respective item(s) without any blank cell in the rate column in case of item rate tender and type percentage excess or less up to two decimal place only in case of percentage rate tender.

16.5 The bidder shall log on to the portal with his/her DSC and move to the desired tender for up loading the documents in appropriate place one by one simultaneously checking the documents.

16.5.1 Bids cannot be submitted after due date and time. The bids once submitted cannot be viewed, retrieved or corrected. The Bidder should ensure correctness of the bid prior to uploading and take print out of the system

generated summary of submission to confirm successful uploading of bid. The bids cannot be opened even by the OIT or the Procurement Officer Publisher/ opener before the due date and time of opening.

16.5.2 Each process in the e-procurement is time stamped and the system can detect the time of log in of each user including the Bidder.

16.5.3 The Bidder should ensure clarity/legibility of the document uploaded by him to the portal.

16.5.4 The system shall require all the mandatory forms and fields filled up by the contractor during the process of submission of the bid/tender.

16.5.5 The bidder should check the system generated confirmation statement on the status of the submission.

16.5.6 The Bidder should upload sufficiently ahead of the bid closure time to avoid traffic rush and failure in the network.

16.5.7 The Tender Inviting Officer is not responsible for any failure, malfunction or breakdown of the electronic system used during the e-procurement process.

16.5.8 The Bidder is required to upload documents related to his eligibility criteria and qualification information and Bill of Quantity duly filled in. It is not necessary for the part of the Bidder to up-load the drawings and the other Bid documents (after signing) while uploading his bid. It is assumed that the bidder has referred all the drawings and documents uploaded by the Officer Inviting the Bid.

16.5.9 The Bidder will not be able to submit his bid after expiry of the date and time of submission of bid (server time). The date and time of bid submission shall remain unaltered even if the specified date for the submission of bids declared as a holiday for the Officer Inviting the Bid.

16.6 **SIGNING OF BID:** The 'online bidder' shall digitally sign on all statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity as per IT ACT 2000. If any of the information furnished by the bidder is found to be false / fabricated / bogus, his EMD/Bid Security shall stand forfeited & his registration in the portal shall be blocked and the bidder is liable to be blacklisted.

## 17. **SECURITY OF BID SUBMISSION:**

17.1 All bid uploaded by the Bidder to the portal will be encrypted.

17.2 The encrypted Bid can only be decrypted / opened by the authorised openers on or after the due date and time.

## 18. **RESUBMISSION AND WITHDRAWAL OF BIDS:**

18.1 Resubmission of bid by the bidders for any number of times before the final date and time of submission is allowed.

18.2 Resubmission of bid shall require uploading of all documents including price bid afresh.

- 18.3 If the bidder fails to submit his modified bids within the pre-defined time of receipt, the system shall consider only the last bid submitted.
- 18.4 The bidder should avoid submission of bid at the last moment to avoid system failure or malfunction of internet or traffic jam or power failure etc.
- 18.5 The Bidder can withdraw his bid before the closure date and time of receipt of the bid by uploading scanned copy of a letter addressing to the Procurement Officer Publisher (Officer Inviting Tender) citing reasons for withdrawal. The system shall not allow any withdrawal after expiry of the closure time of the bid.

**19. OPENING OF THE BID:**

- 19.1 Bid opening date and time is specified during tender creation or can be extended through corrigendum. Bids cannot be opened before the specified date & time.
- 19.2 All bid openers have to log-on to the portal to decrypt the bid submitted by the bidders.
- 19.3 The bidders & guest users can view the summary of opening of bids from any system. Contractors are not required to be present during the bid opening at the opening location if they so desire.
- 19.4 In the event of the specified date of bid opening being declared a holiday for the Officer Inviting the Bid, the bids will be opened at the appointed time on the next working day.
- 19.5 Combined bid security for more than one work is not acceptable.
- 19.6 The electronically submitted bids may be permitted to be opened by the predefined Bid opening officer from their new location if they are transferred after the issue of Notice Inviting Bid and before bid opening. Further, action on bid documents shall be taken by the new incumbent of the post.
- 19.7 In case of non-responsive tender the officer inviting tender should complete the e-Procurement process by uploading the official letter for cancelled / re-tender.

**20. EVALUATION OF BIDS :**

- 20.1 All the opened bids shall be downloaded and printed for taking up evaluation. The officer authorized to open the tender shall sign and number on each page of the documents downloaded and furnish a certificate that "the documents as available in the portal containing \_\_\_\_\_ nos. of pages".
- 20.2 The bidder may be asked in writing/ online (in their registered e-mail ids) to clarify on the uploaded documents provided in the Technical Bid, if necessary, with respect to any doubts or illegible documents. The Officer Inviting Tender may ask for any other document of historical nature during Technical Evaluation of the tender. Provided in all such cases, furnishing of any document in no way alters the Bidder's price bid. Non submission of legible documents may render the bid non-responsive. The authority inviting bid may reserve the right to accept any additional document.
- 20.3 The bidders will respond in not more than 7 days of issue of the clarification letter, failing which the bid of the bidder will be evaluated on its own merit.

- 20.4 The Technical evaluation of all the bids shall be carried out as per information furnished by Bidders.
- 20.5 The Procurement Officer-Evaluators; will evaluate bid and finalize list of responsive bidders.
- 20.6 The financial bids of the technically responsive bidders shall be opened on the due date of opening. The Procurement Officer-Openers shall log on to the system in sequence and open the financial bids.
  - 20.6.1 The Financial Bid will be opened on the notified date & time in the presence of bidders or their authorised representative who wish to be present.
  - 20.6.2 At the time of opening of "Financial Bid", bidders whose technical bids were found responsive will be opened.
  - 20.6.3 The responsive bidders' name, bid prices, item wise rates, total amount of each item in case of item rate tender and percentage above or less in case of percentage rate tenders will be announced.
  - 20.6.4 Procurement Officer-Openers shall sign on each page of the downloaded BoQ and the Comparative Statement and furnish a certificate to that respect.
  - 20.6.5 Bidder can witness the principal activities and view the documents/summary reports for that particular work by logging on to the portal with his DSC from anywhere.
  - 20.6.6 System provides an option to Procurement Officer Publisher for reconsidering the rejected bid with the approval of concern Chief Engineer / Head of Department.

**21. NEGOTIATION OF BIDS:**

- 21.1 For examination, evaluation, and comparison of bids, the officer inviting the bid may, at his discretion, ask the lowest bidder for clarification of his rates including reduction of rate on negotiation and breakdown of unit rates.

**22. NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT:**

- 22.1 The Employer/Engineer-in-Charge shall notify acceptance of the work prior to expiry of the validity period by cable, telex or facsimile or e-mail confirmed by registered letter. This Letter of Acceptance will state the sum that the Engineer-in-Charge will pay the contractor in consideration of execution & completion of the Works by the contractor as prescribed by the contract & the amount of Performance Security and Additional Performance Security required to be furnished. The issue of the letter of Acceptance shall be treated as closure of the Bid process and commencement of the contract.
- 22.2 The Contractor after furnishing the required acceptable Performance Security & Additional Performance Security, "Letter to Proceed" or "Work Order" shall be issued by the Engineer-in-Charge with copy thereof to the Procurement Officer –Publisher. The Procurement Officer-Publisher shall up load the summary and declare the process as complete.

22.3 If the L-1 bidder does not turn up for agreement after finalization of the tender, then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. Besides the consortium / JV / firm where such an agency / firm already happens to be or is going to be a partner/member/proprietor, he/ they shall neither be allowed for participation in bidding for three years nor his/ their application will be considered for registration and action will be initiated to blacklist him / them. In that case, the L-2 bidder, if fulfils other required criteria, would be called for drawing agreement for execution of work subject to condition that the L-2 bidder negotiates at par with the rate quoted by the L-1 bidder, otherwise the tender will be cancelled.

**23. BLOCKING OF PORTAL REGISTRATION:**

23.1 If the Registration Certificate of the Contractor is cancelled /suspended by the registering authority/ blacklisted by the competent authority his portal registration shall be blocked automatically on receipt of information to that effect.

23.2 The portal registration blocked in the ground mentioned in the above Para-23.1 shall be unblocked automatically in receipt of revocation order of cancellation / suspension/ blacklisting from the concerned authority.

23.3 The Officer Inviting Tender shall make due inquiry and issue show cause notice to the concerned contractor who in turn shall furnish his reply, if any, within a fortnight from the date of issue of show cause notice. Thereafter the Officer Inviting Tender is required to issue an intimation to the defaulting bidder about his unsatisfactory reply and recommend to the Chief Manager (Tech.) for blocking of portal registration within 10 days of intimation to the defaulting bidder regarding his unsatisfactory reply with intimation to the Registering Authority and concerned Chief Engineer/ Heads of Office if any of the following provisions are violated.

23.3.1 Fails to furnish original Technical / Financial (Tender Paper Cost, EMD/Bid Security) instruments before the designated officer within the stipulated date and time.

23.3.2 Backs out from the bid on any day after the last date of receipt of tender till expiry of the bid validity period.

23.3.3 Fails to execute the agreement within the stipulated date.

23.3.4 If any of the information furnished by the bidder is found to be false / fabricated / bogus.

Accordingly the Officer Inviting Tender shall recommend to the Chief Manager (Tech.), State Procurement Cell, Odisha for blocking of portal registration of bidder and simultaneously action shall also be initiated by OFFICER INVITING TENDER for blacklisting as per Appendix- XXXIV of OPWD Code, Volume-II.

**24. GUIDELINES FOR UNBLOCKING OF PORTAL REGISTRATION:**

**24.1 UNBLOCKING OF PORTAL REGISTRATION:**

Unblocking of portal registration of a contractor shall be done by a Committee consisting of the following members.

EIC (Civil)-cum-CPO, - Chairman

Engineer-in-Chief (WR)	-	Member
Concerned Chief Engineer	-	Member
Sr. Manager (Finance), SPC	-	Member
Officer Inviting Tender	-	Member
Chief Manager (Technical), SPC	-	Convener

- 24.2 The Chief Manager (Tech), State Procurement Cell will be the convener and he will maintain all records for this purpose. The Committee shall meet not less than once in a month if required & shall consider the recommendation of the officer inviting tender for unblocking of portal registration. The quorum of the meeting will be four.
- 24.3 The minimum period of blocking of Portal Registration shall in no case be less than 90 days. After blocking of Portal Registration, the Contractor whose Portal Registration has been blocked may file application to the concerned officer inviting tender showing sufficient ground for unblocking of his portal registration along with a Treasury Challan showing deposit of Rs. 10,000/- (Rupees ten thousand) only (non-refundable) under the head of accounts '0059 - Public Works' as processing fees. The officer inviting tender shall forward the application filed by the contractor to the Chief Manager (Tech), State Procurement Cell.
- 24.4 On receipt of recommendation from the concerned Chief Engineer along with the copy of challan as mentioned above, the Chief Manager (Tech) being the member Convener of the Committee shall place the case before the Committee for examination and taking a decision in this regard. After examination the Committee may recommend for unblocking of the portal registration of said contractor if the Committee is satisfied that the fault committed by the contractor is either unintentional or done for the first time.
- 24.5 After scrutiny by the State Procurement Cell if it is found that the portal registration of a contractor has been blocked for the 2<sup>nd</sup> time the Chief Manager (Tech), SPC may not consider his case to be placed before the Committee and may advise the concerned officer inviting tender to issue show cause notice to the contractor asking him to explain as to why his portal registration shall not remain blocked. On receipt of show cause reply from the contractor the officer inviting tender shall examine the same & if considered proper he may report to the Chief Manager (Tech), SPC along with his views furnishing the copy of the show cause reply for placement of the same before the Committee for taking a decision in respect of blocking/ unblocking. If the Committee found that the contractor is in habit of committing such fault again and again intentionally the committee may advise the concerned officer inviting tender to initiate proceeding for blacklisting as per the existing rule.
1. These amendments shall take effect from the date of issue of the order.
  2. This amendment is an addition to the existing provision and will be placed below Appendix-IX to OPWD Col, Vol-II.
  3. Accordingly Office Memorandum No.1027 dt.24.01.2009 stands modified.
  4. This has been concurred in by the Finance Department vide their UOR No.3-WF-1 dt.04.01.2013.

***Sd/19.07.2013***  
**E.I.C-cum-Secretary to Govt.**

**Online Receipt of Tender Paper Cost & Earnest Money Deposit  
through e-Procurement Portal  
as per Works Department Letter No.17276/W Dt.06.12.2017**

**Government of Odisha  
Works Department**

\*\*\*

**Office Memorandum**

**File No.07556900012016–17254/W Dt.05.12.2017**

**Sub: Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids.**

1. The State Government have formulated rules and procedures for Electronic receipt, accounting and reporting of the receipt of Cost of Tender Paper and Earnest Money Deposit on submission of bids through the e-procurement portal of Government of Odisha i.e. "<https://tendersodisha.gov.in>".
2. Electronic receipt of cost of tender paper has been successfully tested through SBI payment gateway. Now it has been decided to introduce electronic receipt of **Cost of Tender Paper and Earnest Money Deposit on submission of bids** through payment gateway of designated banks such as **SBI/ICICI Bank/HDFC Bank** for all Government Departments, State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc. in phases (ANNEXURE-I). The process outline as well as accounting and reporting structure are indicated below :
  - a) It will be carried out through a single banking transaction by the bidder for multiple payments like **Cost of Tender Paper and Earnest Money Deposit on submission of bids**.
  - b) Various payment modes like **Internet banking/ NEFT/RTGS** of Designated Banks and their Aggregator Banks as well can be accessed by the intending bidders.
  - c) Reporting and accounting of the **e-receipts** will be made from a single source.
  - d) Credit of receipts into the Government accounts and to the designated Bank account of the participating entities indicated in Para 2 above would be faster.
3. Only those bidders who successfully remit their **Cost of Tender Paper and Earnest Money Deposit on submission of bids would be eligible to** participate in the tender/bid process. The bidders with pending or failure payment status shall not be able to submit their bid. Tender inviting authority, State Procurement Cell, NIC, the designated Banks shall not be held responsible for such pendency or failure.

#### 4. **Banking arrangement:**

- a) Designated Banks (**SBI/ICICI Bank/HDFC Bank**) payment gateway are being integrated with e-Procurement portal of Government of Odisha (<https://tendersodisha.gov.in>)
- b) The Designated Banks participating in **Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids** will nominate a **Focal Point Branch** called e-FPB, who is authorized to collect and collate all e-Receipts. Each such branch will act as the Receiving branch and Focal Point Branch notwithstanding the fact that the bidder might have debited his account in any of the bank's branches while making payment.

#### 5. **Procedures of bid submission using electronic payment of tender paper cost and EMD by bidder:**

- a) **Log on to e-Procurement Portal:** The bidders have to log onto **the** Odisha e-Procurement portal (<https://tendersodisha.gov.in>) using his/her digital signature certificate and then search and then select the required active tender from the "Search Active Tender" option. Now, submit button can be clicked against the selected tender so that it comes to the "My Tenders" section.
- b) **Uploading of Prequalification/Technical/Financial bid:** The bidders have to upload the required Prequalification /Technical/Financial bid, as mentioned in the bidding document and in line with Works Department office memorandum no.7885, dt.23.07.2013.
- c) **Electronic payment of tender paper cost and EMD:** Then the bidders have to select and submit the bank name as available in the payment options
  - i. A bidder shall make electronic payment using his/her **internet banking** enabled account with designated Banks or their aggregator banks.
  - ii. A bidder having account in other Banks can make payment using **NEFT/RTGS** facility of designated Banks.
    - Online NEFT/RTGS payment using internet banking of the bank in which the bidder holds his account, by adding the account number as mentioned in the challan as an interbank beneficiary.
- d) **Bid submission:** Only after receipt of intimation at the e-Procurement portal regarding successful transaction by bidder the system will activate the 'Freeze Bid Submission' button to conclude the bid submission process.
- e) **System generated acknowledgement receipt for successful bid submission:** System will generate an acknowledgement receipt for successful bid submission. The bidder should make a note of '**Bid ID**' generated in the acknowledgement receipt for tracking their bid status.

#### 6. **Settlement of Cost of Tender Paper;**

- a) **Cost of Tender Paper:** In respect of Government receipts on account of **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State

Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to **Bid Identification Number**. The State Procurement Cell shall generate Bank-wise-head-wise challans separately for **Cost of Tender Paper** and instruct the designated Banks to remit the money to the State Government account under different heads. In respect of the cost of tender paper received through the e-procurement portal, the remittance to the Cyber Treasury account will be made to the Head of Account 0075-Misc, General Services-800-Other Receipts -0097-Misc. Receipts-02237-Cost of Tender Paper.

- b) For the time being, the State Procurement Cell (SPC) will use over the counter payment facility of the Odisha Treasury portal. Thereafter, remittance through NEFT & RTGS will be facilitated through the Odisha Treasury portal.
- c) Similarly, in case of State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc., **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to **Bid Identification Number**. The State Procurement Cell shall generate Bank-wise list of challans and instruct the designated Banks to remit the money through the Odisha Treasury portal. The cost of tender papers will be credited to the registered Bank account of the concerned State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc.
- d) Bank will refund (in case the Tender Inviting Authority (TIA) issues such instructions) the tender fee, EMD to the bidder, in case the tender is cancelled before opening of Bid as per direction received from TIA through e-procurement system.
- e) Back-end Transaction Matrix of Electronic receipt of Cost of Tender Paper and Earnest Money Deposit on submission of bids is enclosed in the Annexure.

#### **7. Settlement of Earnest Money Deposit on submission of bids:**

- a) The Bank will remit the **Earnest Money Deposit on submission/ cancellation of bids** to respective bidders accounts as per direction received from TIA through e-procurement system.

#### **8. Forfeiture of EMD :**

Forfeiture of **Earnest Money Deposit on submission of bid** of defaulting bidder is occasioned for various reasons.

- a) In case the **Earnest Money Deposit on submission of bid** is forfeited, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority.
- b) The Tender inviting authorities of the Government Departments will deposit the forfeited **Earnest Money Deposit on submission of bid**, in the State Government Treasury under the appropriate head (8782-Cash Remittances and Adjustments between the officers rendering accounts to the same Accounts Officer-102-P.W.Remittances-1683-Remittances-91028-Remittances into Treasury) after taking the amount as a revenue receipt in their Cash Book under

the head 0075-Misc. General Services-00-101 -Unclaimed Deposits-0097-Misc, Receipts-02080-Misc. Deposits and submit the detail account to DAG (Puri) as a deposit of the Division.

- c) By clicking submit button, system will initiate the forfeiture of EMD. System will not allow the evaluator to edit the initiation after clicking the submit button. Forfeiture option can be carried out in phased manner like one bidder at a time.

**9. Role of the Banks:**

- a) Make necessary provision / customizations at their end to enable the provision for online payments / refunds as per this document.
- b) Provide necessary real-time message to bidders regarding successful or unsuccessful transactions during online payment processes and redirect them to e-Procurement website with necessary transaction reference details enabling them to submit their bids.
- c) The bank shall ensure transfer of funds from the pooling account to the Government Head/current account of PSUs/ULBs within the next bank working day as per the directions generated from e-Procurement portal.
- d) Bank should provide timely reports and reference details to NIC enabling them to carry out their role as stated below.
- e) Refund of amount to bidders as per the XML file provided by e-Procurement system on the next bank working day from the date of generation of the XML file and also provide a confirmation to NIC on the same.

**10. Role of State Procurement Cell:**

- a) Communicate requirements of Government departments/ State PSUs/ Autonomous Bodies/ ULBs online payment requirements to National Informatics Centre / the authorised Banks for mapping/ customization.
- b) In every working day, the State Procurement Cell shall generate MIS from the e-Procurement portal to ascertain the tender paper cost received in the e-Tendering process separately bank-wise for the Government Department and the PSUs/ULBs. The SPC shall generate bank-wise separate online challans from the Odisha Treasury portal and make the remittance through over the counter facility or NEFT/RTGS (as and when this functionality is available in Treasury portal) and issue instruction to the bank for remittance of the receipt to the State Government account.
- c) The State Procurement Cell shall be responsible for providing challan details and MIS in respect of the remittance towards tender paper cost to the Tender inviting authorities for their record.
- d) State Procurement Cell shall monitor the progress of e-Tendering by different Government departments / State PSUs/ Autonomous Bodies / ULBs through an MIS. State Procurement Cell shall monitor and send monthly progress reports to the Government.
- e) The e-Procurement system will generate a consolidated refund & settlement XML file as an end of the day activity.

- f) e-procurement system will provide a web service for payment gateway (PG) provider to pull the encrypted refund and settlement details in XML file against a day.
- g) Similarly, payment gateway (PG) provider will provide a web service to pull the refund and settlement status against a day
- h) e-procurement system will update the status accordingly for reconciliation report.

**11. Role of National Informatics Centre :**

- a) Customize e-Procurement software and web-pages of Government of Odisha (<https://tendersodisha.gov.in>) to enable the provision for electronic payment.
- b) The NIC, Odisha will modify / rectify the errors in electronic data relating to the Chart of Account.
- c) NIC will provide an interface to organisations to download the electronic receipt data.
- d) Enable automatic generation of daily XML files from e-Procurement system and ensure delivery of the same to the authorised Banks for enabling automatic refund/settlement of funds.
- e) NIC shall enable the e-Procurement portal to generate MIS as required for the State Procurement Cell in order to make remittance of the tender paper cost to the State Government account using the Odisha Treasury portal.

**12. Role of Cyber Treasury :**

- a) The cost of the tender paper deposited by the SPC using the Odisha Treasury Portal which will be accounted for by the Cyber Treasury and it shall submit the accounts to A.G (O) as per the established process.
- b) The Cyber Treasury will provide MIS as required to the SPC for the purpose of accounting and reconciliation of the electronic remittances made to the State Government account.

**13. Redressal of Public grievances :**

- a) The State Procurement Cell, Odisha, National Informatics Centre, Odisha and the e-FPB will have an effective procedure for dealing with, public complaint for e-Receipt related matters. In case, any mistake is detected by any of the stakeholders in reporting of receipt of tender paper cost and EMD, either suo moto or on being brought to its notice, the State Procurement Cell, Odisha, National Informatics Centre, Odisha unit, Cyber Treasury and the bank will promptly take steps for rectification. The e-Focal Point Branch of the participating Banks, National Informatics Centre, Odisha and the State Procurement Cell, Odisha will notify the contact number and address of the Help Desk for resolution of any dispute regarding e-Receipt.

**14. Applicability and modification of existing rules / orders:**

The modalities prescribed in this Office Memorandum for downloading of tender paper, submission and rejection of bid, acceptance of Bids as well as refund and forfeiture of earnest deposit will be applicable for electronic submission of bids through e-procurement portal. Existing provisions regulating cost of tender paper, earnest money deposit in OPWD Code and OGFR would stand modified to the extent prescribed.

- 15.** These arrangements would be made effective after signing of MoU between the designated Banks and the State Procurement Cell, firming up of Banking arrangements and technical integration between designated Bank and e-Procurement Portal.
1. This shall take effect from the date of issue of this Office Memorandum.
  2. Accordingly, relevant existing codal/ contractual provision exist vide Office Memorandum No.6785/W Dt.09.05.2017 of Works Department stands modified to the above extent.
  3. This has been concurred in by the Finance Department vide their UOR No.-39-WF-I Dt.09.11.2017.

***Sd/05.12.2017***  
**E.I.C-cum-Secretary to Govt.**

***[For any Technical related queries please call at Help desk numbers of State Procurement Cell (SPC), Govt. of Odisha – 1800 3456 765, 0674-2530998, 2530996]***

**ANNXURE-I of Appendix - II**

**Back-end Transaction Matrix of Electronic receipt and remittance of Cost of Tender Paper and Earnest Money Deposit on submission of bids.**

	<b>Cost of Tender Paper on submission of bids</b>	<b>Earnest Money Deposit on submission of bids</b>
Government Departments	<p>I. The payment towards the <b>cost of Tender Paper</b>, in case Government Departments, shall be collected in separate Pooling accounts opened in Focal Point Branch called e-FPB of respective designated banks [as stated in Para 2] at Bhubaneswar on T+1_day.</p> <p>II. With reference to the Notice Inviting Tender/ Bid Identification Number, the amount so realized is to be remitted to Government Account under the Head Of Account 0075-Misc. General Services-800-Other Receipts-0097-Misc. Receipts-02237-Cost of Tender Paper through Odisha Treasury Portal after opening of the bid.</p>	<p>I. In case of tenders of Government Departments, amount towards <b>Earnest Money Deposit</b> on submission of bids shall be collected in a pooling account opened for this purpose at Focal Point Branch called e-FPB of respective designated banks at Bhubaneswar and the banks will remit the amount to respective bidder's account within two working days on receipt of instruction from TIA through refund and settlement of e-procurement system.</p> <p>II. In case of forfeiture of <b>Earnest Money Deposit</b> on submission of bids, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority within two working days of receipt of instruction from TIA.</p>
State PSUs Statutory Corporations, Autonomous Bodies and Local Bodies.	<p>I. In case of State PSUs, Statutory corporations, Autonomous Bodies and Local Bodies etc. the amount towards <b>Cost of Tender Paper</b>, on submission of bids shall be collected in separated pooling accounts opened in Focal Point Branch called e-FPB of respective designated Banks at Bhubaneswar on T+1 days.</p> <p>II. The <b>Paper cost</b> will be transferred to the respective current accounts of concerned State PSUs, Statutory Corporation, Autonomous Bodies and Local Bodies etc. after opening of bid.</p>	<p>I. Amount towards <b>EMD</b> on submission of bids shall be collected in a separate pooling account of Focal Point Branch called e-FPB of respective designated banks at Bhubaneswar and the banks will remit the amount to respective bidder's account on receipt of instruction from TIA through refund and settlement of e-procurement system within two working days from receipt of such instruction.</p> <p>II. In case of forfeiture of <b>Earnest Money deposit</b> on submission of bids, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority within two working days of receipt of instruction from TIA.</p>