



Tender Call Notice No. 03/24-25 of panchayat Samiti, Dabugam

**GOVERNMENT OF ODISHA  
PR & DW DEPARTMENT**

# **BID DOCUMENT**

**FOR  
COMPOSITE TENDER OF BUILDING WORKS**

**OFFICE OF THE PANCHAYAT SAMITI DABUGAM**

**BID DOCUMENTS**

Contractor

  
BLOCK DEVELOPMENT OFFICER, DABUGAM

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Government Of Odisha

## PANCHAYAT SAMITI DABUGAM

INVITATION FOR BIDS (IFB)

**Bid Identification No. 3/2024-25 of Panchayat Samiti, Dabugam****Letter No.....612.....Dt.....21/02/2025**

The Panchayat Samiti, Dabugamon behalf of Governor of Odisha Invites Percentage Rate Bids InDouble Cover system in conformity with detail Tender call notice No. **03/2024-25 of Panchayat Samiti, Dabugam Dated:21.02.2025** to be eventually drawn up in State P.W.D Form P-1 contract for the execution of the works detail in the table, from the class of eligible contractors as mentioned against the work in Column - 4 (four) registered with the State Governments and contractors of equivalent Grade/ Class Registered with Central Government/ MES/ Railways/ CPWD for execution of civil works. The proof of registration from the appropriate authority shall be enclosed along with the Bid. If successful, the bidder who has not registered under State Government has to register under the appropriate registering authority of the State Government of Odisha in appropriate class of eligibility before award of the work as per prevalent registration norms of the state. The bidders may submit bids for the following works.

SLNo	Name of work	Approximate value of work.	Class of contractor	Concerned office. With Head qrs.	E.M.D. (Rs.)	Cost of document (Rs.)	Period of completion.
1	2	3	4	5	6	7	8
1.	Construction of GPLF Building at Medena of Dabugam Block under Nabarangpur District for the year 2024-25	Rs.2388075.00	"B" Class & "C" Class	Panchayat Samiti, Dabugam	23880/-	6,000/-	6 (Six) Calendar Months
2.	Construction of GPLF Building at Ghodakhunta of Dabugam Block under Nabarangpur District for the year 2024-25	Rs.2388075.00	"B" Class & "C" Class	Panchayat Samiti, Dabugam	23880/-	6,000/-	6 (Six) Calendar Months
3.	Construction of GPLF Building at Junapani of Dabugam Block under Nabarangpur District for the year 2024-25	Rs.2388075.00	"B" Class & "C" Class	Panchayat Samiti, Dabugam	23880/-	6,000/-	6 (Six) Calendar Months
4.	Construction of GPLF Building at Dongriguda of Dabugam Block under Nabarangpur District for the year 2024-25	Rs.2388075.00	"B" Class & "C" Class	Panchayat Samiti, Dabugam	23880/-	6,000/-	6 (Six) Calendar Months
5.	Construction of GPLF Building at Borigam of Dabugam Block under Nabarangpur District for the year 2024-25	Rs.2388075.00	"B" Class & "C" Class	Panchayat Samiti, Dabugam	23880/-	6,000/-	6 (Six) Calendar Months

Bid documents consisting of plans, specifications, the schedule of quantities and the set of terms and conditions of contract and other necessary documents can be seen in the office of the undersigned during the office hours every Day except on Sunday and public holiday till last date of receipt of tender papers Interested bidders may obtained further information at the same address.

Contractor

  
 BLOCK DEVELOPMENT OFFICER, DABUGAM

2. Bids must be accompanied with financial instruments towards E.M.D in shape of N.S.C./Post Office Saving Bank Account/Post Office time deposit Account/Kissan Vikas Patra/ Bank guarantee in favour of Block Development Office of concern block from any nationalized scheduled bank in India counter guaranteed by its local branch at Bhubaneswar/e- bank guarantee executed on the National e-Governance Services Limited (NeSL) Digital document Execution Portal towards E.M.D/Initial security Deposit/any other security deposit from the contractor or supplier as provided in Memorandum No. 1499 dt. 01.02.2023 of Works Dept., Govt. Of Odisha. Bids must also be accompanied by self-attested Photo copy of valid GSTIN, PAN card and valid contract registration certificate, failing which the bid will be liable for rejection.
3. Bid documents can be Downloaded from official website of Government of Odisha (<https://tendersodisha.gov.in/>) start from **Dt. 28.02.2025** to **Dt. 17.03.2025**. The bidders who have downloaded the bidding documents from the internet site will have to pay the cost of the tender document as indicated in col no. 7 .
4. The Bids will be opened on the **Dt. 18.03.2025 at 11.00 AM** in the office of the undersigned, in the presence of the members of tender committee of **PANCHAYAT SAMITI, DABUGAM** , bidders or their authorized agents who wish to attend at the Conference hall of **PANCHAYAT SAMITI, DABUGAM** . If the office happens to be closed on the last date of receipt/ opening as specified, the bids will be received / opened in the next working day at the same time and venue specified in the notification. Other details can be seen in the bidding documents.
5. Additional performance security shall be obtained from the bidder when the bid amount is less than the 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 amount as per table below. Additional Performance Security (APS) has to be furnished in shape of Demand Draft/ Term Deposit Receipt pledged in favour of the Block Development Office, within seven days of issue of letter of acceptance (LOA), otherwise the bid shall be cancelled and the security deposit shall be forfeited. Further proceeding for black listing shall be initiated against bidder.
5. In case of Engineering contractors seeking exemption of EMD are instructed to enclose an affidavit regarding the list of works awarded during the current financial year 2024-25 with exemption of EMD along with an application to avail the same for this work and will submit copy of original contract license and produce the original license at the time of opening of tender, otherwise the tender will be rejected.
7. The Selected bidders must have to deposit 1% ISD of Bid Value & APS (if Any ) at the time of agreement in shape of Demand Draft drawn in favour of Block Development Officer , Dabugam Payable at State Bank of India, Dabugam.


Amount of Additional Performance Security		
Sl. No	Range of Difference between the estimated cost put to tender and Bid amount	Additional Performance Security to be deposited by the successful bidder
I.	Below 5%	No Additional Performance Security
II.	From 5% and above and below 10%	50% of (Difference between estimated cost put to tender and Bid Amount)
III.	From 10% and above	150% of (Difference between estimated cost put to tender and Bid Amount)

3. Scheduled Caste and Scheduled Tribe Tenderers will be given concession where their tenders are within 10% of the rate quoted by the lowest tenderer, for any work, the work may be considered for award to him/ them at the lowest tendered rate. The Security deposit at half the usual rate may be deposited/realized by/from the Scheduled Caste or Scheduled Tribe contractors coming under categories up to "B" class only as against the permissible percentage under Rule 13 of the PWD contractor's regulations rules.
3. If any bidder quotes less than 15% (fifteen) of the amount put to tender then such a bid shall be rejected and the tender shall be finalized basing on merit of the rest bids and if more than one bid is quoted at 14.99% (decimal upto 2 nos. will be taken for all practice purpose) less than the estimated cost, the tender accepting authority will finalize the tender through transparent lottery system in presence of bidder or their representatives.

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BLOCK DEVELOPMENT OFFICER, DABUGAM

10. The percentage quoted in the tender without mentioning excess or less shall be treated as excess.
11. Validity of tender shall be 90 days from the date of opening of tender.
12. Any addendum/ corrigendum/ cancellation of above tender will be displayed in notice Board & published in the website(<https://tendersodisha.gov.in/>)
13. The authority reserves right to reject/cancel any or all the tenders without assigning any reason thereof.


  
Block Development Officer,  
Dabugam

Memo No. 613 /2025

Dated. 21/02/2025

Copy submitted to the Secretary I & PR Deptt. Odisha, Bhubaneswar for favour of kind information.

Copy along with DTCN (Soft Copy) submitted to DeGM Collectorate, Nabarangpur with a request to display the bid document in the district website from Dt. 28.02.2025 to 17.03.2025 up to 5.00 P.M.


  
Block Development Officer,  
Dabugam

Memo No. 614 /2025

Dated. 21/02/2025

Copy to Notice Board.

Copy to all Block Development Officers/All Tahasildars/All CDPOs of the district for information with a request to publish the same in their Notice Board for wide publicity.

  
Block Development Officer,  
Dabugam

Memo No. 615 /2025

Dated. 21/02/2025

Copy submitted to the CDO-cum-EO, Zilla Parishad, Nabarangpur for favour of kind information.

Copy submitted to the Collector, Nabarangpur for favour of kind information.

  
Block Development Officer,  
Dabugam

Memo No. 616 /2025

Dated. 21/02/2025

Copy submitted to the Deputy Secretary, Govt. in PR & DW Deptt. (O), BBSR for favour of kind information & necessary action.

  
Block Development Officer,  
Dabugam

**CHECK LIST TO BE ENSURED BY THE BIDDER**

Sl. No.	Particulars	Reference to Clause	Whether furnished		Ref. To Page No.
			Yes	No	
1.	Cost of tender paper Rs. 6,000/-	DTCN			Page No. 2 & 3
2.	All the EMDs requirements mentioned in the DTCN shall be Guided as per (Bid security Declaration as per Schedule-H) Vide OM No. 5984 Dt.27.04.2021 of works department.	DTCN Clause - 2 & Schedule-H			Page No. 3 & 66
3.	Additional Performance Security in case the bid price/ rate is less than the estimated cost put to tender as per OM No.4559 Dt.5.4.2021 of Works Department, Govt of Odisha.	DTCN Clause - 5			Page No. 3
4.	Copy of valid Registration Certificate	DTCN - 2 Clause - 2			Page No. 3
5.	Copy of GST & GSTIN Regd. Certificate.	DTCN Clause - 2			Page No. 3
6.	Copy of PAN Card	DTCN Clause - 2			Page No. 3
7.	No Relation Certificate in Schedule-A	DTCN Schedule - A			Page No. 59
8.(a)	Information regarding current litigation, debarring/ expelling of the tender or abandonment of the work by the tenderer.	DTCN Schedule - E			Page No. 63
(b)	Affidavit in legal stamp paper	DTCN (Schedule-F)			Page No. 64
9	Similar Nature of Work	DTCN (Schedule-D)			Page No. 62
10	Qualification of key personnel engaged.	DTCN (Schedule-B)			Page No. 60
11(a)	List of plant and equipment with the contractor	DTCN (Schedule-C) Annexure - I			Page No. 61
(b)	Apart from the above the contractor shall have to arrange other machineries of any required for the work	DTCN (Schedule-C) Annexure - II			Page No. 61
12	Registration certificate PAN Card, Valid GST for execution of composite work. For verification purpose.	DTCN Clause (IFB)			Page No. 8
13	Existing commitments and ongoing works. And MoU for Electrical	DTCN (Schedule-G&I)			Page No. 65& 67

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BLOCK DEVELOPMENT OFFICER, DABUGAM

**CONTRACT DATA****A. GENERAL INFORMATIONS**

Sl No.	Item	Details
1.	Bid Identification No.	03 / 2024-25 PANCHAYAT SAMITI, DABUGAM
2.	Officer Inviting Tender	PANCHAYAT SAMITI, DABUGAM
3.	Accepting Authority	BLOCK DEVELOPMENT OFFICER DABUGAM
4.	Executing Authority	BLOCK DEVELOPMENT OFFICER DABUGAM

**B. BID INFORMATION**

5.	Intended completion period/ Time period/ assigned for Completion	06 (six) Calendar Months
6.	Last Date & time of submission of Bid	Date: 17/ 03/2025 at 5.00 PM
7.	Date of opening	Date: 18/ 03/2025 at 11.00 A.M
8.	Cost of Bid Document (as per Cl No. 7 of Table), Page- 2	
	I Amount	Rs.6,000/-
9.	Bid Security	
	I Bid Security Declaration as per Schedule-I) vide F.D.OM No. 5894 Dt. 27.04.2021	
10.	Bid validity period	90 days
11.	Currency of Contract	Indian Rupee
12.	Language of Contract	English
13.	Similar Nature of work.	Similar Nature of work means experience in Building works.

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 BLOCK DEVELOPMENT OFFICER, DABUGAM

## Instruction to Bidders

(Relevant clauses in the DTCN/ Bid document shall be superseded)

### A. GENERAL

#### 1. NOTICE INVITING BID AND OBTAINING BID DOCUMENTS:

- 1.1. The authority belonging to the major discipline is competent to invite tender of composite bids. He will also nominate the Block Development Office who will deal with all matters relating to the bids in the invitation of bids.
- 1.2. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules/ amendments issued there under from time to time. If he fails to do so, it will be considered a breach of the contract and the Block Development Office may in his discretion without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.
- 1.3. The contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices quoted in the Bill of Quantities, all of which shall, except in so far as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, plant & services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the work and the remedy of any defects therein.
- 1.4. The successful bidder shall complete the works by the intended completion date specified in the Contract data.
- 1.5. Throughout these bidding documents, the terms "bid and tender" EMD and Bid Security and their derivatives (bidder/ tenderer, bidding/ tendering, etc.) are synonymous.
- 1.6. In case the tender for composite work includes in addition to main work/ building work all other ancillary works such as sanitary and water supply installations, drainage installation, electrical work, horticulture work, roads and paths and gate works in dams and canals etc., the bidder apart from being a registered civil Contractor of appropriate class must associate himself for the said work with agencies of appropriate class those who is eligible to tender, electrical and horticulture works in the composite tender. Intending purchasers are required to produce documents viz. Contractor Registration Certificate, Pan card, Valid GST, of self and the contractor with whom associated for execution of Composite work for verification purpose in the later stage. Furnishing copy of such documents is mandatory along with the tender documents otherwise, his/ her bid shall be declared as non-responsive and thus liable for rejection. The Successful lowest Bidder is required to produce the originals of all the documents in the office of Block Dev. Officer, for verification within 5 (five) days of opening of the financial bid. 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 L-1 bidder. The Successful bidder who has quoted less bid price/ rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender

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BLOCK DEVELOPMENT OFFICER, DABUGAM

minus the quoted amount as Additional Performance Security (APS) in shape of TDR in favour of the Block Dev. Officer, / Bank Guarantee in favour of the Block Development Office from any Nationalized/ Schedule Bank in India Counter guaranteed by its local branch within 7 (Seven) days of issue of letter of acceptance (LOA) by the Block Development Office to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the EMD/ Bid Security shall be forfeited. Further processing for blacklisting shall be initiated against the bidder.

## 2. ELIGIBLE BIDDERS

- 2.1. This Bid is open to all Contractors of the class mentioned in the *Invitation for Bids* registered with the State Governments and Contractors of Equivalent Grade/ Class Registered with Central Government/MES/Railways for execution of civil works. The Bidders are required to enclose the proof of registration license from the registering authority. Contractors not registered with Government of Odisha, can participate in tender but have to subsequently register themselves with the appropriate registering authority of the State Government before award of work as preregistration norms of the state.
- 2.2. If the bidder has a relative employed as an Officer in the rank of an Assistant Engineer/ Under Secretary and above in the State Government of Odisha in the concerned Department, he shall inform the same in the bid mentioning the exact details in a covering letter along with the tender, failing which his bid will not be considered. Also, if the fact of relationship subsequently comes to light, his contract will be rescinded. The bid security or the performance security will be forfeited and he shall be liable to make good any loss or damage resulting from such cancellation. In case the bidder has no relationship with any of the officers mentioned above he shall have to furnish with his bid-a certificate.
- 2.3. He shall also intimate the names of persons who are working with him in any capacity or are Subsequently employed by him and who are near relatives to any gazette officer in the concerned department. Any breach of this condition by the contractor would render him liable for penal action for suppression of facts.
- 2.4. No Engineer of gazette rank or other gazette officer employed in Engineering or Administrative duties in an Engineering Department of the Government of Odisha is allowed to work for contractor for a period of two years after his retirement from Government service, without prior permission of the Government of Odisha in writing. Such a contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of Odisha as aforesaid before submission of the tender for engagement in the contractor's service.

## 3. QUALIFICATION CRITERIA:

- 3.1 The bid shall include following information and documents:
  - a. Copy of valid contractor's registration certificate, PAN card, GST of self and the Contractor with whom associated for execution of Composite work should accompany the technical bid.
  - b. Copies of original documents defining the constitution or legal status, place of registration, and principal place of business, written power of attorney of the signatory.

- c. The contractor or his identified sub-contractor (Permissible in case of Composite bids only) should possess and furnish required valid license, PAN, GST for executing the electrical installation works/ mechanical works/ building electrification works.
- d. Details of work under progress.
- e. Details of work for which bid submitted.
- f. The detailed list of plant and machineries to be employed by the bidder for use in this work is to be furnished as required Schedule-C

3.2 The Bidders are subject to be disqualified if they have

- a. Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements.
- b. Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.
- c. Participated in the previous bidding for the same work and had quoted unreasonable prices and could not furnish rational justification to the Engineer-in-Charge.
- d. Indulged in unlawful & corrupt means in obtaining bids.
- e. Been black listed/ suspended by the competent authority.

4. ONE BID PER BIDDER

- 4.1 Each bidder shall submit only one bid for one work. A bid is said to be complete if accompanied by cost of bid document and appropriate bid security.

5. COST OF BIDDING:

- 5.1 The bidder shall bear all costs associated with the preparation and submission of his bid, and the Block Development Officer will in no case be responsible and liable for those costs.
- 5.2 The Estimated Cost is excluding GST and including CESS, Royalty and Cost of Conveyance. The rates of item basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates. GST as applicable on Works Contract shall be paid over the bill amount at the time payment of bill.
- 5.3 The rate of royalties and taxes prevailing on the date of measurement shall be considered as per latest Govt. Circular.
- 5.4 The successful bidder shall make his own arrangement for all materials unless otherwise specified in the conditions of contract.

6. SITE VISIT

(Revised/ substituted as per Works Deptt. Office Memorandum No.12366 Dt.8.11.2013)

- 6.1 Every bidder is expected before quoting his rate to inspect the site of proposed work. The bidder should also inspect the quarries and approach roads to quarries and satisfy himself/themselves about the quality and availability of materials. In every case the materials must comply with the relevant specifications. Complaints in future date that the availability of materials at quarries has been misjudged cannot be entertained. Bidders are advised to satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A Bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The Bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & plants,

water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of work.

- 6.2 The bidder, in preparing the bid, shall rely on site Investigation Reports referred to in the Contract Data, supplemented by any information available to the bidder.
- 6.3 The Officer inviting the bid/ Engineer-in-Charge will clarify queries on the Contract Data on requisition by the intending Bidder.
- 6.4

## **B. BIDDING DOCUMENTS**

### **7. GENERAL INSTRUCTIONS:**

- 1) The description of the work is as mentioned under Invitation for Bid.
- 2) The bids by the Tender Inviting Officer shall consist of general arrangements drawings or typical sections of the project. Bidder may be seen these drawings and take out the print for detail study. Any other drawings and documents pertaining to the works available with the officer inviting the Bid will be open for inspection by the bidders. The bidder is required to study all the documents for preparation of his bid. It is assumed that while participating in the bid, the bidder has referred all the drawings and required data given in the Bid. Seeking any revision of rates or backing out of the bid claiming for not having referred to any or all documents provided in the Bid by the Officer Inviting the Bid will be construed as plea to disrupt the bidding process and in such cases the bid security shall be forfeited.
- 3) The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms and technical specifications, bill of quantities, forms, Annexes Schedule and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk.

### **8. CLARIFICATION OF BIDDING DOCUMENTS:**

- 8.1 The bidder may clarify any queries related to tender by attending office within the stipulated time before last date and time of receipt of tender.

### **9. AMENDMENT OF BIDDING DOCUMENTS:**

- 9.1 Before the deadline for submission of bids, the officer inviting the Bid may modify the bidding documents by issuing addenda.
- 9.2 Any addendum/ corrigendum thus issued shall be part of the bidding documents and shall be notified in the website ([http:// www. Nabarangpur .nic .in](http://www.Nabarangpur.nic.in) ) & notice board.
- 9.3 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.
- 9.4 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Officer inviting the Bid if also happens to be the Block Development Office with the permission of the higher authority may, at his discretion, extend as necessary the dead line for submission of bids.

## C. PREPARATION OF BIDS

### 10. LANGUAGE OF THE BID:

All documents relating to the Bid shall be in the English/ Hindi / Oriya language. Bids submitted in any other language shall be summarily rejected.

### 11. DOCUMENTS COMPRISING THE BID:

11.1 Following documents will be deemed to be part of the bid even if not submitted with the bid.

- (i) Invitation for Bids (IFB)
- (ii) Instructions to bidders (ITB)
- (iii) Conditions of Contract
- (iv) Specifications
- (v) Drawings

11.2 All the volumes/ documents shall be provided in the website by the Officer inviting the bid also. The bidder shall carefully go through the document as per DTCN and prepare the required documents and submit the bid.

A. Cost of "Bid Document" & "Bid Security" shall comprise

- (i) Cost of Bid Document.
- (ii) Bid Security

B. "Technical Bid" shall comprise.

- (i) Declaration under the Official Secret Act, 1923
- (ii) Qualification Information and supporting documents,
- (iii) Certificates, undertakings, affidavits

C. "Financial Bid" shall comprise.

- (i) Priced Bill of Quantities

### 12. PROPOSAL BY THE BIDDER:

12.1 For Item rate tenders the bidder shall fill in rates in figures and should not leave any cell blank.

12.2 In case of percentage rate tender, the bidder shall write his name in the space provided in the specified location in the Bill of Quantities (BOQ) and write percentage excess or less up to two decimal place only in the designated.

12.3 **(Amendment to Appendix-IX, Clause-36 of OPWD Code Vol-II by inclusion) (Revised/substituted as per Works Deptt. Office Memorandum No. 12366 Dt.8.11.2013)**

If the rate quoted by the bidder is less than 15% of the tendered amount, then such a bid shall be rejected and the tender shall be finalized basing on the merits of rest bids. But if more than one bid is quoted at 14.99% (Decimals up to two numbers will be taken for all practical purposes) less than the estimated cost, the tender accepting authority will finalize the tender through a transparent lottery system, where all bidders/ their authorized representatives, the Block Development Officer, Dabugam will remain present.

12.4 The bidder shall bid for the whole works as described in the Bill of Quantities. The Estimated Cost is excluding GST and including CESS, Royalty and Cost of Conveyance. The rates of item basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates. GST as applicable on Works Contract shall be paid over the bill amount at the time of payment of bill.

- 12.5 Bidders shall submit offers that fully comply with the requirements of the bidding documents, including the Conditions of Contract basic technical design as indicated in the drawing and specification. Conditional offer or alternative offers will not be considered in the process of bid evaluation.
- 12.6 In the case of any bid where unit rate of any item/ items appear unrealistic, such bid will be considered as unbalanced and in case the bidder is unable to provide satisfactory explanation such a tender is liable to be disqualified and rejected.
- 12.7 The contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Bill of Quantities, all of which shall, except in so far as it is otherwise provide in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, plant & services or of contingencies for which there is a Provisional Sum) and all matters and things necessary for the proper execution and completion of the work and the remedying of any defects therein.
- 12.8 The contractor shall confirm in all respects, by giving all notices and paying all fees, with the provisions of:
- (i) Any national or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the works and remedying of any defects therein.
  - (ii) The rules and regulations of all public bodies and companies whose property rights are affected or may be affected in any way by the works.

### 13. CURRENCIES OF BID AND PAYMENT:

The unit rates and the prices shall be quoted by the bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees.

### 14. VALIDITY:

- 14.1. Bids shall remain valid for a period not less than 90 days or the period mentioned in the Contract Data, from the date of opening of tender as specified in the notice inviting the Bid. A Bid valid for a shorter period shall be rejected by the Block Development Office as non-responsive.
- 14.2. In exceptional circumstances, prior to expiry of the original time limit, the Officer inviting the Bid may request the bidders to extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. A bidder may refuse the request without any risk of forfeiture of his bid security.
- 14.3. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his bid security for the period of the extension.

### 15. (A) BID SECURITY AND ADDITIONAL PERFORMANCE SECURITY:

- 15.1 The Bidder shall submit, as part of his Bid, a Bid security for the amount mentioned under NIT/Contract Data. Bidder intending to participate in the bid shall have to deposit their Earnest Money deposit/Bid Security of the amount specified for the work in the table Col. 6 of the Tender Call Notice, failing which the bid will be liable for rejection.
- 15.2 The Successful bidder who has quoted less bid price / rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as Additional Performance Security (APS) as below has to be furnished in shape of Demand Draft/ Term Deposit Receipt pledged in favour of the Block Dev. Officer, within 7 (Seven) days of issue of letter of acceptance (LOA) by the Block Development Office to the Successful bidder otherwise the bid of the Successful bidder shall be cancelled the EMD/Bid Security shall be forfeited. Further proceeding for black listing shall be initiated against bidder.

The Additional Performance Security shall be in the favour of officer as named in Contract Date and shall be valid for a period of 45 days beyond the validity of the bid.

**Revised Amendment has been modified with OM No. 4559, Dt. 05.04.2021 of Works Deptt.**

Bid Security				
	To be submitted	Bid Security declaration as per the Office Memorandum No. 5894 Dt.27.04.2021 of Works Deptt.		
Additional Performance Security				
		Sl	Range of difference between Estimated cost put to tender and Bid amount.	Additional Performance Security to be deposited by the successful bidder.
		1	Below 5%	No additional Performance Security.
		2	From 5% and above and below 10%	50% of (Difference between Estimated cost put to tender and Bid amount.
		3	From 10% and above.	150% of (Difference between estimated cost put to tender and Bid amount.

15.3 Combined bid security for more than one work is not acceptable.

15.4 In the case of schedule caste/schedule tribe contractors, Government Undertakings, Co-operatives Societies, Diploma or Degree holders in Engineering who are registered with the Government of Odisha, the rules framed by Government from time to time about Cost of Bid documents, Bid security, availing price preference facilities and performance security will apply.

15.5 The Bid Security may be forfeited

- a. If the bidder withdraws the bid after opening of the bid but within the period of validity.
- b. If the Bidder seeks any revision of rates or back out of the bid claiming for not having referred to any or all documents provided in the Bid by the Officer Inviting the Bid.
- c. If the Bidder fails to submit the original documents within the stipulated date.
- d. In the case of a successful bidder, if the bidder fails within the specified time limit to
  - (i) Sign the Agreement
  - (ii) Furnish the required Performance Security including additional performance security if any.

#### 15.(B) FORMAT AND SIGNING OF BID:

- a. The bidder can download/ purchasing the tender of his choice and undertake the necessary preparatory work offline and submit the completed tender at his convenience before the closing date and time of submission. The bidder shall only submit single copy of the required documents and Price Bid in the bid document. In the Financial bid, the bidder cannot leave any figure blank. He has to only write the figures, & words. The Bidders are advised to submit the completed Bid document well ahead of the last date & time of receipt.

- b. 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.
- c. (I) The bidder should sign on all the documents, certificates submitted by him, owing responsibility for their correctness. 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.
- (II) However, the Officer inviting the Bid if so desires can ask for legible copies or original copies for verification within a stipulated period provided such document in no way alters the Bidder's price bid. If the Bidder fails to submit the original documents and Additional Performance Security within the stipulated date as defined in tender call notice, his bid security shall be forfeited.

### **D. SUBMISSION OF BIDS**

16.1(I) The bid shall require all the mandatory forms and filled up by the contractor before submission of the bid/ tender.

16.1(II) 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 consists of GST, / PAN, Registration-Certificates, Affidavits, Joint venture agreement along with other required documents as per Instruction to the bidder, Works in hand, List of machineries along with any other information required by OIT.

The financial bid shall consist of the Bill of Quantities (BOQ).

16.2 In case of item rate tender, bidders shall fill in their rates other than zero value in the specified place 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 work put to tender. The Successful bidder who has quoted less bid price / rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as Additional Performance Security (APS) in shape of TDR in favour of the Block Dev. Officer, / Bank Guarantee in favour of the Block Development Office from any Nationalised/ Schedule Bank in India Counter guaranteed by its local branch at Nabarangpur within 7 (Seven) days of issue of letter of acceptance (LOA) by the Block Development Office to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the EMD/Bid Security shall be forfeited. Further processing for black listing shall be initiated against the bidder.

- (a) 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 write rates in figure only in the rate column of respective items without any blank cell in the rate column in case of item rate tender and write percentage excess or less up to two decimal place only in case of percentage rate tender.
- (b) The Bidder should ensure clarity/ legibility of the document submitted by him.
- (c) The bidder should check whether all relevant documents are attached in bid or not.

### **17. DEADLINE FOR SUBMISSION OF THE BIDS:**

- Bids cannot be submitted after due date and time. The bidder should ensure correctness of the bid prior to submission. The bid cannot be opened even by the OIT before the due date and time of opening.
- The officer inviting the bid may extend the deadline for submission of bids by issuing an addendum/corrigendum, in which case all rights and obligations of the officer inviting the bid & and the bidders previously subject to the original deadline will then be subject to the new deadline.

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**18. LATE BIDS:**

18.1 Bids cannot be submitted after closer specified date and time.

**19. MODIFICATION AND WITHDRAWAL OF BIDS:**

19.1 In the tender, withdrawal of bid is allowed. But in such case he has to write a letter with appropriate reasons for his withdrawal addressed to the Officer inviting the bid citing reasons for withdrawal in the respective bid before the closure of receipt of the bid.

**E. OPENING AND EVALUATION****OPENING OF THE BID:**

- 20.1. Bid opening dates are specified in the DTCN or can be extended vide corrigendum. These dates are available in IFB i. e, in tender document (DTCN).
- 20.2. In the event of the specified date of bid opening being declared a holiday for the Officer inviting the Bid/ Engineer-in-Charge, the bids will be opened at the same time on the next working day.
- 20.3. The Additional Performance Security shall be verified regarding the genuineness of the financial instruments from the concerned banks / Post Offices of branch of the banks / post offices.
- 20.4. Combined bid security for more than one work is not acceptable.
- 20.5. The Successful bidder who has quoted less bid price / rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as Additional Performance Security (APS) in shape of TDR in favour of the Block Development Office/ Bank Guarantee in favour of the Block Development Office from any Nationalised/ Schedule Bank in India Counter guaranteed by its local branch at within 7(Seven) days of issue of letter of acceptance (LOA) by the Block Development Office to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the EMD/ Bid Security shall be forfeited. Further processing for blacklisting shall be initiated against the bidder.
- 20.6. The Technical evaluation of all the bids will be taken up only as per the information furnished by the Bidders. But evaluation of the bid does not exonerate the lowest bidder from checking their original documents and if at a later date the bidder is found to have misled the evaluation through wrong information, action shall be taken against the bidder/contractor.
- 20.7. After technical evaluation of the bidders and selection of the qualified bidders, the financial bids of the technically qualified bidders shall be opened on the due date of opening. Members of the bid opening committee shall open the financial bids for the technically qualified bidders. Opening of price bid and evaluation of lowest bidder is subject to satisfaction of other qualification information provided in the bid.
- i) The Financial Bid will be opened on the notified date & time in the presence of bidders or their authorized representative who wish to be present.
  - ii) At the time of opening of "Financial Bid", the names of the bidders whose bids were found responsive will be announced. The bids of only those bidders will be opened. The remaining bids will be rejected.
  - iii) The responsive bidders' names, the bid prices, the item wise rates the total amount of each item, any discounts and withdrawals, and such other details as the officer inviting the tender may consider appropriate, will be announced by him or his authorized representatives at the opening.
  - iv) Special rebate/ discount offers if any shall be declared and recorded first.
  - v) The Financial bid of the bidders shall be opened one by one by the designated officers. Tender committee members shall sign on each page of the BOQ and Comparative Statement.

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- vi) The Bidder can witness the principal activities and view the documents for that particular work.
- vii) In case of non-responsive tender the office reinventing tender should cancelled /re-tender.

#### 21. PROCESS TO BE CONFIDENTIAL:

Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the officer inviting the bid, processing of bids or award decisions may result in the rejection of his bid. The authority inviting bid may reserve the right to accept any additional document. The bidder will respond in not more than 7 (Seven) days of issue of the clarification letter, for failing which the bid of the bidder will be evaluated on its own merit.

#### 22. CLARIFICATION OF BIDS:

To assist in the examination, evaluation, and comparison of bids, the officer inviting the bid may, at his discretion, ask any bidders in writing to clarify on the documents provided in the Technical Bid, if necessary, with respect to any doubts or illegible documents.

#### 23. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS:

23.1. During the detailed evaluation of "Technical Bids", the officer inviting the bid will determine whether each bid: -

- i) Bid security is confirmed as NIT.
- ii) Has submitted legible documents as required for evaluation
- iii) Is substantially responsive to the requirements of the bidding documents.

23.2(a) During the detailed evaluation of the "Financial Bid", the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., priced bill of quantities, technical specifications and drawings.

(b) For examination, evaluation and comparison of bids, the officer inviting the bid may, at his discretion, ask the lowest bidder.

(c) For clarification of his rates including reduction of rate on negotiation and break down of unit rates.

### F. AWARD OF CONTRACT

#### 24. AWARD CRITERIA:

- a) The officer in charge will award the contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated price.
- b) The Employer shall notify acceptance of the work prior to expiry of the validity period by confirmed by registered letter. This letter of acceptance will state the sum that the Block Development Office 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.
- c) On acceptance of the tender, the Contractor shall name in writing his accredited representative(s) who would be responsible for taking instructions from the Block Dev. Officer.
- d) Competent Authority on behalf of Governor of Orissa reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
- e) The successful bidder registered under other State Government / MES / Railways / CPWD in equivalent rank has to register understate PWD before signing of the agreement.

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**25. OPTIONS IF THE BIDDER BACKS OUT FROM BIDDING PROCESS:**

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 3(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/there application will be considered for registration and action will be initiated to blacklist him/them. In that case, the L-2bidder, 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 and furnish the required Additional Performance Security (If required), otherwise the tender will be cancelled.

The bidding process shall be deemed to be complete till the date of issue of letter of acceptance. If the bidder fails to sign the agreement within the stipulated period mentioned on DTCN, his bid security shall stand forfeited.

**RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS:**

The competent authority on behalf of the Governor of Odisha does not bind him to accept the lowest or any other tender and reserves to him the authority to reject any or all the tenders received without assigning any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.

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

- (a) The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- (b) The bidder shall within 7 (Seven) days of issue of letter of acceptance, furnish the Performance security in the prescribed form & the work programme & shall sign the agreement in prescribed format, failing which the Block Development Office 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.

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 F2/P1 as the case may be
- (c) The letter to proceed with the work shall be issued by Block Development Office 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.

**27. CORRUPT OR FRAUDULENT PRACTICES:**

The Block Development Office will reject a proposal for award if he determines that the bidder recommended for award has been engaged in corrupt or fraudulent practices in competing for the contract in question. He will report to the Officer Inviting Bid /next higher authority. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.

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**DETAILED TENDER CALL NOTICE**

1. The Percentage tender rate bids are invited in double cover system from **"B"&"C"Class contractors** registered with the State Government and contractors of equivalent Grade / class registered with Central Government / MES / Railways for execution of Composite Building works on production of definite proof from the appropriate authority in prescribed form to be eventually drawn in P.W.D. FORM P-1
  - (a) This tender is on Composite basis and only tenderers with sound financial background capable of investing required amount for advance procurement of all materials required for the work need apply. Department shall not supply any material at all for the work.
  - (b) This detailed Tender Call Notice along with the clauses mentioned here in shall form a part of the contract and agreement.
  - (c) Contractor not registered with Government of Odisha, can participate 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.
2. The bid documents consisting of plans, specifications, the schedule of quantities and the set of terms and conditions of contract and other necessary documents can be seen in the website (<https://tendersodisha.gov.in/>)
3. The Bid documents will be available in the website: (<https://tendersodisha.gov.in/>). from Dt.28.02.2025 to Dt.17.03.2025.
4. The bid documents will be opened by the assigned officer in the PANCHAYAT SAMITI DABUGAM at 11.00 Hours - on 18.03.2025 in the presence of the bidders or their authorized representatives who wish to attend.
5. Bid must be accompanied with Earnest Money deposit/ Bid security and cost of Bid documents of the amount specified at Column.06 & 07 of the Tender Call Notice. As for OM No. 5894 Dt. 27.04.2021 of Works Deptt. Failing which the bid will be liable for rejection.
6. Contractor exempted from payment of EMD will be able to participate in the tender attached with documentary evidences in shape of affidavit towards his eligibility for such exemption.
8. The Successful bidder who has quoted less bid price / rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as Additional Performance Security (APS) in shape of TDR in favour of the Block Development Office/Bank Guarantee in favour of the Block Development Office from any Nationalised/Schedule Bank in India Counter guaranteed by its local branch at . within 7 (Seven days) of issue of letter of acceptance (LOA) by the Block Development Office to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the EMD/Bid Security shall be forfeited. Further processing for blacklisting shall be initiated against the bidder.
9. Self attested photo copies of following documents: -
  - i) Registration certificate as per clause-2 of DTCN & Registration Certificate of associates.
  - ii) Joint venture deed with eligible registered electrical contractors along with other relevant documents for composite Building
  - iii) GST and PAN as per DTCN.
  - iv) Schedule 'E' as DTCN
  - v) Schedule 'F' as of DTCN
  - vi) No relation certificate Other required schedule-A Information as per DTCN
  - vii) Furnishing of such documents along with the Technical Bid is mandatory otherwise, his/ her bid shall be declared as non-responsive and thus liable for rejection and action to be taken.

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10. The contractors registered with State Government and contractors of equivalent Grade/ class registered with Central Government / MES / Railways having registration for Civil, Electrical and P.H. works having both legal competency and expertise in Civil, Public Health and Electrical Engineering works can put tenders for this composite work and the documentary evidence under appropriate Act in support of their legal competency and expertise to execute Civil, Electrical and P.H. work invariably should accompany their tender papers. The Civil Contractor in order to take part in the Composite tender should enter into a joint venture agreement for that work with eligible Registered Electrical Contractors (Associate with the joint venture) and a copy of such agreement for the work after due registration should be attached with the Tender along with documents viz. Contractor Registration Certificate, Pan card, GST, of self and the contractor with whom associated for execution of Composite work. Furnishing copy of such documents is mandatory along with the tender documents otherwise, his/her bid shall be declared as non-responsive and thus liable for rejection. If the Civil Contractor is having registration in P.H. and Electrical works under the same name and style, the question of joint venture does not arise. Successful bidder who has not registered under State Government has to register under the appropriate registering authority of the State Government of Odisha in appropriate class of eligibility before award of the work as per prevalent registration norms of the state. The tender papers shall bear signature of authorised person of the tenderer, the letter of authorisation should accompany tender papers. The authorisation should clearly indicate the name of legal person to sign and enter in to agreement and receiving payment and will be responsible for all contractual obligations for execution of work for Civil, P.H and Electrical Items of work to the Block Dev. Officer, ..

(i) The contract will be drawn in PWD P1 Contract form & will constitute 3 parts as follows:

- |     |          |                               |
|-----|----------|-------------------------------|
| (a) | Part-I   | For Civil items of works      |
| (b) | Part-II  | For Electrical items of works |
| (c) | Part-III | For P.H items of work.        |

The contract shall be drawn & signed by Block Development Office on behalf of the Governor of Odisha.

11. No tenderers will be permitted to furnish their tender in their own manuscript papers. No letter should accompany the tender.

12. The tender should be strictly in accordance with the provisions as mentioned in the tender schedule. Any change in the wordings will not be accepted.

13. The work is to be completed in all respects within 06(Six) calendar months from the date of issue of work order. Tenderer whose tender is accepted must submit a programme of work including E.I. & P.H. work (both internal and external) immediately after issue of work order for approval of Block Dev. Officer, ..

14. All tenders received will remain valid for a period not less than 90 days or the period mentioned in the contract data, from the date of opening of tender as specified in the notice inviting the Bid. A bid valid for a shorter period shall be rejected by the Block Development Office as non-responsive. Validity of tenders can also be extended if agreed by the tenderers and the Department.

15.

i. In the case of Item Rate Tenders, the bidder shall write his name in the space provided in the specified location in the Bill of Quantities (BOQ). The bidder shall write his rates in figure only in the rate column of respective items without any blank cell in the rate column.

ii. In case of percentage Rate tenders, the bidder shall write his name in the space provided in the specified location in the Bill of Quantities (BOQ) of the financial bid. Only percentage quoted shall be considered. Percentage rate quoted by the Contractor shall be accurately write in the specified location, so that there is no discrepancy. The percentage rate quoted in

the tender without mentioning excess or less and not supported with the corresponding amount will be treated as excess. The Contractor will write percentage excess or less up to two decimal place only. Bills for percentage rates tender shall prepared at the estimated rate for individual item only and percentage excess or less shall be added or subtracted from the gross amount of the bill. The Estimated Cost is excluding GST and including CESS, Royalty and Cost of Conveyance. The rates of Item basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates. GST as applicable on Works Contract shall be paid over the bill amount at the time of Payment of Bill. If the rate quoted by the bidder is less than 15% of the tendered amount, then such a bid shall be rejected and the tender shall be finalized basing on the merits of rest bids. But if more than one bid is quoted at 14.99% (Decimals up to two numbers will be taken for all practical purposes) less than the estimated cost, the tender accepting authority will finalize the tender through a transparent lottery system, where all bidders/ their authorized representatives, the Block Development Office and D.A.O will remain present. (Amendment to Appendix-IX, Clause-36 of OPWD Code Vol-II by inclusion) (Revised/ substituted as per Works Deptt. Office Memorandum No. 12366 Dt.08.11.2013)

16. Every page of the D.T.C.N., tender paper to be signed by the tenderer during agreement.
17. The tendered shall carefully study the tentative drawings and specifications applicable to the contract and all the documents, which will form a part of the agreement to be entered in to, by the accepted tenderer and detailed specifications for Odisha, and other relevant specifications and drawings, which are available. Complaint at a future date that the tenderers have not seen plans and specifications cannot be entertained.
18. The drawings furnished with the tender are tentative and subject to revision or modification as tendered during the execution as per actual necessity and detail test conducted. But the tendered rates quoted by the tenderer will hold good in case of such modification of drawings during the time of execution and shall in no way invalidate the contract and no extra monetary compensation will be entertained. The work shall however be executed as per final approved drawing to be issued by the Engineer-in-Charge as and when required.
19. By admission of a tender for the work, a tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the work, about the quality and availability of the required quantity of material including the wheat/ rice referred to above, medical aid, labour and food stuff etc. and that rates quoted by him in the tender will be adequate to complete the work according to the specifications attached there to and that he had taken in to account all conditions and difficulties that may be encountered during its progress and to have quoted rates including labour and materials with lead, lifts, loading and unloading, freight for all materials and all other charges necessary for the completion of the work, to the entire satisfaction of the Engineer-in-Charge of the work and his authorised subordinates. After acceptance of the contract rate Government will not pay any extra charges for any reason in case the contractor claims later on to have misjudged as regard availability of materials, labour and other factors. Every bidder is expected before quoting his rate to inspect the site of proposed work. The bidder should also inspect the quarries and approach roads to quarries and satisfy himself/themselves about the quality and availability of materials. In every case the materials must comply with the relevant specifications. Complaints in future date that the availability of materials at quarries has been misjudged can not be entertained.
20. (Amendment to Para 3.4.16(a)(vii) of OPWD Code Vol-I by substitution) (Revised/substituted as per Works Deptt. Office Memorandum No.12366 dt.8.11.2013) For the purpose of estimate, the approved quarry lead is to be provided judiciously. Engineers in charge would be responsible for ensuring the quality of materials supplied. The contractors would however be responsible for procurement of materials from authorized sources and voluntarily disclose the source of procurement for the purpose of billing. Besides the bidder would be required to submit the details of quarry for procurement while submitting the bid.

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21. The tender should be accompanied with the attested true copies of the valid Registration certificate, GST, and PAN card which are mandatory. The bidder shall carefully go through the tender and prepare the required documents of DTCN of Instruction to bidder for and the originals of all scanned documents of the successful lowest bidder only are to be produced within 5 (five) days after opening of the tender in the offices of the ZP. for verification otherwise his/her bid shall be declared as non-responsive and he/she will be debarred in future from participating in tender for 3(three) years and will be blacklisted 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 L-1 bidder along with the required Additional Performance Security. The Successful bidder who has quoted less bid price / rates than the estimated cost put to tender shall have to furnish the exact amount of differential cost i.e. estimated cost put to tender minus the quoted amount as Additional Performance Security (APS) in shape of TDR in favour of the Block Dev. Officer, / Bank Guarantee in favour of the Block Development Office from any Nationalised/Schedule Bank in India Counter guaranteed by its local branch at .within 7(Seven days) of issue of letter of acceptance (LOA) by the Block Development Office to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the EMD/Bid Security shall be forfeited. Further processing for blacklisting shall be initiated against the bidder.
22. The tender containing extraneous conditions not covered by the tender notice are liable for rejection and quotations should be strictly in accordance with the items mentioned in the tender Call Notices. Any change in the wording will not be accepted.
23. Letters found in the tender documents raising or lowering the rates or dealing with any point in connection with the tender and regarding adjustment. or any other matter will not be considered.
24. The department reserves the right of authority to reject any or all tenders received without assigning any reason whatsoever.
25. The earnest money will be retained in the case of successful tenderers and will be dealt with as per terms and condition of O.P.W.D. Code the earnest money will be refunded to the unsuccessful tenderers on application after completion of the tender process. The retention of E.M.D. with the Department will carry no interest.
26. The Block Development Office will notify the bidder / tenderer whose bid has been accepted of the award prior to expiration of the validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the conditions of Contract called the "Letter of Acceptance") will state the sum that the Block Development Office will pay the contractor in consideration of the execution, completion and maintenance of the Works by the contractor as prescribed by the contract (Hereinafter and in the contract called the "Contract Price"). The bidder has to furnish performance (Initial Security Deposit) in shape of "bid security declaration" as per Office memorandum No.5984 Dt.27.04.2021 of works Deptt. After successful bidder, he has to submit initial security deposit @ 2% of the quoted amount in form of Deposit receipt of any Scheduled Commercial Bank in India / Kissan Vikash Patra / Post Office Savings Bank Account/National Savings Certificate / Post Office Time Deposit Account duly pledged in favour of the block development office payable at . before signing the agreement in the P.W.D. form No. F-2 (Schedule XLV No. 61) for the fulfilment of the contract in the block development office for civil, EI & PH component respectively as directed. The amount of security deposit withheld according to the provision of P-1 agreement shall be retained as security for the due fulfilment of this contract along with the additional performance security as mentioned in the DTCN duly pledged in favour of the Block Development Office payable at .In accordance with the provisions of the agreement.
- Standard P.W.D. Form P1 with latest amendments.
- Failure to enter in to the required agreement and to make the security deposit as above shall entail forfeiture of the Bid Security (earnest money). No contract (tender) shall be finally

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accepted until the required amount of initial security money is deposited. The security will be refunded after Six months of completion of the work and payment of the final bill will not carry any interest.

As concurred by Law Department & Finance Department In their U.O.R. No 848, Dt.21.05.97 J.O.R No.202 W.F.D. Dt.06.03.98 respectively the E.M.D. will be forfeited in case, where tenderers back out from the offer before acceptance of tender by the competent authority.

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 3(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.

27. The contractor should be liable to fully indemnify the Department for payment of compensation under workmen compensation act. VIII of 1923 on account of the workmen employed by the contractor and full amount of compensation paid will be recovered from the contractor.
28. Tenderers are required to liable by fair wages clause as introduced by Govt. of Orissa, Works Department letter No.VII (R&B) 5225, dt.26-2-55 and No.II, M-56/61-28842 (5), Dt.27-9-61.
29. The contractor shall bear cost of various incidentals, sundries and contingencies necessitated by work in full within the following or similar category.
  - a) Rent royalties, cess and other charges of materials, Octroi taxes including Ferry tolls, conveyance-charges and other cost on account of land buildings including temporary building required by the tenderer for collection of materials, storage, housing of staff or other purpose of the work are to be borne by the contractor at his own cost. No rent will be payable to Govt. for temporary occupation of land owned by govt. at the site of the work for Bonafede use of the land for work and all such construction of temporary nature by the contractor shall be done after Civil portion of the work and all such construction shall have to be demolished and debris removed and ground made good and cleared after completion of the work at no extra cost.
  - b) Royalty will be recovered from each bill as notified by Govt. from time to time unless K-Forms are enclosed. Refund of royalty at later date after passing of the bills cannot be entertained as the recovery of royalty is being credited to revenue.
  - c) Labour camps or huts necessary to a suitable scale including conservancy and sanitary arrangements therein to the satisfaction of the local labour laws and health authorities shall have to be provided by the Contractor.
  - d) Arrangement of suitable water supply including pipe water supply where available for the staff and labour as well as for the execution of the work is sole responsibility of the Contractor and no extra cost for carriage of water will be entertained.
  - e) All fees and dues levied by Municipal, Canal or Water Supply Authorities are to be borne by the Contractor.
  - f) Suitable safety equipment's and dresses, gloves, life belts etc. for the labour engaged in risky operations are to be supplied by the contractor at his own cost.
  - g) Suitable fencing barriers, signals including paraffin and electric signals where necessary at work and approaches in order in project the public and employees from accident has to be provided by the Contractor at his own cost.
  - h) Compensation including cost of any legal suit for injury to persons or property arising out of execution of the work and also any sum, which may become payable due to operation of the workmen compensation act, shall have to be borne by the contractor.

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- i) The contractor has to arrange adequate lighting arrangements for the work wherever necessary at his own cost.
30. No payment will be made for layout, benchmark, level pillars, profiles and benching and levelling the ground required, which has to be carried out by the contractor at his own cost. The rates to be quoted should be for finished items of work inclusive of carriage of all materials and all incidental items of work.
31. After the work is finished all surplus materials should be removed from the site of work, preliminary work such as vats, mixing platforms, etc. should be dismantled and all materials removed from the site and premises left neat and this should be inclusive in the rates. No extra payment will be made to the Contractor in this account.
32. It should be understood clearly that no claim what-so-ever will be entertained to extra items of works quantity of any item besides estimate amount unless written order is obtained from the competent authority and rate settled before the extra items of work or extra quantity of any items of work is taken up.
33. The tenderers shall have to abide by the C.P.W.D. safety code rules introduced by the Govt. of India, Ministry of Works and Housing & Supply in their standing order no.44150, Dt.25-11-57.
34. No part of the contract shall be sublet without written permission to the Block Development Office or transfer be made by the power of attorney authorising others to receive payment on contractor's behalf.
35. Bid documents consisting of plans, specifications, the schedule of quantities and the set of terms and conditions of contract and other necessary documents can be seen in all the offices issuing the documents and office of the under signed during office hours every day except on Sundays and Public Holidays till last date of sale and receipt of tender papers. Interested bidders may obtain further information at the same address. But it must be clearly understood that tenders must be received in order and according to instructions in complete shape. Incomplete tender is liable for rejection.
36. No Relation certificate  
The contractor shall furnish a certificate along with the tender to the effect that he is not related to any officer in the rank of an Assistant Engineer & above in the state PR & DW Deptt. or Assistant/Under Secretary & above in the PR & DW Deptt. If the fact subsequently proved to be false, the contract is liable to be rescinded. The earnest money & the total security will be forfeited & he shall be liable of make good to damages the loss or damages resulting for such cancellations. The proforma for no relationship certificate is contained in a separate sheet vide Schedule-A.
37. PAYMENT FOR VARIATION IN PRICE (Clause-31 of F2/P1 Contract)  
(Vide Works Department Memorandum No.15847 Dt.19.11.2019) Clause 31: Price Adjustment
- 37.1: 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 the following Paras.
- c) Following expressions and meanings are assigned to the work done during each months:

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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.

37.2: 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:

38. (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:

$$VM = 0.85 \times Pm/100 \times R \times (M1 - Mo)/Mo$$

VM 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.

Mo 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.

M1 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.

Pm Percentage of local material component (other than cement, steel, Bitumen and POL) of the work.

38 (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:

$$Vc = 0.85 \times Pc/100 \times R \times (C1 - Co)/Co$$

Vc Increase or decrease in the cost of work during the month under consideration due to changes in the rates for cement.

Co 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.

C1 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.

Pc Percentage of Cement Component of the work.

38 (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:

$$Vs = 0.85 \times Ps/100 \times R \times (S1 - So)/So$$

Vs Increase or decrease in the cost of work during the month under consideration due to changes in the rate for steel.

So 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.

S1 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.

Ps Percentage of Steel Component of the work.

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

38 (a)(iv) Adjustment for 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 IOC/BPCL depot at nearest centre on the day 28 days prior to date of opening of Bids,

$B_1$  The official retail price of bulk bitumen at the IOC/BPCL depot at nearest centre for the 15th day of the month under consideration

$P_b$  Percentage of Bitumen Component of the work.

38 (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:

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

$V_{pi}$  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

$P_{io}$  All India wholesale price index of pipe on 28 days preceding the date of opening of the bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

38 (b) Adjustment for Labour Component

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

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

$V_L$  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

$P_L$  Percentage of labour Component of the work.

38 (c) Adjustment of POL (fuel and lubricant) Component

Price adjustment for increase or decrease in the 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 IOC/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 IOC/BPCL/HPCL at nearest centre for the 15th day of the month under consideration

Pf 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.

38 (d) Adjustment for Plant and Machinery Spares Component

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:

$$Vp = 0.85 \times Pp / 100 \times R \times (P1 - P0) / P0$$

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

P0 The All India Whole sale 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,

P1 The All India Whole sale 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,

Pp 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 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 Portland cement
2	Bars & rods	Rebars	Mild steel long products.
3	Heavy Machinery & parts	Construction Machinery	Manufacture of machinery for mining, quarrying & construction

38 (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 authorised representative of Government and further, shall at the request of the Engineer-in-Charge, furnish document 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

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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 (PL)	POL (Pf)	Steel (Ps)+Cement (Pc) + Bitumen (Pb)+Pipes (Ppl)+ Plant & Machinery Spare & Component (Pp) + Other Materials*
1	R&B works (% of component)	Road Works	5	5	90
		Bridge works	5	5	90
		Building works	5	5	90
2	Irrigation work (% 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 on "Appendix to Bid" (enclosed herewith).

## Appendix to Bid Schedule of Adjustment Data

[For all works, adjustment factor for Labour and POL shall be considered @ 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]

Cl.No.38 of F2/P1 Contracts SI No.	Index Description	Source of Index	Base Value *	Base Date *	Weightage of Item**
38(a)(i)	Other materials	All India Whole sale price index (all commodities) as published by the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
38(a)(ii)	Cement	Whole sale price index for Cement (Ordinary Portland Cement) as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
38 (a)(iii)	Steel	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			

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		Commerce and Industry,			
38 (a)(iv)	Bitumen (VG-30)	Official retail price of bulk bitumen at the nearest IOC/HPCL depot.			
38 (a)(v)	Pipes	Whole sale price index for the type of Pipe under consideration, as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
38 (b)	Labour	Minimum Wage notified by the Labour and Employee's State Insurance Department of Government of Odisha, India			5%
38 (c)	POL	Official retail price of HSD at the nearest IOCL/HPCL/BPCL depot.			5%
38 (d)	Plant and Machinery	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,			
			Total		100%

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

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

39. All items of work as per schedule of quantities of this tender should confirm to Orissa Detailed Standard Specification. I.R.C. & I.S.I. Codes & Bridge code section I, II, III, IV & VII & latest design criteria for pre-stressed concrete bridge specially for Roads & Bridges issued by MoRT&H., Government of India, Compacting shall have to be carried out with help of mechanical vibrators from the range of I.S.2505, I.S.2006, I.S.2514, I.S.4656.

40. Shuttering & centring shall be with suitable steel shutters in side of which shall be lined with suitable sheeting and made leak proof and watertight. All joints in formwork shall be properly sealed preferably with P.V.C. joints sealing tapes & compounds.

41. Form work including complete false work shall be designed by the Contractor without any extra cost to employer and the Department will have the right to inspect the scaffolding, centring and shuttering made for the work and can reject partly or fully such structures, if found defective in their opinion. Any eventually such as loss of lives or property due to failure of centring and shuttering shall be the responsibility of the Contractor regarding compensation of all claims thereof.

42. Cement Concrete should be machine mixed by weight by means of concrete mixture/batching plant confirming to relevant grade and approved by the Engineer-in-charge for all types of concrete works. The Contractor should arrange his own batching plant concrete mixer appropriate vibrators, pumps, etc. for this purpose at his own cost and departmental machinery if available only may be utilised on payment of necessary hire charges as detailed in clause of recovery sheet on necessary requisition.

43. Cement shall be used by bags and weight of one bag of Cement should be 50 (fifty) Kg. net & the Engineer-in-Charge or his representative shall have the right to test the weight & quality from time to time.

44. The tenderers shall make all arrangements for proper storage of materials but no cost for

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raising shed for store and pay of security guard etc. will be borne by the Department. The department is not responsible for any theft or loss of materials at site. It is contractor's risk. Under any such plea, if the tenderer stops the work he shall have to pay the full penalty as per clauses of the contract.

45. Approach Road to site of work for transport of materials to site of work is sole responsibility of the Contractor. Statutory traffic restriction in the town area for Transport of construction material to site of work is to be taken in to consideration before tendering and no consideration for extra time or compensation thereof shall be considered.
46. The contractor should at his own cost arrange necessary tools and plants required for efficient execution of work and the rates quoted should be inclusive of transportation, hire and running charges of such plant and cost of consumables.
47. The contractor shall properly co-ordinate with the execution of P.H. and Electrical works and takes care of the safety of workers.
48. The machineries if available, with the department may be supplied on hire as per charges noted in the enclosed statement and may be changed from time to time subject to the condition that the contractor will execute in advance an agreement with the Block Dev. Officer.
49. No claim whatsoever will be entertained for supply of machineries.
50. The tenders should furnish along with their tender a list of works executed during the last three years duly certified by the concerned Engineer-in-charge indicating the satisfactory completion for Civil, P.H. & Electrical works as per the proforma enclosed in a separate sheet of Schedule-H.
51. An applicant or any of its constituent partners of whose contract for any work has been rescinded or who has abandoned any work in the last Five years, prior to the date of the bid, shall be debarred from qualification. The tenderer must submit the required information in schedule-E of the DTCN the tenderer is to furnish an affidavit (in-original) in the specified format as per Schedule-F-of the DTCN regarding authentication of tender documents & information about any litigation & Bank guarantee etc. Non-furnishing of the information in Schedule - E and required affidavit in Schedule - F(Original), the tender will be liable for rejection.
52. It should be clearly understood that:
  - a) The joints of the bars are to be provided with lapping, welds or bolts nuts as well be directed by the Engineer-in-charge. No payment shall be made for the lapping/welding of M.S/Tor steel reinforcement.
  - b) Concrete test specimens 150mm × 150mm × 150mm in size (whether plain or reinforced concrete) for the testing shall be taken for each structural member by a representative of the contractor in the presence of responsible officer of the rank not lower than that of an Assistant Engineer or sub- Divisional Officer. The contractor shall bear the cost so involved in testing. The test specimen in cube should be carried out in the Departmental Control and Research Laboratory of Cuttack or Bhubaneswar/ Nabarangpur. Test should be carried out in accordance with the stipulation in Bridges code section- III.
  - c) Test specimens shall be formed carefully in accordance with the standard method of taking test specimen and no plea shall be entertained later on the grounds that the casting of the test specimen was faulty and that the result of the specimen did not give a correct indication of the actual quality of concrete.
  - d) Plain concrete and reinforced concrete specimens will be tested in Government Test Houses at Alipore or Control and Research Laboratory at Cuttack/ Bhubaneswar/ Nabarangpur. Cost of testing of all specimens and samples will be borne by the Contractor.
53. The rates quoted should be inclusive of carriage of water required in connection with execution of the work. No claim for carriage of water whatsoever will be entertained.
54. The contractor shall employ one or more Engineering Graduate or Diploma holders as apprentice at his cost if the work as shown in the tender exceeds Rs.2,50,000.00. The apprentices will be selected by the Block Dev. Officer, .. The period of employment will commence within one month after the date of work order and would last till the date, when

  
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62. **Sample of all material** - The contractor shall supply sample of all materials fully before procurement for the work for testing and acceptance as may be requiring by the concerned Executive Engineer.
64. Super class contractor shall employ under himself two Graduate Engineer and two Diploma holders belonging to the State of Odisha. Special class contractor shall employ under him one graduate Engineer and two Diploma Holders belonging to the state of Orissa. Likewise 'A' class contractor shall employ under him one Graduate Engineer or two Diploma Holders belonging to state of Orissa. The contractor shall pay to the Engineering personnel monthly emoluments, which shall not be less than the emoluments of the personnel of equivalent qualification employed under the State Govt. of Odisha. The Engineer-in Chief (Civil), Orissa may however assist the contractor with names of such unemployed Graduate engineers and Diploma Holders if such help is sought for by the contractor. The names of such Engineering personnel appointed by the Contractors should be intimated to the tender receiving authority along with the tender as to who would be supervising the work. Each bill of the Super Class, Special Class or 'A' Class Contractor shall be accompanied by an employment Roll of the Engineering personnel together with a Certificate of the Graduate Engineer or Diploma Holder so employed by the contractor to the effect that the work executed as per the bill has been supervised by him. (Vide Works Department No. Codes M-22/91-15384 dated 9.7.91). The required certificate is to be furnished in the Performa contained in a separate sheet vide **Schedule-B**
65. An engineering personnel of the executing agency should be present at work site at the time of visit of High level Inspecting officers.
66. All reinforced cement work should conform to Orissa Detailed specification and should be of proportion M-15 and M-20 having a minimum compressive strength (in work test) 150Kg/200Kg: per Cm<sup>2</sup> in 15 Cm cubes at 28days, after mixing and test conducted in accordance with IS 456/2000 and IS 516 using 12mm to 20mm. size hard black crusher broken granite chips (20mm size not be exceed 25%).
67. Bailing out of water from the foundation, pipeline trenches S. Tanks/Soak pits/Sumps/M.H. etc. either rainwater or sub-soil water if necessary should be borne by the contractor. No payment will be made for benchmarks. Level pillars, profiles and benching and levelling the ground wherever required. The rates quoted should be for finished items of works inclusive of these incidental items of work.
68. It should be understood clearly that no claims whatsoever would be entertained.
69. The tenderer shall have to abide by the C.P.W.D. safety code rules introduced by the Government of India, Ministry of work Housing and Supply in their standing order No-44150 dtd.25.11.57.
70. The Contractor will have to submit to the Block Development Office for monthly return of labour both skilled and unskilled employed by him on the work.
71. All fittings for doors and windows P.H. & Electrical works as supplied by the Contractor should be of best quality and conform to relevant I.S. specification and should be got approved by the Engineer-in-charge of the respective wing before they are used on the work.
72. After completion of the work the contractor shall arrange at his own cost all requisite equipments for testing buildings, if found necessary and bear the entire cost of such test, including the inspection of Electrical Inspector.
73. The Tenderer has to furnish along with their tender,
1. a list of works, which are at present in their hand
  2. list of T&P and
  3. list of work executed in the prescribed Performa enclosed.
74. All reinforced cement concrete works should be finished smooth Extra charges for plastering if required to any R.C.C. structures like roof slab, Columns, Chajjas, fins, parapets, shelves etc. shall not be paid.
75. Deleted.
76. The contractor has to arrange the samples of materials required for execution to be got tested and approved by the Department before taking up the work and during course of execution required from time to time. All such samples are to be tested at Government Test

  
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house Alipore or at Control and Research Laboratory Cuttack at the cost of the Contractor with no extra cost to the Department for civil work.

77. If there is any damage to the work due to natural calamities like flood or cyclone or any other cause during the course of execution of work or up to 12 months after completion of work or if any, imperfection becomes apparent to the work within 12 months from the date of final certificate of completion of work the contractor shall make good of all such damages at his own cost with no extra cost to the Department. No claims, whatsoever, in this regard will be entertained.
78. The fly ash bricks should be well burnt and of good qualities. The bricks should be approved by the Engineer-in-charge before use in the work and should conform to the minimum strength as per National Building Code.
79. Under Section 1 of contract labour Regulation and Abolition Act 1970 the contractor who undertakes execution of work through labour should produce valid licence from the licensing authority of labour Department.
80. Standard co-efficient for linear measurement will be adopted while calculating consumption of steel and no claim whatsoever regarding difference in co-efficient of steel will be entertained. The rates quoted shall be inclusive of any eventuality of difference for co-efficient for linear measurements.
81. Engineering contractors excepting those claiming exemption with production of affidavit, should furnish E.M.D as specified in the Tender Notice failing which the tender will be summarily rejected.
82. That for the purpose of jurisdiction in the event of disputes if any of the contract would be deemed to have been entered in to within the State of Orissa and it is agreed that neither party to the contract will be competent to bring a suit in regard to the matter by this contract at any place outside the State of Orissa.
83. **SPECIAL CONDITIONS (PART OF THE CONTRACT)**
  - (i) All materials before they are being used in the items of works as per this Schedule of quantities and also the finished items of work where tests are applicable shall have to be tested through the Engineer-in-charge of the respective wing at appropriate Laboratories according to the relevant I.S. specifications of the materials and the said items of works and the cost of all such tests shall have to be borne by the Contractor and the rates of the items of works should be inclusive of cost of such tests.
  - (ii) The tests have to be planned & carried out such that the progress of work is not hampered
  - (iii) The tests are mandatory as per the prescribed frequencies and I.S. specifications. However, these are not exhaustive and the Engineer-in-charge has the right to prescribe other required test if any as will be considered from time to time.
84. In case of ambiguity between clauses of this D.T.C.N. and the P1 contract form, the relevant Clauses of the P1 contract form shall prevail over the D.T.C.N. The clauses not covered under P1 contract form shall be governed by the clauses of the D.T.C.N.
85. It must be definitely understood that the Government does not accept any responsibility for the correctness and completeness of the trial borings shown in the Cross Section.
86. Schedule of quantities is accompanied in Cover-II (Price Bid). It shall be definitely understood that the Government does not accept any responsibility for the correctness or completeness of this schedule and that this schedule is liable for alternation or omissions, deductions or alternations set forth in the conditions of the contract and such omissions, deductions, additions or alternations shall no way invalidate the contract and no extra monetary compensation, will be entertained.
87. In case of any complaint by the labour working about the non payment or less payment of his wages as per latest minimum Wages Act, the Addl. PD (Tech) will have the right to investigate and if the contractor is found to be in default, he may recover such amount due from the contractor and pay such amount to the labour directly under intimation to the local labour office of the Govt. The contractor shall not employ child labour. The decision of the APD (Tech) is final and binding on the contractor.
88. The contractor should arrange the materials like Steel, Cement, paint and bitumen etc. of approved quality and specification at his own cost for completion of the work with the time schedule. No extension of time will be granted on the application of the contractor due to delay in procurement of materials.

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89. If the contractor removes Government materials supplied to him from the site of work with a view to dispose of the same dishonestly, he shall be in addition to any other liability civil or criminal arising out of his contract be liable to pay a penalty equivalent to five times of the price of the materials according to the stock issue rate or market rate whichever is higher. The penalty so imposed shall be recovered at any time from any sum that may then or at any time thereafter become due to the contractor or from his security deposit or from the proceeds of sale thereof.
90. Though Departmental issue of cement and steel has indicated, it may not be taken as binding. The contractor must have to arrange by themselves cement, steel, bitumen and every sort of materials from approved manufacturer, get it tested in the Departmental Laboratory and approved by the Department before use. No extension of time or escalation of price on such account shall be entertained in future.
91. TOR rods, plates and structural members will be supplied in quantity, length and size available in the stock. For payment of reinforcement, the steel including plates etc. shall be measured in length of different diameter, size and specification as actually used (including hooks and cranks) in the work correct to an inch or cm. and their weight calculated as per sectional weight prescribed by the Indian Standard Specification or as directed by the Engineer-in-Charge (Wastage of bars and unnecessary lapping will not be considered for measurement and payment).
92. The contractor should at his own cost arrange necessary tools and plants required for the efficient execution of work and the rates quoted should be inclusive of the running charges of each plant and cost of conveyance.
93. Orissa Bridge & Construction Corporation Ltd. will be allowed price preference up to 3% over the lowest quotation or tender as laid down in works and Transport Department Resolution No-285 date-17.04.1974. The Orissa Construction Corporation will be allowed a price preference to the extent of up to 3% over the lowest tender amount (Where their tender is not the lowest) provided they express willingness to execute the work after reduction of rates by negotiation.
94. The contractor is required to pay royalty to Govt. as fixed from time to time and produce such documents in support of their payment to the concerned Engineer-in-Charge with their bills, failing which the amount towards royalties of different materials as utilised by them in the work will be recovered from their bills and deposited in the revenue of concerned department.
95. Under no circumstances interest is chargeable for the dues or additional dues if any payable for the work.
96. **Trial Boring** - The foundation level as indicated in the body of the departmental drawing is purely tentative and for the general guidance only. The Department has no responsibility for the suitability of actual strata at the foundation level. The contractor has to conduct his own boring before starting the work and get the samples tested at his own cost to ascertain the S.B.C. and credibility of the strata at founding level while quoting his rates for tender the contractor shall take in to account of the above aspects.
97. Any defects, shrinkage or other faults which may be noticed within **12 (twelve) months** from the completion of the work arising out of defective or improper materials or workmanship timing are upon the direction of the Engineer-in-Charge to be amended and made good by the contractor at his own cost unless the Engineer for reasons to be recorded in writing shall be decided that they ought to be paid for and in case of default Department may recover from the contractor the cost of making good the works. The contractor is also required to maintain the road/ building for **12 months** from the date of successful completion of the work.
98. From the commencement of the works to the completion of the same, they are to be under the contractors charge. The contractor is to be held responsible to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and they hold the Govt. of Odisha harmless for any claims for injuries to person or structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or anyone in his employment during the execution of the work. Also no claim shall be entertained for loss due to earthquake, flood, cyclone, epidemic, riot or any other calamity whether natural or incidental damages so caused will have to be made good by the contractor at his own cost.

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99. **Gradation of ingredients:** The coarse and fine aggregate shall meet the grade requirement as per the latest provision of relevant I.S. Code / I.R.C. code / MoRT&H specifications.
100. Where it will be found necessary by the Department, the Officer-in-Charge of the work shall issue an order book to the contractor to be kept at the site of the work with pages serially numbered. Orders regarding the work whenever necessary are to be entered in this book by the P.W.D. Officer-in-Charge with their dated signatures and duly noted by the contractor or his authorised agents with their dated signature. Orders entered in this book and noted by the contractor's agent shall be considered to have been duly given to the contractor for following the instructions of the Department. The order Book shall be the property of the P.W.D. and shall not be removed from the site of work without written permission of the Engineer-in-charge and to be submitted to the Engineer-in-charge every month.
101. No part of the contract shall be sublet without written permission of the concerned Block Development Office or transfer is made by power of Attorney authorising others to receive payment on the contractor's behalf.
102. The contractor should attach the certificate in token of payment deposit with the registration authority as per recent circular of the Government relating to his registration.
103. The rates quoted by the contractor shall cover the latest approved rates of labours, materials, P.O.L. and Royalties. Arrangement of borrows areas; land, approach road to the building site etc. are the responsibility of the contractor.
104. The rate for each work of concrete items wherever dewatering is imperatively necessary the term dewatering shall mean the execution or operation of the items due to standing water as well as due to percolation of water. The quoted rates will be inclusive of this.
105. Deleted.
106. Number of tests as specified in I.R.C. / MO RT & H / I.S. specification required for the construction of roads /bridges / buildings or any other structural works will be conducted in any Govt. Test House / Departmental laboratories/reputed material testing laboratory as to be decided by the Engineer-in-charge. Testing charges including expenditure for collection / transportation of samples /specimens etc. will be borne by the contractor. The collection of samples and testing are to be conducted for both prior to execution and during execution as may be directed by the Engineer-in-charge and on both the accounts the cost shall be borne by the contractor.
107. In case the 1<sup>st</sup> lowest tenderer or even the next lowest tenderers withdraw in series one by one, thereby facilitating a particular tender for award, then they shall be penalized with adequate disincentives with forfeiture of EMD unless adequate justification for such back out is furnished. Appropriate action for black listing the tenderers shall also be taken apart from disincentivising the tenderer.
108. **Condition for issue of plant & machinery to contractor on hire: - Deleted**
109. **AMMENDMENT TO THE CONDITION OF F2 CONTRACT**
- Clause-2(a) of F2 Contract: -TIME CONTROL: -
- (A) Progress of work and Re-scheduling programme.**
- The Block Development Office 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.
  - Within 15 days of issue of the letter of acceptance, the contractor shall submit to the Block Development Office for approval a Programme commensurate to Clause no.15 showing the general methods, arrangements, and timing for all the activities in the Works along with monthly cash flow forecast.
  - 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, 1/4th 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 3/4th of the whole time allowed under the contract has elapsed.
  - If at any time it should appear to the Engineer-in-Charge that the actual progress 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.

- An update of the Work 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.
- 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.**

- 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.
- As soon as possible after the Agreement is executed, the Contractor shall submit the Time & Progress Chart for each milestone 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 Block Development Office 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.
- 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.
  - i) Force major, or
  - ii) Abnormally bad weather, or
  - iii) Serious loss or damage by fire, or
  - iv) Civil commotion, local commotion of workmen, strike or lockout affecting any of the trades employed on the work, or.
  - v) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract.
  - vi) 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
  - vii) Any other cause, which, in the absolute discretion of the authority mentioned, in Contract data is beyond the Contractors control.
- □ Request for reschedule and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- 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 Block

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Development Office 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 Block Development Office and this shall be binding on the contract.

**(C) Compensation for Delay.**

If the contractor fails to maintain the required progress in terms of clause 2 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 Block Development Office (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 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 @ 1.5% per month of for delay of work, delay to be completed 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:** - (Amendment to Para 3.5.5(v) Note-iii of OPWD Code Vol-I by modification) (Revised/substituted as per Works Dept. Office Memorandum No.5288 dt.04.05.2016)

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 Block Development Office 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 Superintending Engineer, Chief Engineer & the Administrative Department. The incentive for timely completion should be on a graduated scale of 1(one) percent to 5(five) percent of contract value. Assessment of incentives may be worked out for earlier completion of work in all respect in the following scale.

- i. Before 30% of the contract period = 5% of contract value
- ii. Before 20% to 30% of the contract period = 4% of contract value.
- iii. Before 10% to 20% of the contract period = 3% of contract value.
- iv. Before 5% to 10% of the contract period = 2% of contract value.
- v. Before 5% of the contract period = 1% of contract value.

**(E) Management Meetings**

- 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.
- 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

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meeting or after the management meeting and stated in writing to all who attended the meeting.

Clause-2 (b) of Item Rate F2 Agreement: - Rescission of Contract (Amendment as per letter No.10639 dt 27.05.2005 of Works Department, Orissa): -

To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Block Development Officer shall be conclusive evidence), 20% of the value of left over work will be realised from the contractor as penalty.

110. The tenderers are required to go through each clause of P.W.D. Form P-1 carefully in addition to the clauses mentioned here in before tendering.

111. The safety certificate of the E.I. work will be furnished by the agencies after getting necessary verification from the electrical inspector / equally competent authority responsible for the work prior to Energisation of the building.

112. Amendment to Para 3.5.18 Note-viii of OPWD code Vol-I (Revised/substituted as per Works Deptt. Office Memorandum No.12366 dt.8.11.2013)

Before acceptance of tender, the successful bidder will be required to submit a work programme and mile stone 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 mile stone liquidated damage will be imposed.

113. 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 a Contractor may be blacklisted

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

**Total 113 Items only**

**HIRE CHARGES OF PLANTS AND MACHINERIES ( Whenever Required )**

Sl No.	Description			Usage Rates in Rs.	
	Machine	Activity	Output	Unit	Rate
1.	Dozer D-50-A-15	Spreading Cutting Cleaning	200cum/hour 100cum/hour 150cum/hour	Per hour Perhour Perhour	1592.17
2.	Dozer D-80-A-12	Spreading Cutting Cleaning	300cum/hour 150cum/hour 200cum/hour	Perhour Per hour Perhour	2190.43
3.	Motor Grader 3.35meter blade	Clearing Spreading GSB WMM	200cum/hour 200cum/hour 50cum/hour 50cum/hour	Per hour Perhour Per hour Perhour	1343.48
4.	Tractor with ordinary grader			Per hour	251.30
5.	Hydraulic Excavator of 1cum bucket	Soil ordinary Soil Marshy Soil unsuitable	60cum/hour 60cum/hour 60cum/hour	Per hour Perhour Perhour	730.43
6.	Hydraulic Excavator of 2cum bucket	Soil		Per hour	1624.35

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7.	Front End loader 1 cum bucket capacity	Soil loading Aggregate loading	60cum/hour 25cum/hour	Per hour Per hour	452.17
8.	Tipper 5cum	Transportation of soil, GSB, WMM, Hotmix etc.	5.5cum	Per km. Per tonne.km Per hour	20.87 2.17 506.09
9.	Vibratory Roller 8-10 tonne	Earth/soil GSB WMM	100cum/hour 60cum/hour 60cum/hour	Per hour Perhour Perhour	864.35
10.	Smooth wheeled Roller 8-10 tonne	Soil compaction BM compaction	70cum/hour 25cum/hour	Perhour Perhour	294.78
11.	Sheep foot Roller	Soil compaction		Per hour	56.52
12.	Truck mounted water tanker	Water transport	6kL	Per hour	506.09
13.	Tractor	Pulling	50HP	Per hour	200.87
14.	Rotavator	Mixing	25cum/hour	Per hour	9.57
15.	Ripper	Scarifying	60cum/hour	Per hour	15.65
16.	Air compressor	General purpose	170/250cfm	Per hour	179.13
17.	Diesel Compressor		400cfm	Per hour	744.35
18.	Diesel Compressor		300cfm.	Per hour	618.26
19.	Electrical Compressor		500cfm	Per hour	432.17
20.	Wet Mix Plant 60 TPH	Wet Mix	25cum/hour	Per hour	675.65
21.	Wet Mix Plant 75 TPH	Wet Mix	35cum/hour	Per hour	900.87
22.	Mechanical broom hydraulic	Surface cleaning	1250sqm/hour	Per hour	200.00
23.	Bitumen pressure distributor	Applying bitumen tack coat	1750sqm/hour	Per hour	601.74
24.	Emulsion pressure distributor	Applying emulsion tack coat	1750sqm/hour	Per hour	448.70
25.	Hotmix plant-120 TPH	DBM/BM/SDC/ Premix	40cum/hour	Per hour	13130.43
26.	Hotmix plant-100 TPH	DBM/BM/SDC/ Premix	30cum/hour	Per hour	9710.43
27.	Hotmix plant-60 to 90 TPH	DBM/BM/SDC/ Premix	25cum/hour	Per hour	7765.22
28.	Hotmix plant-40 to 60 TPH	DBM/BM/SDC/ Premix	17cum/hour	Per hour	6217.39
29.	Hotmix plant-8 to 10 TPH	DBM/BM/SDC/ Premix	cum/hour	Per hour	891.30
30.	Paver finisher Hydrostatic with sensor control 100 TPH	Paving of DBM/BM/SDC/ Premix	40cum/hour	Per hour	1500.00
31.	Paver finisher Mechanical 100 TPH	Paving of WMM /PMC Paving of DLC	40cum/hour 40cum/hour	Perhour Perhour	642.61
32.	Paver finisher Mechanical	Paving of DLC	75cum/hour	Per hour	1605.22
33.	Hydraulic Chips Spreader	Surface dressing	1500sqm/hour	Per hour	1478.26
34.	Tandem Road Roller	Rolling of Asphalt surface	30cum/hour	Per hour	641.74
35.	Pneumatic Road Roller	Rolling of Asphalt surface	25cum/hour	Per hour	697.39
36.	Pothole repair machine	Repair of potholes	4cum/hour	Per hour	508.70
37.	Bitumen boiler oil fired	Bitumen spraying	1500 litre	Per hour	111.30
38.	Tar boiler	Bitumen spraying		Per hour	64.35
39.	GSB plant 50 cum	Producing GSB	40cum/hour	Per hour	582.61

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40.	Mastic Cooker	Mastic wearing coat	1 tonne	Per hour	1379.13
41.	Batching and Mixing plant 15-20 cum.	Concrete Mixing	13cum/hour	Per hour	1043.48
42.	Batching and Mixing plant 30 cum.	Concrete Mixing	20cum/hour	Per hour	1252.17
43.	Batching and Mixing plant 112.5 cum.	Concrete Mixing	75cum/hour	Per hour	2400.00
44.	Batching and Mixing plant 262.5 cum.	Concrete Mixing	175cum/hour	Per hour	4486.96
45.	Transit Mixer	Transportation of concrete mix to site.	4.5cum/hour 3cum/hour	Per hour Per hour	521.74 478.26
46.	Grout pump			Per hour	56.52
47.	Concrete pump of 45 & 30 cum	Pumping concrete	33cum/hour 22cum/hour	Per hour	143.48
48.	Pump with 5HP diesel engine	Pumping of Water		Per hour	51.30
49.	Pump with 10HP diesel engine	Pumping of Water		Per hour	93.91
50.	Pump with 20HP diesel engine	Pumping of Water		Per hour	144.35
51.	Pump with 40HP diesel engine	Pumping of Water		Per hour	241.74
52.	Pump with 40HP electrical	Pumping of Water		Per hour	129.57
53.	Pump with 50HP electrical	Pumping of Water		Per hour	158.26
54.	Cranes 80 tonnes	Lifting purpose		Per hour	717.39
55.	Cranes 35 tonnes	Lifting purpose		Per hour	478.26
56.	Cranes 3 tonnes	Lifting purpose		Per hour	200.00
57.	Crawler mounted crane(18T)	Lifting purpose		Per hour	1493.04
58.	Tower Crane	Lifting purpose		Per hour	479.13
59.	Welding	Welding		Per hour	70.43
60.	Grouting machine without compressor			Per hour	79.13
61.	Mechanical Winch(10T)			Per hour	194.78
62.	Power Winch(40HP)			Per hour	191.30
63.	Concrete Bucket	For pouring concrete	1cum	Per hour	8.70
64.	Kerb casting machine	Kerb making	80RM/hour	Per hour	173.91
65.	Concrete Mixer 0.4/0.28 cum 1 cum	Concrete Mixing	2.5cum/hour 7.5cum/hour	Per hour Per hour	153.91
66.	Vibrator(3HP diesel)	Compacting concrete		Per hour	92.17
67.	Piling Rig with Benfonite pump	0.75m dia to 1.2m dia boring attachment	2 to 3RM/hour	Per hour	3065.22
68.	Concrete Paver Finisher with 40HP Motor	Paving of concrete surface	20cum/hour	Per hour	1608.70



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69.	Intégrated stone crusher	Crushing of spalls Crushing of spalls	100TPH 200 TPH	Per hour	4860.87 10226.09
70.	Stone crusher(electric al)	Crushing of spalls		Per hour	160.00
71.	Crushing & processing plant(electrical)			Per hour	204.35
72.	Concrete paver Finisher with 40HP Motor	Paving of concrete surface	175cum/hour	Per hour	14076.52
73.	Prestressing Jack with Pump & Access	Stressing of steel wires / stand		Per hour	72.17
74.	Generator 100KVA	Generation of Electric Energy	100KVA	Per hour	391.30
75.	Generator 250KVA	Generation of Electric Energy	100KVA	Per hour	978.26
76.	Generator 33KVA	Generation of Electric Energy	50KVA	Per hour	208.70
77.	Generator 40KVA	Generation of Electric Energy	KVA	Per hour	369.57
78.	Generator 125KVA	Generation of Electric Energy	KVA	Per hour	786.96
79.	Pneumatic Sinking Plant	Pneumatic sinking of wells	1.5 to 2.0 cum/hour	Per hour	2339.13
80.	Truck 5.5cum per 10 tonnes	Material Transport	4.5cum	Per km. Per ton.km. Per hour	17.39 1.74 484.35
81.	Road Marking machine	Road marking	100sqm/hour	Per hour	52.17
82.	Mobile slurry seal equipment	Mixing and laying slurry seal	2700sqm/hour	Per hour	565.22
83.	Wagon drill			Per hour	111.30
84.	Dimond drill			Per hour	293.91
85.	Inwell rings			Per hour	62.61
86.	Jack hammer			Per hour	7.83
87.	Pneumatic rammer			Per hour	11.30
88.	Pusher leg			Per hour	4.35

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## TECHNICAL SPECIFICATION OF CIVIL PORTION OF WORK

Materials of following specification are to be used in work. The Tenderer are expected to possess and be well conversant with the following IS standard and code of practice.

1.	Cement	Will be as per I.S. 269/455 (However the grade of cement to be selected by the Engineer-in-Charge of work and complex cube test before commencement of work in eachbatch).
2.	Steel	I.S. 432 (Plain) and 1786 (Tor)
3.	Vibrator	I.S. 7246
4.	Aggregate	I.S. 383, I.S. 515
5.	Water for mixing and curing	Shall be clean, free from injurious amount of oil, salt, acid, vegetable materials and other substances and harmful to concrete in conformity to I.S. 456 and I.S.3025.
6.	Sand / Fine Aggregate	I.S. 2116, 383
7.	Binding wire	I.S. 280 (galvanised minimum 1 mm)
8.	Rain water pipe	I.S. 2527
9.	Construction joints	I.S. 3414
10.	Steel Window Frame	I.S. 1038/83
11.	Steel Door Frame	I.S. 4351/75
12.	Fitting & Fixtures for journey works	Conforming to I.S. 7452/82 strictly conform to I.S. specification and as per direction of Engineer-in-Charge.

**Note:** For road work (Approach Road) specification as per road and bridges (latest edition) published by I.R.C & M.O.S.T. shall be followed. In case of any doubt and absence of provision, regarding specification I.S. shall be referred (Indian standard).

### ITEM OF WORK

1. Concrete shall be with conformity to I.S.456.
2. Foundation shall be with conformity to I.S.1080.
3. Stone masonry (R.R.) shall be with conformity to I.S.1597(Part-I)
4. C.R. Masonry shall be with conformity to I.S.1597.
5. Brick masonry shall be with conformity to I.S.2212.
6. Cement plastering shall be with conformity to I.S.9103 & 6925.
7. Mortar shall be with conformity to I.S.2250
8. White and colour washing shall be with conformity to I.S.6278.
9. CC in foundation shall be with conformity to I.S.2571.
10. Anti-Termite Treatment shall be with conformity to I.S.6813. (Part - I & Part -II)
11. Painting to all surfaces shall be with conformity to I.S.2395 (Part - I & Part -II)
12. DPC shall be with conformity to I.S.3067
13. Tarfelt treatment shall be with conformity to I.S.1346
14. Mosaic flooring with conformity to I.S.2114
15. Steel painting shall be with conformity to I.S. 1477 (Part -I Part - II) I.S. 1661
16. Pile Foundation Shall be conformity to I.S. 2911 (Part 1 & Part 2)

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## TECHNICAL SPECIFICATION OF ELECTRIFICATION INSTALLATION WORKS PART-II (EI)

The details of internal wiring, the position of fittings, fans, switches and plug sockets etc. are indicated in the layout drawings. The position of light fittings, fans, switchboards etc. indicated in these drawings are only for the guidance of the supplier and the actual position of these shall be mutually decided between the supplier and the purchaser. The supplier shall submit the purchaser of his consideration and approval all runs of wiring and the exact position of all the points and the switch boxes first marked on the points buildings.

All internal wiring shall be done in conformity to the latest Indian standard specification/Rules, code of practice adopted by CPWD and other standard practices prevalent in the part of the country. For the purpose of the specification the terminology used shall be as defined in IS:732 and IS:1356 of the definition of points wiring. The installation shall be carried out in conformity to all requirements of IE Act, 1910 and IE Rules 1956:

- a) Ceiling rose in (in case of ceiling and exhaust fan).
- b) Ceiling rose or connector (in case of pendants except stiff pendant points)
- c) Bank plate (in case of stiff pendant).
- d) Socket outlet (in case of socket outlet points)
- e) Lamps holder (in case of wall Bracket, batten holder bulk head fitting and similar other fittings)
- f) Call bell / buzzer (in case words 'via' the switch shall be read 'via' the ceiling rose / socket outlet for bell push, where no ceiling rose / socket outlet its provided).

The following shall be deemed to be included in the point wiring

- a) Switch and ceiling rose are required
- b) In case of wall brackets, bulk head fittings, cables as required up to the lamp holders]
- c) Bushed conduit for porcelain tubing where cables pass through walls.
- d) All wood or metal blocks, boards and boxes, R.J. Boxes sunks or surface type including those required for fan regulator but excluding those under the distribution board and main control switch.
- e) Earth wire from 3 pin socket point to the common earth including connection to the earth dolley.
- f) Earth wire of 18SWG/H.D.B.C. wire for loop earthing of the fixture
- g) All fixing accessories such as clips, nails, screw, plug, rawl plug, wooden plug, round blocks etc. as required
- h) Joint for junction boxes and connecting the same as required
- i) Connections to ceiling rose or connection socket outlet, lamp holders, switch, fan regulators etc

The point wiring in case of fan and light points shall mean the distance between the control switch and ceiling rose, connect or back plate, socket outlet or lamp holder depending upon the fittings measured along the runs of wiring irrespective of the number of wires in run. In the case of socket outlet points, the length shall mean the distance between the socket outlet and the tapping point of live wire on the nearest switchboard or junction box, as the case may be.

In the case of exclusive socket outlet circuits wired on 'Joint Box' system of wiring, any junction provided for extending the wiring beyond the point referred to, shall be treated as the nearest tapping point. In case of call bell / buzzer points the length shall mean the distance between the call bell and the ceiling rose / socket outlet or the bell push (when the ceiling rose / socket outlet is not used).

Sub main shall include the earth wire of adequate size main distribution Board up to sub distribution board B.B. such wiring has been classified on the basis of length. For the internal lighting, either surface conduct wiring system or recessed conduit or batten wiring system shall be provided as specific in the bill of quantities and working drawings.

  
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Contractor:

**Conduit wiring**

For recessed conduit wiring system the conduit shall be placed in the ceiling / columns etc. before the casting of the slab or column. The conduit pipes shall be properly positioned and fixed so that it will not be displaced at the time of concreting. The junction boxes provided shall be so arranged that its cover will be flush with the finished surface of the ceiling or column.

For placing the conduits in the walls, chases of ample dimension shall be made neatly to fix the conduit in a desired manner. The conduit pipe shall be fixed by means of staple or saddles not more than 600mm apart. Fixing of standard bends or elbows shall be avoided and all curves maintained by bending the conduit itself with a long radius will permit easy drawing of the conductors. Suitable inspection boxes shall be provided to permit periodical inspection and removal or replacement of wires if necessary. There shall be mounted flush with the wall with holes in the cover of the box.

The switch or regulator box shall be made of metal on all sides except on the front where backlight sheet or Perspex cover painted to match the colours of the wall shall be used in case of surface wiring system. For recessed wiring system, these boxes shall be made flush with the conduit of each conduit or section shall be completed before conductors are drawn in. The entire system of conduit after installation shall be tested for mechanical strength and electrical continuity throughout the earthing of the entire installation shall be carried out in accordance with I.E. Rules and standards.

The number of wires drawn in the conduits shall not exceed the numbers those specified in Indian standard specification No.732.

**Main and Sub distribution Boards:**

The position of main boards for lighting and sub distribution board for different buildings are approximate and the exact location shall be given to the successful tenderer at the time of installation.

The scope of this specification includes installation of the panel boards and distribution boards and making necessary connections. The installation of the boards shall be done strictly in accordance with the details supplied with the specifications; the instructions supplied by the switchgear manufacturer, Indian standard specifications and H.E. rules.

The supplier shall submit the details of installations to the purchaser for his consideration and approval, prior to installation.

When the switchboards are wall / column mounted top, they shall, be mounted on a suitable angle iron framework. All the metal supports etc. shall be protected against corrosion. The mounting height for such switchboards shall be such that it can be conveniently operated.

**Earthing**

Earthing shall generally be carried out in accordance with the requirements of Indian Electricity Rules and the relevant rules and regulations of electrical supply authorities. The complete earthing work for the installation covered by this specifications shall also be provided taking into account Indian Standard Specification No.IS:732 and IS:3043. The earthing system adopted shall also have adequate mechanical strength.

The work shall include earthing of noncurrent carrying metallic parts of all the equipment, light fittings, conduit pipes, cable and cable supports and earth strips (the design to be approved by the purchaser) and all the inter connection between the earthing system to a value mutually agreed upon between the purchasers and the supplier.

**Installation, testing and Commissioning:**

The supplier shall be responsible for the installation testing the commissioning of all the equipment and materials supplied by him against this specification. This shall also include the provision of miscellaneous wiring and supports and earthing in compliance with Indian Electricity rules and to the full satisfaction of the Government Electrical Inspector. All small items such as clamps, bolts, nuts, racks, supports, miscellaneous wiring etc. required to make the installation complete, shall constitute the part of major items specified in the bill of quantities and the tenderer should quote for each item taking these into consideration.

The responsibility of the supplier shall include receiving all the equipment and materials at

site, storage for required period, handling the same at the site of erection, final execution, erections, revisions of equipment, if any, testing and commissioning and handing over the installation complete in all respect to the entire satisfaction of the purchaser's authorized representative. The supplier shall make good of all the damaged equipment and materials during this period at his own expense.

The supplier shall submit sample of each and every equipment and materials for the final approval of the purchaser's representatives immediately after the acceptance of offer. All the equipment's and materials shall be supplied exactly as per to the approved samples. If at any stage the purchaser brings to the notice of the supplier any discrepancy or defect the supplier shall replace the same at his own expense.

The supplier shall render all reasonable assistance to the purchaser in getting the installation approved by the Government Electrical Inspector prior to the energisation and supply necessary drawings, test-certificates and both for tests carried out at the factory and site as well as the tests which the inspector may demand. In case any addition of alternations are required, to be made in the installation or in the equipment as per the directive of the Government Electrical Inspector / Local Authorities, he same will have to be carried out by the supplier, at his own expense.

The position of light fittings, main board, switches, sockets and routes of pipes and cables shown in the drawings are only indicative. The actual position of these shall be decided at site at the time of execution joints by the supplier and the purchaser's authorized representative. The position of light fittings, pipes and board if required, to be changed / shifted due to the change in the building design etc by the purchaser's authorized representative, the same shall be carried out at no extra cost.

All the materials supplied to the contractor according to the Contract condition will be subject to inspection and approval of the officer or his representative from time to time. The contractor will provide all facilities of such inspections free of cost. At the time of inspection, the owner of his representative will have full liberty to reject any such materials, which does not conform to the specification / requirement. No claim for any rejected materials will be entertained by the owner. The contractor will remove all rejected materials from site at his own cost.

No surplus materials procured by the contractor will be accepted by the owner. The contractor will be responsible to get the Electric installations cleared by the Electrical Inspector of Orissa Government. Only the inspection fee will be reimbursed by Department on production of challan copy

#### **Installation and Maintenance Tools:**

The supplier along with the tender shall furnish a complete list of tools, appliances and accessories required for the installations of switch grass, light fittings, pipes cables and wires.

#### **Drawings:**

All drawings, test certificates, instructions manuals etc. shall be in English Language and all dimensions and weights shall be in metric units.

The tenderer shall submit with the tender general arrangement drawings for the installations work, typical methods and cabling and cables supports pipe work and pipe supports, typical methods of earthing and fixing of light fittings earthing etc. as offered by him in the tender.

The contractor shall submit for the purchaser's approval all layout, the general arrangement drawings as well as the typical details of all types of installation work in three sets before commencing the manufacture and the site installations work well in advance so that the site work shall not suffer.

**After obtaining approval of the above drawings the contractor shall supply three sets of the following drawings.**

- (a) The arrangement and support of conduit pipe
- (b) The position of light fittings, switches / plug socket and switch boards
- (c) Earthing installations
- (d) Layout plan showing the entire cable network

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On completion of work, the successful tenderer shall supply one set of tracing in transparent linen and five sets of prints of all drawings incorporating all the changes / modifications affected during the execution of the contract. All wiring diagrams shall indicate clearly, the switch board, the runs of main and sub main wiring and the position of all the points with their controls. All the circuits shall be clearly indicated and numbered in accordance with IS:375.

The technical literatures and operating instructions and the maintenance manuals shall also be supplied in triplicate to the purchasers after the completion of the installations work.

**Test:**

Manufactures standard tests in accordance with Indian Standard and other standards, adopted shall be carried out on all the equipment and accessories covered by this specification so as to ensure efficient and satisfactory performances of all the components and also the equipment as a whole under working conditions at site. The tenderer shall submit a complete list of all such tests. If the purchaser, if so desired for special tests, to be carried out, under certain conditions the same shall be made by the successful tenderer at his own expenses.

All equipment shall be tested at site before the commissioning in accordance with the adopted standard and Indian Electricity Rules. Voltage test shall be carried out on each circuit on completion of wiring and cabling.

**Technical Data:**

The tenderers shall submit with their tender all such technical data, which are required for complete evaluation of the equipment offered. The suppliers shall give complete technical information of the equipment as detailed in Annexure and relevant Indian standards. The tenderer should supply such details of all equipment and materials offered specially with regard to the following.

- a) Fuse switch board and distribution boards
- b) Light fittings
- c) Conduits and the accessories for them
- d) Switches / plug sockets
- e) Cable and wires

**The tender shall give along with his tender the following details:**

- a) Complete details of earthing electrodes, earthing station and earthing conductors
- b) Details of conduit supports
- c) Details of all the equipment and accessories to be supplied

**Exception to Specifications:**

The object of this specification is to have all tenderers quote for equivalent materials and workmanship. It is, however, understood the certain manufacturers may not be able to offer as specified in every case, where the tenderer may find it necessary to deviate from the exact letter and not the intent of the specification, he must specifically state what these deviations may be at the time he submits the tender. All deviations must be grouped in one statement.

No deviations other than those includes in the tender will be permitted. These deviations should be listed as per Annexure.

**PVC Insulated Cables and Wires:**

For 415V Distribution system, cables of voltage grade not less than 1000V shall be used. These cables shall be heavy-duty class, PVC insulated and PVC sheathed with aluminium conductors. The wires used in the lighting installation shall be PVC insulated n sheathed in case of conduits wiring and of 660V grade. Wires of different colours shall be made use of for quick identification of phase wire / neutral wire etc. All cable of wires shall comply with the requirements regarding the manufacture and testing etc as specified in India Standard Specification IS:1554 and IS:694.

The length of cables indicated in the bill of quantities and drawings are only indicative and the successful tenderer will be paid for the exact length of cables laid at site. No joint shall be

allowed in a run of cables, which can be covered by a possible drum length of cables.

Fuse switch / switch fuse shall be metal clad dust and vermin proof suitable for use under climatic conditions prevailing at site. Switch fuse / fuse switch units shall comply in general to IS: 1567/4064 with regard to design and constructional / features.

The 'ON' and 'OFF' position of the switch handles shall be distinctly indicated and interlocks shall be provided to ensure that the switch cover cannot be opened unless the switch is in the 'OFF' position. Means shall, however, be provided for releasing the interlock to permit closing of switch with cover open for testing purposes. Designs with normal conventional position of switch handles, i.e. with switch handle up in the 'ON' position and down in the 'OFF' position shall be preferred. All live parts inside the switch shall be properly surrounded and inter phase barrier shall be provided.

Switch fuse / fuse switch units, distribution boards shall be provided with necessary metal frame work so that they can be mounted on wall / columns structure etc. as desired. The panel boards, shall be wall mounted type or floor mounted type as specified in the bill of quantities or drawings. Necessary supporting metal frame of approved design shall be provided for all panel boards.

The arrangements of work boards shall be such that the operational handle of the top mounted switches are within the convenient of operators (about 1.2 M from the finished floor level) and proper space shall be provided for the termination of the cable in the switches provided below the bus-bars.

The bus-bars within the bus-bar chamber shall be liberally spaced for taking the riser connection. The bus-bars with aluminium conductors shall be provided and PVC sleeves of different colour shall be mounted on them for easy identification, Clamped joints for taking the riser connections, instead of bolted type shall be preferred.

Two bolted type earthing terminals shall be provided on the switch boards. All individual switches shall be connected with suitable size earth wire to the main earthing terminals of the switchboard.

Hanger Board and shock treatment / charts shall be supplied wherever required.

At the incoming side of each pen phase, 3-neon type indicating lamps should be provided at the main board.

### Switches and Plug Sockets

Switches provided for control of light points shall conform to IS:1087 and shall be rated for 5A/15A 250V

#### Ceiling Fans and Exhaust Fans:

Ceiling fans shall conform to Indian standard specification IS: 374-1960. The fans shall be supplied with all standard accessories like regulator and capacitors etc.

The performances rating of the propeller fans shall in accordance with stipulations of IS:2312. All fans shall be robust in design and construction and shall be supplied complete with wall brackets / clamps etc.

### Fluorescent Fittings:

All fluorescent fittings supplied shall conform in general to IS:1913 and shall be complete with all standard accessories like choke, starter and capacitor etc

The type of enclosure provided for the fittings shall be of that specified in the bill of quantities and the working drawings. The materials of construction for fittings used for outdoor installations and for use in the work anodes shall be such that they shall withstand the atmospheric condition in that area.

Lamp holders used shall be fully shock proof, spring-loaded rotary type to ensure positive lamp locking. It should also be not possible to touch live parts of the lamp holder both after the lamp has been taken out and during the insertion or removal of the lamp. The starters shall be designed to give designed starting characteristics that shall promote full lamp life. Starter shall have high mechanical strength and topic proof construction. It should be incorporated with radio suppression capacitor of adequate rating and capacity. Power factor

improvement capacitors are provided with hermetically sealed housing to ensure long and trouble free service. Terminal soldering tango shall be provided for easy electrical connections. The capacitors in general shall conform to IS:1569-1963 and P.F improvement up to 0.95 for twin fluorescent light fittings and 0.9 for single fluorescent light fittings is to be maintained.

The ballast provided in the fluorescent fittings shall generally be in accordance to IS:1534. The ballast should incorporate the following design features.

- i) Low working temperature
- ii) Correct pre heating current for the electrodes
- iii) Proper wave foam
- iv) Small in dimensions
- v) Correct power supply to the lamp
- vi) No hum.
- vii) Easy connection leads.

All the metal construction of the fittings shall be such that they shall:

- 1) Withstand the atmospheric condition prevailing in the area
- 2) Provide maximum mechanical protection to the tubes and fittings accessories. Assists in maximum and uniform light distribution.

All fittings shall be provided complete with florescent lamps. All lamps shall confirm to IS:2418.

**Incandescent Fittings:**

The incandescent fittings shall be supplied strictly as per the details given in the enclosed annexure and bill of quantities, deviation if any regarding designs, construction of materials should be specified clearly.

All the metal parts used in construction of the fittings shall have no effect due to dust / fumes / gases likely to exist in the atmosphere. All the bolts, clamps, nuts and guard wire etc shall be galvanized.

The wall fittings shall be provided with necessary hooks / clamps / supports etc for fixing the light fittings on wall / ceiling etc as detailed in the bill of quantities and the working drawings.

Light fittings shall be suitable for connection with 19mm dia. Conduit pipe as required. If fittings are to be connected through PVC cables, glands of adequate size and capacity shall be provided.

The lamp holders provided in the fittings shall confirm to IS:1528.

## CODES

Codes shall mean the following including the latest ascendants and / or replacement if any.

- a) Indian Boiler Act, 1923 and Rules and Regulations made there under
- b) Indian Electricity Act, 1923 and Rules and Regulations made there under
- c) Indian Factories Act, 1948 and Rules and Regulations made there under
- d) The minimum wages Act
- e) The Women's Compensation Act
- f) The Payment of Wages Act
- g) The Fatal Accident Act
- h) The Industrial Employment Act
- i) The Employment provident Fund Act
- j) Indian Explosive Act 1984 the Rules and Regulations made there under
- k) Indian Petroleum Act 1934, and Rules and Regulations made there under
- l) A.S.M.E. Test Codes
- m) AIRE Test, Codes

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- n) American Society of Materials Testing Codes
- o) Standards of the Indian Standards Institution
- 1) Low Tension Circuit Breakers: IS 2516-1955 Part I Sec.1
  - 2) Switchgear Bus Bars IS 375-1963
  - 3) HRC fuse links IS 2208-1962
  - 4) Distribution fuse boards IS 2675-1966
  - 5) Enclosure for Low Voltage switchgear IS 21470-1962
  - 6) PVC Cables IS 1554-1975
  - 7) Tubular fluorescent lamps for Cameral lighting service IS 2418-1963
  - 8) Tungsten Filament Lamps for cameral service IS 415-1963
  - 9) Ceiling Fans IS 274-1966
  - 10) Flood lights IS 1947-1961
  - 11) Wall Glass flame-proof electric light fittings IS 2206-1962 (Part 1)
  - 12) Water Tight Electric Light Fittings IS 3553-1956
  - 13) Steel Boxes for Enclosure of Electrical Accessories IS 5133-1969
  - 14) Fittings for Rigid Steel conduit IS 2667-1979
  - 15) Rigid steel circuits for electrical wiring IS 3837-1966
  - 16) Accessories for Rigid Steel Conduits for Electrical Wiring IS 3837-1966
  - 17) Switch Socket Outlets IS 3837-1966
  - 18) PVC Wiring IS 694-1977
  - 19) Switches for domestic and similar purpose IS 3854-1966
  - 20) PVC wiring IS 694-1977
  - 21) Call Bell and Buzzers IS 2268-1966
  - 22) Straight through joint boxes and leads sleeves or paper insulated cables-EID-0032-1964
  - 23) Earthing IS 3043-1966
  - 24) Electrical Wiring installations IS 732-1963
  - 25) Switchgear IS 3072-1965 (Part I)
  - 26) Lighting protection IS 2309 -1969
  - 27) Public Address system IS 1882-1962
  - 28) Low Tension switch use units IS 4064-1978
  - 29) Code of Practice for Automatic FIRE ALARM system IS 2189-1970
  - 30) Specification for Heat Sensitive Fire Detectors IS 2175-1977
  - 31) Guide for Safety procedure in Electric work IS 5216-1969
  - 32) Rubber Mats for Electric works IS 5424-1969
- p) Other internationally approved standards and / or Rules and Regulations touching the subject matter of the contract.

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**PART-III**  
**ADDITIONAL APPENDIX TO BILL OF QUANTITY:**  
**(For P.H. Items of Work)**

The quantities of items mentioned in the tender schedule may increase or decrease during execution of works but the contractor will complete the work as per his tendered rates in accordance with the instruction of Engineer in charge of G.P.H. wing.

**Specification:** The standard PHD and PWD specification will be followed for execution of work. During the course of execution of work, the instructions of the Engineer in charge shall be final and binding. The Sales Tax element should not be added to the analysis of rates and the previous practice should be followed as per the Works Department letter No. IIT.22-89-18170 dt.18.7.1989

There should be no clause either in the tender or in agreement for payment of any additional claim on account

of Sales Tax on completed works which will be deemed to be recovered by existing omnibus stipulation as per the works Department letter No. TIT 22/89-18170 dt.18.7.89/

It is the responsibility of the Contractor to arrange watch and ward to the installations until testing commissioning and handing over for which no extra payment towards watch and ward will be paid,

The contractor shall maintain a separate site order book for P.H. portion of work.

The P.H. portion of work shall be open for inspection by the authorities of P.H. Circle (R&B) Orissa, Nabarangpur and the higher authorities and instructions imparted during the course of inspection should be binding on the contractor.

Materials not covered by any of the above categories of items in the bill of quantity have to be approved by the

competent authorities before utilising the same in works. In such event, the payment of such item will be made as per actual on due approval by the competent authority. All materials required for the work shall be supplied by the contractor as per standard specifications appended with due approval by the Engineer in charge.

In case the materials as per make specified is not available, the materials of equivalent, make and as per I.S. Specifications or of best quality when not covered by I.S. Specifications.

Can be utilised on prior approval of S.E./ E.E., G.P.H.D, (R & B), Nabarangpur or the officers duly authorised by

him. It is binding on the part of the contractor to use such items of materials which are available in the Departmental store and in such case the deduction from the bills will be made at stock issue rates.

**TECHNICAL SPECIFICATION FOR P.H PORTION OF THE WORK:**

**A. WATER SUPPLY PIPES AND FITTINGS**


**1. Materials**

All galvanized iron pipes are to be of mild Steel, continuous welded, screwed tubes, medium quality conforming to ISS & bearing ISI Marks, manufactured by reputed firms and approved brands as specified. The pipes shall conform to IS 1239 (Part - I) -1975.

All G.I. Fittings shall be of 'R' Brand manufactured by M/S.R.M.Engineering Ltd., Ahmedabad and 'C' brand manufactured by Crescent Engineering works or equivalent best quality.

All pvc pipes are to be of medium quality (Schedule-80) manufactured by reputed firms and approved brands as specified. The pipes shall conform to ASTM- D-1785

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**Weight of G.I. pipes for a Metre length:**

The per meter weight of different diameters of G.I. pipes for medium class is indicated in the following table.

Sl No.	Pipe size in mm	Medium class (in kg)
1	15mm	1.22
2	20mm	1.57
3	25mm	2.43
4	32mm	3.13
5	40mm	3.60
6	50mm	5.10

**Laying of Pipes**

The layout of the mains and service Pipes etc will be done in accordance with the drawings. The Contractor is to mark out the exact position of the pipes and fittings at site and take approval of the consultant /Engineer in-charge, before taking up the work.

Where the pipes are laid, underground these must not be laid less than 450mm below ground level and coated with one coat of approved black bituminous paint. For laying the G.I. Pipes and Fittings below ground level, the width and the depth of the trenches for different dimensions of the pipes shall be given as below:

Dia of pipe	Width of Trench	Depth of Trench
15mm to 50mm	300mm	600mm
65mm to 100mm	450mm	750mm

The pipes shall be laid on a layer of 75mm thick sand and filled up with sand up to 75mm above pipes and the remaining portion of the trench shall then be filled up with excavated earth with proper ramming as described in "Excavation and refilling". The surplus earth shall be disposed of as directed.

Thrust or anchor blocks of cement concrete 1:2:4 in hard granite chips shall be constructed on all bends or branches to transmit the hydraulic pressure without impairing the ground and spreading it over a sufficient area. Pipes shall not be laid to pass through manholes, catch pit, drain. Where it is unavoidable the pipes shall be carried in sleeve pipes of M.S./G.I., as approved by the consultant/Engineer-in-charge. The rates should include such a situation

5. Where pipes run along walls, these are to be fixed to the wall with holder bat clamps/M.S. Hooks as below

Dia of pipe in mm	15	20	25	32	40	50
Horizontal Line	2m	2.5m	2.5m	2.5m	3m	3m
Vertical Line	2.5m	3m	3m	3m	3.5m	3.5m

Where the pipes are passing through the R.C.C./Masonry wall/Column/beam or pillars, these must pass through the appropriate higher sizes of C.I./G.I. Sleeve Pipes and are to be included in the rates

In case the Pipes are embedded in walls and floors it should be painted with one coat of anticorrosive paint of approved quality

All pipes should be fixed horizontal and vertical. For taking the Pipes through the walls and floors and roof slab etc. the holes shall be made by filling with chisel or jumper and not by dismantling the brick work or concrete. After fixing, the holes shall be made good with cement concrete 1:2:4 and properly finished with cement plaster 1:4 to match the adjacent surface.

Union Nuts are to be provided in each of the Vertical riser or drop on and from G.I. Tank and near the Valve and as and where necessary.

The long screw fittings of 8cms are to be provided for long horizontal lines and inside the lavatory/ Kitchen etc.

6. After laying and jointing the Pipes and fittings shall be inspected under working condition of pressure and flow. Any joint found leaking pipes should be removed and replaced without extra cost. The Pipes and Fittings after they are laid shall be tested to hydraulic pressure of 6 Kg/ cm<sup>2</sup>. The test pressure should maintain without loss of for at least half an hour.

7. **Painting**

On completion of the test, the exposed pipes and fittings are to be painted with two coats of synthetic enamel paint of approved colour and brand over a coat of priming.

8. **Measurement**

The length shall be measured in running meter correct to centimetre for the finished work, which shall include the Pipes and fittings such as Bends, Tees, Elbows etc., but excludes Brass or Gun-metal fixture like Tap, Cocks, Valves, PVC connection Pipes etc.

9. **Jointing**

The jointing of G.I. tubes/pvc pipes and fittings etc. will be done as per the provisions stipulated in the B.I. Specification.

10. **Bib cock and Stop Cock**

These shall conform to I: S 781 - 1967 and bear ISI Mark. The Bib cock is a draw off tap with a horizontal inlet and free outlet and stop cock is a valve with a suitable means of connection for insertion in a pipe line for controlling or stopping the flow. This shall be of screw down type. The cocks shall open in anti-clockwise direction. The stop cocks should be C.P. concealed stop cocks and C.P. angle valve type as specified in tender schedule. Bib cocks should be also C.P. Brass bibcocks.

11. **Full way Valve (Brass)**

Full way valve is a valve with suitable means of connection for insertion in a pipeline for controlling or stepping the flow. The valve shall be of brass fitted with a cast iron wheel and shall be of gate valve type conforming to I: S 780 - 1960 brass rod latest one, opening full way and of the size as specified. The approximate weight of the valves is indicated below for guidance.

Pipe size in mm	Flanged End valves in Kg	Screwed End valve in Kg
15mm	1.021	0.567
20mm	1.503	0.68
25mm	2.498	1.077
32mm	5.232	1.559
40mm	6.082	2.268
50mm	6.691	3.232

2. **Gun-Metal Full way Valve**

This shall be of the Gunmetal fitted with wheel and shall be of Gate-Valve type opening full way.

This shall conform to I: S 778-1971. Class I. The valves should bear I.S.I. Mark

3. **Ball Valve**

The ball valves shall be high or low pressure class as stipulated in the Tender Schedule and shall conform to I: S 1703 - 1968. The nominal size of ball valve shall be that corresponding to the size of Pipe for which it is used. The ball valve shall be of brass or gunmetal and the float for low pressure in Polyethylene and for high pressure in copper.

Each and every ball valve while in closed position shall withstand an internally applied hydraulic pressure of 20 Kg/Cm<sup>2</sup> for a minimum period of two minutes without leakage or sweating.

Every high pressure ball valve when assemble in working condition, with the float immersed to not more than half its volume shall remain closed against a test pressure of 10.5 Kg/Cm<sup>2</sup>.

Polyethylene floats shall be watertight and non-absorbent and shall not contaminate water and with no jointing adhesive jointing parts.

The minimum thickness of the copper sheet used for making copper floats shall be of 0.45 mm. The thickness of materials of the float shall be uniform throughout.

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**CUTTING HOLES UP TO 30 CM X 30 CM IN WALLS INCLUDING MAKING GOOD THE SAME;**

General: - Square holes of size as specified or as directed by the Engineer-in-charge shall be cut in the masonry or taking pipes. Any damage to the head joining portion or to any other item shall be made good as directed by the Engineer-in-charge. All dismantled material shall be removed from the site.

Masonry works: - Bricks work etc, shall be made good by using the same class of brick, tile or stone masonry as was cut during the execution of the work. The mortar to be used shall be cement mortar

(1:4) as directed by the Engineer-in-charge.

Finishing: - Cement mortar in 1:4 mix shall be used for plastering or pointing as may be required. The surface shall be finished with two or more coats of white wash/colour wash/distemper/ painting as required but where the surface is not to be whitewashed, colour washed, distempere or painted, it shall be finished smooth with a floating coat of neat cement or is required to match with the surrounding surfaces.

These specifications for brickwork, stone work and finishing etc. shall be the same as detailed under relevant standards of State P.W.D. specification.

**5. CUTTING HOLES UP TO 15 CM X 15 CM IN RCC FLOORS INCLUDING MAKING GOOD THE SAME;**

General:-

Square holes of size as specified shall be in R.C.C. floor and roofs/chajjas for passing pipes etc.

Any damage to the head joining portion or to any other item shall be made good as directed by the Engineer-in-charge. All the dismantled material shall be removed from the site.

Cement Concrete: - After insertion of pipes etc. the hole shall be repaired with cement concrete

1:2:4 and the surface finished to match the existing surface. The top and bottom shall be finished properly to make the joint leak-proof. The specifications for cement concrete work and finishing etc. shall be the same as detailed under relevant sub-heads of State P.W.D. specifications.

**16. Shower rose**

The shower rose: - The shower roses shall be of chromium-plated brass of specified diameter. It shall have uniform performance. The inlet size shall be 15 mm or 20 mm as required.

The chromium plating wherever specified shall be of grade-B type conforming to IS No. 1068 - 1958. The chromium shall never be deposited on brass unless a heavy coating of nickel is interposed. In the case of iron, a thick coat of copper shall first be applied, then one of nickel and finally the chromium. In finish and appearance, the plated articles, when inspected shall be free from plating defects such as blisters, pits, roughness and unplated areas and shall not be stained or discoloured.

A stopcock of the specified size shall be provided to control the inlet water supply to the shower rose.

(a) Height of shower 1850 to 2000 mm from floor level.

(b) Height of tap:-  
450 mm from floor level projecting 150 mm from wall.

Flushing Cistern:

17.

The flushing of the Indian water closet (Orissa closet) shall be done by C.I. or polystyrene high level valve less syphonic flushing cistern (PVC low level cistern) of approved brand and quality I.S.I. marked and capacity as specified. The connection between the cistern and water closet shall be made by 32 mm dia G.I. flush pipe, made from G.I. pipe (Light quality) or 32 mm dia PVC pipe as specified in the tender schedule. The flush pipe with an offset should be fixed to wall using C.I. holder bat clamps. The capacity of the cistern should be 10 ltrs. As per I.S.I. The cistern shall be fixed on cast iron or rolled steel/PVC cantilever brackets (built in type), S.S. The cistern shall be firmly embedded screwed in the wall, with C.C. M20. The cistern shall be provided with 20 mm dia PVC. Overflow pipe with fittings, which shall terminate into mosquito proof coupling secured in a manner that will permit it to be

ereadily cleaned or renewed.

The 32mm dia flush pipe shall be connected to the water closet by means of approved type joint. The flush pipe shall be fixed to the wall by using C.I. holder bat clamps. The bend and the offset

required in the flush pipes shall be made cold. The inside of the C.I. Cistern shall be painted with two coats of approved black bitumen paint. The outer face of the C.I. cistern, bracket, overflow pipe and flush pipe etc., shall be painted with two coats of any synthetic enamel paint of approved shade and make, over a coat of priming. The cost of the painting shall be included in the rate quoted for the flushing cistern.

The inlet connection to the cistern shall be made with 450mm long 15mm dia PVC heavy type connection pipe.

### 3. SOIL AND WASTE PIPES AND FITTINGS

- (a) These should conform to IS: 1729-1964 or its latest revision.
- (b) The pipes and fittings should be true to shape smooth, cylindrical, inner and outer surfaces being concentric, free from cracks and pinholes and neatly dressed. The ends of the pipes and fittings shall be square to their axes.
- (c) Pipes are available with or without ears single socketed or double socketed. These should be procured as per requirement. Usual length of the pipes are 1.8m but available in specific lengths, if so, ordered.
- (d) Weights and other physical criteria including tolerances are stated in Table-1.
- (e) **LAYING:** - The laying is done by spigot - socket joints. The exact lengths are measured at the site, pipes are cut to sizes, if exact lengths of cut pieces are not readily available. In the stack lines, pipes with ears are used. The stack line is fixed to the wall with the help of 100 mm stout nails driven into wooden blocks fixed in the walls properly secured.
- (f) **JOINTING:** - Jointing is made with the help of spun yarn and cement mortar (1:2). In certain places molten lead is used instead of cement mortar. Where molten lead is used, caulking is done after lead gets cooled.
- (g) **VENTILATION PIPES:** - It should be carried up above the roof (at least 1 m above the parapet) and guarded with provision of a cowl. The stack lines must be secured to the walls by means of M.S. stay and clamps.
- (h) Provision of doors in the fittings is a must so as to clean the line wherever required. The doors must be fitted along with rubber insertion and brass bolts.
- (i) The lavatory waste stack shall be connected directly to the Inspection Chamber/Manhole where the wastes from kitchens, basins, sinks, baths are to discharge through gully traps, the gully traps being connected ultimately to Inspection Chamber /Manhole.
- (j) Pipes and fittings must be internally painted with a coat - tar and externally with enamel paint of approved colour.


All soil-waste, vent and anti-siphonage pipes and fittings shall conform to IS: 1729-1964 or as revised from time to time. The pipes shall have spigot and socket ends with bend on spigot end. The pipes and fittings shall be true to shape, smooth and cylindrical, their inner and outer surface being as nearly as practicable concentric. They shall be sound and nicely cast and shall be free from cracks, lap, pinholes or other imperfection and shall be neatly dressed and carefully fettled.

The ends of pipes and fittings shall be reasonably square to their axes.

The sand cast iron pipes shall be of the dia as specified in the description of the item and shall be in length of 1.5m, 1.8m and 2m including socket ends of the pipes unless shorter lengths are either specified or required at junction etc. The pipes and fittings shall be supplied without ears unless specified or directed otherwise.

All pipes and fittings shall ring clearly when struck over with a light hand hammer, and shall be capable of being easily worked with drill or bit.

**TOLERANCES:** - The standard weights and thickness of pipes shall be as shown in the following table. A tolerance up to minus 10% may however, be allowed against these standard weights.

  
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**TABLE 1**

Table showing the standard weight and thickness of SCI / HCI pipes

Sl.	Nominal dia of Overall weight of pipe 1.5m	Thickness in of pipe excluding gears (in Kg)			No. bore (in mm)	mm.
		1.8m	2.0m			
01	100	5.00	18.14	21.67	24.15	
02	50	5.00	9.50	11.41	12.67	

A tolerance up to minus 15 percent in thickness and 20mm in length will be allowed. For fittings, tolerance in length shall be plus 25 mm minus 10 mm.

The thickness of fittings and their socket and pigot dimensions shall conform to the thickness and dimensions specified for the corresponding sizes of straight pipes. The tolerances in weights and thickness shall be the same as for straight pipes.

The access door fittings shall be designed so as to avoid dead spaces to avoid accumulation of filth. Doors shall be provided with 3mm rubber insertion packing and when closed and bolted these shall be watertight.

**SAND CAST IRON FLOOR TRAP:** - Sand cast iron floor trap shall be P' or S' type with minimum 50 mm seal and shall be of self-cleansing design.

**FIXING AND JOINTING:** - The pipes and fittings shall be fixed in vertical alignment unless otherwise specified and shall be secured to the walls at all joints with M.S. holder butt 6 clamps. The

clamps shall be made from 1.6mm thick M.S. sheet of 30mm width, bent to the required shape and size so as to fit tightly on the socket of the pipe, when tightened with screw bolts. It shall be formed out of two semi circular pieces hinged with 6 mm dia M.S. pin on one side and provided with flanged ends on the other side with hole to fit in the screw bolt and nut 40mm long. The clamp shall be provided with a hook made out of 275 mm long - 10 mm diameter M.S. bar riveted to the ring at the centre of one semi circular piece. The clamp shall be fixed to the wall by embedding their hooks in cement concrete blocks 100mm x 100mm x 100mm, 1:2:4 mix for which necessary holes shall be made in the wall at proper places. The clamp shall be kept about 25mm clear off finished face of wall, so as to facilitate cleaning and painting the pipes.

The pipes shall be fixed vertically. The pigot of the upper pipe shall be properly fitted in the socket of the lower pipe such that there is uniform annular space for filling with the jointing material. The annular space between the pigot and socket shall be filled with a few turns of spun yarns soaked in cement slurry or blown bitumen grade 85 / 25 or lead caulked. Caulking tools shall press these home. More skins of yard shall be wrapped, if necessary, and shall be rammed home. The joint shall then be filled with stiff cement mortar (1:2) well pressed with caulking tools and finished smooth at top at an angle of 45 degree sloping up. The joint shall be kept wet at least for seven days by tying four folds of gunny bag to the pipe and keeping it moist constantly.

Where pipes are embedded in masonry these shall be fixed in the masonry work as it proceeds. The pipes shall be kept vertical or to the line as directed by the Engineer-in-

charge. The pipes shall have a minimum surrounding of 12mm thick cement mortar at every portion of external surface. The mortar shall be of the mix as used in masonry work. The length shall be caulked in with lead as soon as the next length of pipe is placed in position. The open end (socket end) of the pipe shall be kept closed till the next length of pipe is fitted and jointed to prevent any brick or concrete or pieces of wood falling in and chocking the pipe.

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The spigot end shall butt the shoulder of the socket and leave no gap in between. The space between the socket and spigot will be first well packed in with spun annular yarn leaving 25mm from the lip of the socket for the lead. The joints shall then be lead caulked as described in detail under jointing of C.I. Pipes with lead joints in public W/S section of this specification. Pipes with ears shall be secured with 40 mm bore steel or iron barrel distance pieces or bobbins and stout C.I. / M.S. nails 10 cm long driven into hard wood plugs fixed in walls. Access doors to fittings shall be provided with 3 mm thick rubber insertion packing and received with screws to make them air/watertight.

All soil pipes shall be carried up above the roof and shall have a wire babbage guard or a cowlas specified.

**HEIGHT OF VENTILATION PIPES:** - All soil pipes shall be carried up above the roof and shall have sand cast iron terminal guard. The ventilating pipe or shaft shall be carried to a height of at least 1 mtr. above the outer covering of the roof of the building or in the case of a window in a gable wall or a dormer window it shall be carried up to the ridge of the roof or at least 2 metres above the top of the window. In the case of a flat roof to which access for use is provided, it shall be carried up to a height of at least 1 mtr. above the parapet or 2 metres above the roof whichever is greater and shall not terminate within 2 metres measured vertically from the top of any window or opening which may exist up to horizontal distance of 5 metres from the vent pipe into such building and in no cases shall be carried to a height less than 3 metres above plinth level.

Where ventilating pipes are carried in pipes shafts, the shaft shall be of a minimum size of 1 metre x 1 metre. If shafts are also used to give light and air to rooms, the ventilating pipe must be carried to a horizontal distance at roof level of not less than 5 metres from the side of the shaft. The payment for the shaft be made separately.

The pipes above the parapet shall be secured to the wall by means of M.S. stay and clamps as explained below.

**M.S. STAYS AND CLAMPS:** - Sand cast iron pipes above parapet shall be fixed with M.S. clamps and stays. The clamps shall be made from 1.5mm thick M.S. flat of 32 mm width, bend to the required shape and size to fit tightly on the socket, when tightened with screw bolts. It shall be formed of two semicircular pieces with flanged ends on both sides with holes to fit in the screw bolts and nuts, 40 mm long. The stay shall be minimum one meter long of 10mm dia M.S. bar. One end of the stay shall be bent to form a hook to be fixed with the clamps by means of bolt and nut cm x 10 cm x 10 cm in 1:2:4 mix. The concrete shall be finished to match with the surroundings surfaces.

**OTHER DETAILS:** - The connection between the main pipe and branch pipes shall be made by using branches and bends with access door for cleaning.

Floor traps shall be provided with 25mm dia puff pipe where length of the waste is more than 180 cm or the floor trap is connected to a waste stack through bends.

The waste from lavatories, kitchens, basins, sinks, baths and other floor traps shall be separately connected to respective waste stack of inspection chamber / upper floors. The waste stack of lavatories will be connected directly to manhole while the waste stack of others shall separately discharge over fully trap.

Every starting manhole shall have a 100 mm sand cast Iron vent, terminating at 1 mtr above the parapet of the building.

The main anti-siphonage pipe shall be of 50 mm Internal diameter. When more than one branch from water closet / sink are connected with the soil pipe and discharge into it, anti-siphonage from the lowest stone should pass through the wall and be carried up outside the building parallel to the soil pipe to a point 5 metres minimum above the highest branch. It can then be connected to the soil pipe or it can be carried in dependently. The anti-siphonage pipes of all the intermediate floors, water closets should be joined with the main anti-siphonage pipe. The ventilating pipes shall have Internal diameter of not less than 50 mm in all parts and shall be connected with arm of soil pipe on trap through a 45 degree branch, at a

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point not less than 7.5 cm and not more than 30 cm from the highest part of the trap and on the side of the water seal which is nearest to the soil pipe the jointing shall be done according to the specification for piping materials used in soil, vent or waste pipes.

Joints shall be filled and caulked as described under sub-head "water supply". The depth of lead from the lip of the pipe socket shall be 25 mm.

**TESTING:**-All sand cast iron pipes and fittings including joints shall be tested by a smoke test to the satisfaction of the Engineer-in-charge and left in working order after completion. The smoke test shall be carried out as stated under.

Smoke shall be pumped into the pipe at the lowest end from a smoke machine, which consists of a bellows and burner. The material usually burnt is greasy cotton waste, which gives out a clear pungent smoke, which is easily detectable by sight as well as by smell if there is leakage at any point of the drain.

**PAINTING:**-All the sand cast iron pipes and fittings shall be painted with colours with two coats of paint over a coat of primer on exposed surfaces as directed by the Engineer-in-charge. Besides, the sand cast iron pipes and fittings shall be painted with a coat of coal tar to the inside surfaces before laying and jointing of pipes and fittings. This specification for painting as described in the relevant sub-heads of Orissa State P.W.D. specification and revised from time to time shall apply in this case also.

**REQUIREMENTS OF JOINTING MATERIALS FOR H.C.I. BUILDING PIPES AND FITTINGS:**

The requirement of jointing materials like cement, gasket for Hard Cast Iron pipes and fittings is indicated in the table below.

**TABLE**

Table showing the requirement of jointing materials for HCI building pipes and fittings.

**1. REQUIREMENT OF LEAD AND GASKET CEMENT FOR JOINTING H.C.I. PIPES (EACH JOINT)**

Dia of pipe In mm	lead in Kg.	Gasket In Kg (same for Lead and cement Joints)	Cement in Kg.
100	1.2	0.13	0.12
50	0.36	0.06	0.06

**Sanitary Ware & Allied Fittings:**

**General:**

All sanitary fixtures and their allied fittings should be of first quality, manufactured by reputed manufacture Hindware/ E.I.D. Parry Ltd./Nycer /Madhusudan ceramics or equivalent. These should be approved by the consultant / Engineer-in-charge before use.

**Squatting pattern W.C. pan (Orissa pattern Closets):**

The water closet shall be of vitreous china of specified size and pattern, integral flushing rim. It shall have the flushing inlet at the back. The Orissa closet should be of approved quality confirming to S.S:- 2556 (part-III).

The squatting type Indian water closets (Orissa closet) shall be sunk in floor sloped towards the pan

in a workmanship like manner. The closet shall be fixed on a proper cement concrete base of 1:3:6 proportions, taking care that the cushion is uniform and even without closet, to receive the specified

thickness of the floor finishing. The joint between the closet and the P.V.C. (S.W.R.) Trap shall be made with W.C. ring and rubber lubricant and shall be of leak proof.

**Wash Hand Basin:**

The wash hand basin shall be of the white vitreous china of approved quality, make and brand I.S.I. marked. It shall be one-piece construction with an integral combined overflow. The size of the basin shall be specified. Each basin shall be provided with one 15mm dia C.P. Brass pillar Tap,

32mm dia C.P waste C.P. chain and rubber plug, unions, joints, C.P. Bottle trap casted PVC waste pipe complete in all respects of approved quality.

The basin shall be supported on a pair of R.S. or C.I cantilever brackets (built in type) embedded and fixed in wall with cement concrete, M20. These brackets shall be painted to required shade with two coats of synthetic enamel paint over coat of priming. The waste of the basin shall discharge into a floor trap or channel through bottle traps PVC waste pipe as specified. One 32mm dia C.P. bottle trap is to be fixed to the waste of the basin, & the outlet of the bottle trap is to be connected to the waste pipe, to discharge the waste to the foresaid floor trap. The connection to the basin shall be made with 450mm long 15mm dia heavy type P.V.C. connection pipe.

#### Kitchen Sink:

Unless otherwise mentioned the kitchen sink and drain board (if used) shall be of white vitreous china or fire clay as specified and of approved quality, make and brand, confirming to I.S.S. It shall be one-piece construction with integral combined overflow. The size of the sink and drain board shall be specified.

Each sink shall be provided with 15mm dia C.P. brass, Bib Cock, long body 40mm C.P. waste with overflow C.P. chain and rubber plug, union etc., complete in all respects as specified and of approved quality. The sink shall be supported on a pair of M.S. or C.I. cantilever brackets (built in type) embedded or fixed in position in the wall by cement concrete M20. The brackets shall be painted to required shade with two coats of approved synthetic enamel paint over a coat of priming. The waste should discharge into a floor trap or channel. The waste pipe should be 40mm dia PVC pipe jointed to the waste of the sink with a brass union nut.

#### Standing Urinals

The urinals shall be flat pattern lipped front basin of required dimension of white/coloured vitreous china and one-piece construction with internal flushing box, rim of an approved make and brand as specified. It shall be fixed in the position by using wooden plug embedded in the wall with screws of proper size. Each urinal shall be connected to a 40mm dia PVC waste pipe, which shall discharge into a channel or floor trap. The lip of urinal shall be kept at 525mm from floor level, while fixing the urinal on the wall.

Where no of urinals are fixed in a line, the distance between the center to center of each urinal shall be kept 750mm and each urinal should be separated from one to other by a partition plate. The center-to-center partition plates shall be kept 750mm.

The partition plates shall be of one-piece kota stone plates, cut to size or partition wall and front corners rounded. The partition plates are embedded in wall with cement concrete and finished smooth. The bottom of the partition plates should be kept 500mm above floor level and top should be kept at 1250 mm above floor level. The plates should project 600mm from wall surface. The width of the plates should be embedded inside the wall and should not be less than 100mm. The thickness of the plates shall be minimum of 25 mm to 32 mm. Thickness of partition wall should be limited to 150mm including smooth surface finishing.

For flushing the urinals each urinal shall be, connected with one 20mm dia G.I. Pipe (Medium class). One end of each of this pipe 15mm PVC connection pipe shall be inserted into the inlet of the Urinal and jointed with jute and putty where as the other end is connected either with a tee or bend with water pipeline fixed on the wall horizontal above the urinals. In each 20mm dia flush pipe, one 20 mm dia gunmetal gate valve angle stopcock to be fixed. By opening this valve, the water will flow to the rims of urinal through the inlet pipe and flush the urinal. After flush, the valve can be closed to avoid wastage of water. One 40mm dia P.V.C. waste pipe shall be connected to the waste of each urinal, to discharge the waste into the channel or trap. One end of this waste pipe shall be made a cup size to fit into the projected waste and tightened with screws and waste clamp.

#### 1. Squatting Urinal Plates:

The urinal plates shall be of white glazed vitreous china with integral flushing rim of size 450mm X 35

0mm of approved make and brand as specified. There shall be white vitreous channel with stop and outlet pieces in the front. These plates shall be fixed on C.C. at 75mm to 100mm above floor level.

For flushing arrangement, one 25mm dia G.I. common water pipe line (minimum size) shall be fixed on the wall parallel to floor. For each urinal one 20mm dia G.I. Branch pipe shall be taken down upto 12mm from floor level just at the center of each plate, in which one 20mm dia gate valve is fixed at 1500mm above floor level. At 1200mm heights, the 20mm dia flush pipe shall be divided into two branches with a tee and fixed horizontal. 300mm on either side and then with the help of elbows, both the branches shall be taken downward and connected to the inlets of the urinal plates at floor level. By operating the valve as above, the water will rush into the rims of the urinal plate and flush it.

Where there are number of Urinals fixed in a line, each Urinal should be separated by a partition plate fixed in the centre of two Urinal Plates. The centre to centre distance of the partition plates shall be kept 750mm minimum.

The partition plates shall be of one-piece kota stone plate, 25 mm to 52mm thick, cut to sizes and front corners rounded. The plates are embedded in wall with cement concrete and finished smooth. The bottom of the partition plates wall shall be kept flushed to Urinal top level, the top level shall be kept at 1200mm from the Urinal Plate top and the projection from the wall shall be 600mm. The width of the plate to be embedded inside the wall should not be less than 100mm.

#### M I R R O R:

##### Materials:-

The mirror shall be of superior glass with edges rounded off or levelled as specified. It shall be free from flaws, specks or bubbles. The size of the mirror shall be 60 mm x 45 mm unless specified otherwise and its thickness shall be not less than 6mm.

The glass for the mirror shall be uniformly silver plated at the back and shall be free from silvering defects.

Silvering shall have a protective uniform covering of red lead pain.

Fixing:- The mirror shall be mounted on 6 mm thick plain asbestos sheet ground and shall be fixed on the position by means of CP brass screws and CP brass washers, over rubber washers and wooden plugs firmly embedded in the wall. CP brass clamps with CP brass screws may be alternative methods of fixing where so directed. Chromium plating shall be of grade "B" type conforming to IS 1069-1958 or as revised from time to time. Unless specified otherwise, the longer side shall be fixed horizontally. The height of the bottom edge of the mirror shall generally be 120 cm above the floor level unless otherwise specified.

#### Glass shelf unit

The shelf shall be of glass of best quality with edges rounded off, and shall be free from flaws, speaks or bubbles. The size of the shelf shall be 60cm x 120cm. Unless otherwise specified and thickness not less than 6mm. The shelf shall have CP brass guardrail resting on rubber washers on the glass plate and CP brass brackets which shall be fixed with CP brass screw to wooden plug firmly embedded in the walls. Chromium plating shall be of grade "B" type conforming to IS 1068-1958 or as revised from time to time. The height of the glass shelf above the floor level shall be 115 cm unless otherwise specified.

**SCHEDULE-A**

**CERTIFICATE OF NO RELATIONSHIP**

I/We hereby certify that I/We\* am/are\* related/not related (\*) to any officer of PR & DW Department of the rank of Assistant Engineer & above and any officer of the rank of Assistant / Under Secretary and above of the PR & DW Department, Govt. of Orissa. I/We\* am/are\* aware that, if the facts subsequently proved to be false, my/our\* contract will be rescinded with forfeiture of E.M.D and security deposit and I/We\* shall be liable to make good the loss or damage resulting from such cancellation.


We also note that, non-submission of this certificate will render my / our tender liable for cancellation.

~~Strike out which is not applicable~~

Signature of the Tenderer

Date:-

Contractor

  
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**SCHEDULE-B****CERTIFICATE OF EMPLOYMENT OF UNEMPLOYED GRADUATE ENGINEER / DIPLOMA HOLDERS**

(for Super class / special class / A class contractors only)

We hereby certify that at present the following Engineering personnel are working with me / in our firm / company and their bio-data are furnished below.

Sl. No.	Name of Engineering personnel appointed for supervising contractor's work with address.	Qualification	Date of Appointment	Monthly emolument	Whether full time engagement and continuous.	If they are superannuated / retired / dismissed or removed personnel from state Govt./ Central Govt./ Public Sector Undertaking/ private Companies and or any one ineligible for Government service.
1	2	3	4	5	6	7

We also note that, non-submission of this certificate will render my / our tender liable for rejection.

Signature of the tenderer.

Date:-


  
BLOCK DEVELOPMENT OFFICER, DABUGAM

Contractor

**Schedule-C**  
**ANNEXURE - I**

**LIST OF PLANT AND EQUIPMENT TO BE DEPLOYED ON THE CONTRACT WORK**  
**(MINIMUM REQUIREMENT)**

Sl. No.	List of plants and equipments	Total	Marks
01.	Truck/Tipper	2	
02.	Concrete Mixture	2	
03.	Generator (5Kv)	1	
04.	Plate Vibrator	2	
05.	Needle Vibrator	2	
06.	Centring & shuttering materials.	4000	
07.	Water Tanker	2	
08.	Except if any		
		<b>Total:-</b>	

**ANNEXURE - II OF SCHEDULE-C**

Part from the above the contractor shall have to arrange other machineries if any required for the work.



**SCHEDULE-E**

**INFORMATION REGARDING CURRENT LITIGATION, DEBARRING EXPELLING OF TENDERER  
OR ABANDONMENT OF WORK BY THE TENDERER**

1. a) Is the tenderer currently involved in any litigation relating to the work. Yes / No
2. b) If yes: give details:  
a) Has the tenderer or any of its constituent partners been debarred/ expelled by any agency in India during the last 5 years Yes / No
3. a) Has the tenderer or any of its constituent partners failed to perform on any contract work in India during the last 5 years Yes / No  
b) If yes, give details:
4. If any information in this schedule is found to be incorrect or concealed, qualification application will be summarily be rejected.

Signature of the contractor



BLOCK DEVELOPMENT OFFICER, DABUGAM

Contractor

**SCHEDULE -F**

**(To be submitted in original in legal stamp paper)**

1. The undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that neither our firm M/s \_\_\_\_\_ nor any of its constituent partners have abandoned any road/ bridge/Irrigation /Buildings or other project work in India nor any contract awarded to us for such works have been rescinded during the last five years prior to the date of this bid.
3. The undersigned hereby authorised and request (s) any bank, person, firm or Corporation to furnish pertinent information as deemed necessary and as requested by the Department to verify this statement or regarding my (our) competency and general reputation.
4. The undersigned understands and agrees that further qualifying information may be requested and agree to furnish any such information at the request of the Department.

(Signed by an Authorised Officer of the firm)  
Title of Officer  
Name of Firm  
Date:



**BLOCK DEVELOPMENT OFFICER, DABUGAM**

Contractor

**SCHEDULE -G**

**Existing commitments and ongoing works**

Description of works	Place & State	Contract No.	Name & Address of Employer	Value of Contract (Rs.Lakh)	Stipulated period of Completion	Value of works remaining to be completed (Rs. Lakh)	Anticipated date of completion
1	2	3	4	5	6	7	8

Each Certificate(s) from the Engineer -in-charge

Contractor

  
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**Schedule-H**

**Form of Bid Security Declaration**

Name Of the Work-

Date:

Bid Identification No.

To

(Fill up the complete name and address of the Authority/Employer/Tender Inviting Authority)

We, the undersigned declare that:

1. We understand that, according to your conditions, bids must be supported by a Bid Security Declaration.
2. We accept that the Authority/Employer/Tender Inviting Authority shall cancel our empanelment and / or suspend/prohibit/debar/blacklist from participating in bidding in any contract of the State for a minimum period of 180 days, if we are in breach of our obligation(s) under the bid conditions, because we:
  - (a) Have withdrawn out Bid prior to the expiry date of the bid validity specified in the letter of Bid or any extended date provided by us; or
  - (b) Having been notified of the acceptance of our Bid by the Employer prior to the expiry date the bid validity in the Letter of Bid or any extended date provided by us,
    - (i) Failure of use to furnish the Performance Security and Additional Performance Security, if required in accordance ITB/Terms of the Bid Document, or
    - (ii) Fail to agree to the decisions of the contract negotiation meeting or
    - (iii) Failure refuse to execute the Contract.
3. We understand this Bid Security Declaration shall expire, if we are not the successful Bidder, upon the earlier of your notification of the name of the successful Bidder through award of contract; or after the expiry date of the Bid validity.

Name of the Bidder \_\_\_\_\_

Name of the person duly authorized to sign the Bid on behalf of the Bidder \_\_\_\_\_

Title of the person signing the Bid \_\_\_\_\_

Signature of the person named above \_\_\_\_\_

Date signed \_\_\_\_\_ day of \_\_\_\_\_

In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid.

*Note: In case of a Joint Venture, the Bid Security Declaration must be in the name of all members to the Joint Venture [that submits the Bid]*

**BLOCK DEVELOPMENT OFFICER, DABUGAM**

Contractor

MEMORANDUM OF UNDERSTANDING

Sri/Smt....., Aged .... Years, S/O- ....., At / P.O. / Dist-..... (Hereinafter called

AND

Party I Sri/Smt....., Aged .... Years, S/O- ....., At / P.O. / Dist-..... (Hereinafter called  
having H.T. / L.T. license registration No..... valid up to .....

WHEREAS the First Party of 1<sup>st</sup> part is the managing partner of .....

WHEREAS the First Party willing to appoint the Second Party to execute the E.I. portion for the tender work, "....."

WHEREAS the Second Party accepted the offer of First Party.

**NOW THIS DEED OF AGREEMENT WITNESSES AS FOLLOWS;**

- Second Party shall do all E.I. works, if the tender is awarded to First Party.
  - Second Party shall fulfill all the E.I. works as per the tender schedule by instruction of Engineer-in-Charge.
  - First Party shall receive payment, signing the bill the document for the concerned work.
  - Second Party shall abide the rules, regulations and specification of E.I. works of above said matter.
- of both the party have signed in presence of

APPROVED for 66 (Sixty-Six) pages only

Contractor

  
BLOCK DEVELOPMENT OFFICER, DABUGAM