GOVERNMENT OF ODISHA
PANCHAYATI RAJ DEPARTMENT

COVER – I

DETAILED TENDER CALL NOTICE FOR THE WORK

Construction Of Subhadra Shakti Kendra (GPLF Office Building with Market Complex)at Dadhibamanapur GP

(CIVIL Tender)

OFFICE OF PANCHAYAT SAMITI, Kataka Sadar

CHECKLIST TO BE ENSURED BY THE BIDDER

Sl. No	Particulars	Reference to Clause no.	Whether furnished		Reference to Page no.
			Yes	No	
01.	Cost of tender paper **Rs.6, 000.00 (**Xerox copy of financial instrument shall be furnished)	D.T.C.N Clause No.04			
02.	E.M.D 1% of the Estimated cost	D.T.C.N Clause No.21			
	Or				
	E.M.D 2% of the estimated cost deploying machineries outside the State	D.T.C.N Clause No.07& Clause No.21			
03.	Copy of valid Registration Certificate	D.T.C.N Clause No.**01,05**			
04.	Copy of valid GST clearance certificate	D.T.C.N Clause No.01			
05.	Copy of PAN Card	D.T.C.N Clause No.05			
06.	No Relationship Certificate in Schedule – A	D.T.C.N Clause No.35			
07. (A)	Information regarding current litigation, debarring / expelling of the tender or abandonment of the work by the tenderer (Schedule-E)	D.T.C.N Clause No.49			
(B)	Affidavit (Schedule-F)	D.T.C.N Clause No.49			
08. (A)	Tools & Plants and machineries as per the requirement in Schedule-C (Minimum 70% marks to be obtained) and Annexure-I (Proof of ownership of Tools & Plants and machineries is to be furnished in shape of copy of invoices / required sale deed in case of 2nd purchase / required lease deed with owner ship documents of the leaser duly attested. In case of centering & shuttering materials certificate of the Executive Engineer of Works Department within 90 days of last date of receipt of tender is allowed.	D.T.C.N Clause No.7			
09.	Affidavit of Joint Venture in case of Composite Building work.	D.T.C.N Clause No.8			
10.	Undertaking non-association with department Calling tenders.	Schedule - I			
11	Declaration regarding experience Cerificate regarding these works or similar type of Building works already executed before.	Schedule-K			
12	Affidavit for Engineer Contractor	DTCN Clause No. 82			
13	Caste Certificate for SC& ST Bidders and affidavit for concession if claimed				
14	PWD Certificate of PWD bidders from Medical officer regarding %ge of Disability				
15	Safety Certificate for EI work				
16	Valid EMAIL Id and Contact Number				

DETAILED TENDER CALL NOTICE

Sealed **Percentage rate** bids are invited **in Single cover system** from the Class of eligible contractors registered with the State Government and contractors of equivalent Grade / class registered with Central Government / MES / Railways having registration for Civil, Electrical and P.H. works for execution of Civil / E.I. / P.H. works on production of definite proof from the appropriate authority in prescribed firm to be eventually drawn in P.W.D. FORM P-1 for the work **" Construction Of Subhadra Shakti Kendra (GPLF Office Building with Market Complex) at Dadhibamanapur GP.**

(a) This tender is of civil work 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 herein shall form a part of the contract and agreement.

2. The Bid documents are available on official website**http://Kataka.odisha.gov.in** from **29-10-2026 to 10-11-2026** upto 5.00PM.

3. The Bid documents will be opened by the assigned officer in the office of the Panchayat Samiti Kataka Sadar, at **11.00** am.on Dt-11-11-2026.

4. The sale of the bid document shall start from 10.00 AM on dt. 29-10-2026 . Sale of bid document will be closed at 5.00 P.M on dt.-10-11-2026. Intended bidders can apply through **https://tendersodisha.gov.in** website. No Box/hand delivery of the Bid document will be entertained. The bid document may also be downloaded from website **http://Kataka.odisha.gov.in** during this period. The intending tenderers has to pay the cost of tender paper for each set as mentioned in column 6 and EMD as mentioned in column -4 as applicable to respective bidders though online from any Nationalized bank while applying.

5 The bid is to be submitted in single covers along with Cost of bid document, DTCN, Xerox copy of registration certificate, valid GSTIN, PAN Details, certificate, undertaking / certificates duly filled, affidavit, and documents required as per the relevant clauses of this DTCN.

. 6 The intending bidders are required to produce documents viz original Registration, valid GISTIN Certificate, PAN card after opening of Technical Bid for verification purpose in the latter stage along with the original documents relating to ownership and hiring of plants and machineries mentioned at **Annexure-I**, preferably within three working days from the date of opening of the tender. Furnishing Xerox copy of such documents along with the Bid is mandatory otherwise his/ her bid shall be declared as non responsive and thus liable for rejection.

7. (i) The Contractors are required to furnish scanned copy of evidence of ownership of principal machineries/equipments as per Annexure-I for which contractor shall have to secure minimum 70% of marks failing which the tender shall be liable for rejection.

(II) In case the contractor proposes to engage machineries and equipments as asked for in the tender document, owned or hired but deployed out side the State, he/she is required to furnish additional 1% EMD /Bid Security. The entire bid security including the additional bid security shall stand forfeited in case the contractor fails to mobilize the machineries within a period as to be able to execute an item of work as per original programme which will be part of the agreement.

(III) The contractor intending to hire/lease equipments/machineries are required to furnish proof of ownership from the company/person providing equipments/machineries on hire/lease along with contracts/ agreements/lease deed and duration of such contract. The contracts/agreements/lease deed should be on long term basis for a minimum period of **12 (Twelve) months as mentioned in contract data** from the last date of receipt of Bid documents.

8. The companies or individuals 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 need 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 sub-contract agreement with eligible Electrical Contractors**

having valid M.V. license (Associate with the sub-contractor) and a copy of such agreement for the work after due registration should be attached with the Tender in original and this shall also form a part of the tender. If the Civil Contractor is having registration in Electrical works under the same name and style, the question of joint venture does not arise. The tender papers shall bear signature of authorized person of the tenderer, the letter of authorization should accompany tender papers. The authorization 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 and Electrical Items of work to the Engineer-in- Charge.

9. (i) The contractor will be drawn in P.W.D. **P-1** contract form and will constitute 3 parts as follows.

a. Part – (A) : For Civil items of works

b. Part – (B) : For Electrical. Items of works

c. Part – (C) :: For P.H items of work

The contract shall be drawn & signed by **Block Development Officer, Kataka Sadar** on behalf of the Governor of Odisha.

(ii) The Civil items of works as per Part-I of Schedule of quantities, Electrical items of works (both internal & external) as per part-II of Schedules of quantities and P.H. items of works (both internal & external) as per Part-III of the Scheduled of quantities of the Agreement shall be supervised measured and check measured by the authorized persons of the respective works. **As this will be a civil tender only part-I of scheduled of quantities will be provided**.

10 If an individual makes the application, the individual should sign above his full type written name and current address.

11 If the application is made by proprietary firm, it shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.

12 If the application is made by a firm in partnership, it shall be signed by all the partners of the firm above their full type written names and current address, or alternatively by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed and current address of all partners of the firm shall also accompany the application.

13 If the application is made by a limited company or a corporation, it shall be signed by duly authorized person holding power of attorney for signing the application in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation will be required to furnish satisfactory evidence of its existence along with the tenders.

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

15. 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.

16. The work is to be completed in all respects within **the calendar** months specified above from the date of issue of work order. Tenderer whose tender is accepted must submit a programme of work. Civil works will be item wise with proper plan , execution with free float time. Any public holiday according to OPWD code only be entertained nothing beyond that. So activity chart, proper log book should be submitted by contractor immediately after issue of work order for approval of Engineer-in-Charge.

17. All tenders received will remain valid for a period of 90 days from the last date prescribed for receipt of tenders and validity of tenders can also be extended if agreed by the tenderers and the Department.

18. The tenders 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 Orissa, 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.

. 19. 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 well 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.

20. 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 taxes, octroy, other duties, 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 authorized 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.

21. E.M.D. 1% to be deposited by contractor at the time of submitting bid documents then after awarded contractor has to deposit rest ISD of 1%.

22. The tender should be accompanied with the ***Xerox copies of the valid Registration certificate, valid GSTIN and PAN card*** which are mandatory and the original certificates are to be produced **of** opening of the tender before **Block Development Officer, Kataka Sadar** for verification, otherwise his/her bid shall be declared as non-responsive and thus liable for rejection.

23. 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.

24. The department reserves the right of authority to reject any or all tenders received without assigning any reason whatsoever. In case of cancelling the evaluation of tender in case of single tender the paper cost deposited by the bidder shall be refunded to him/her. (Added).

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 intimation is sent to rejection of their tenders. The retention of E.M.D. with the Department will carry no interest.

26. The Engineer-in-charge 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 Engineer-in-charge 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 Notification of award will constitute the formation of the contract, subject only to the furnishing of a performance security (Initial Security Deposit) in form of Deposit receipt of Schedule Bank / Kissan Vikash Patra / Post Office Savings Bank Account/National Savings Certificate / Post Office Time Deposit Account duly pledged in favour of the **concerned Block Development officer, payable at Kataka Sadar** and in no other form, shall be 2% of the value of the tendered amount and sign the agreement in the P.W.D. form No. **P-1 (Schedule XLV No. 61)** for the fulfillment of the contract in the office of the Block Development Officer, Kataka Sadar or as directed.

The security deposit together with the earnest money and the amount withheld according to the provision of **P-1** agreement shall be retained as security for the due fulfillment of this contract and additional performance security in accordance with the provisions of the agreement.

The agreement will incorporate all agreements between the officer inviting the bid and the successful bidder within 15 days following the notification of award along with the Letter of Acceptance. The successful bidder will sign the agreement and deliver it to the Engineer-in Charge. Following documents shall form part of the agreement.

a) 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 leading there to & required amount of performance security including additional performance security.

b) Standard **P.W.D. Form P-1 with latest amendments.** Failure to enter in to the required agreement and to make the security deposit as above shall entail forfeiture of the (earnest money) .No contract (tender) shall be finally accepted until the required amount of initial security money is deposited. The security will be refunded after 12 (Twelve) months of completion of the work and payment of the final bill and will not carry any interest.

As concurred by Law Department & Finance Department In their U.O.R. No 848, dtd.21.05.97 J.O.R.No.202 W.F.D. dtd.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.

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 and all other taxes including prevailing taxes from time to time. 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 bonafide use of the land for work and all such construction of temporary nature by the contractor shall be done after obtaining written permission from the Engineer-in-Charge of 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 equipments 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.

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 leveling 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 his 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, dtd.25-11-57. 38. No part of the contract shall be sublet without written permission to the concerned Block Development Officer or transfer is made by the power of attorney authorizing others to receive payment on contractors behalf.

34. 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 expect 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.

35. **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 Block. or Assistant**/**Under Secretary & above in the P.R & DW Department. 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.

36. **DELETED**

(a) DELETED

b) DELETED

c) DELETED

(d) DELETED

e) DELETED

f) DELETED

37. If any advance / Secured advance is granted by the Department the same will bear interest at the rate of 18% P.A.

38. 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.

39. Shuttering & centering 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.

40. 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, centering and shuttering made for the work and can reject partly of fully such structures, if found defective in their opinion. Any eventually such as loss of lives or properly due to failure of centering and shuttering shall be the responsibility of the Contractor regarding compensation of all claims thereof.

41. 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. Cost of empty cement bag@ Rs.4.00/- per each should be deducted from the bill.

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

43. 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.

44. 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.

45. The contractor shall properly co-ordinate with the execution of P.H. and Electrical works and takes care of the safety of Workers.

46. 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 Engineer-in-Charge.

47. No claim whatsoever will be entertained for supply of machineries. No extension of time will be granted to the contractor under this ground under any circumstances.

48. **The tenderers 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 as per the proforma enclosed in a separate sheet of schedule-H.**

49. 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 is to furnish an **affidavit** at the time of submission of tender paper about the authentication of tender documents. An **affidavit** to this effect is to be furnished in **Schedule-F. Non-furnishing** of the information in **Schedule - E** and required affidavit in **Schedule – F**, the bid document will be **summarily rejected.**

50. **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.

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. 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 ***Quality control and Research Laboratory.*** Cost of testing of all specimens and samples will be borne by the Contractor.

51. 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.

52. **DELETED**

53. **List of tool & plants in running condition in possession of contractor is to be furnished in a separate sheet of schedule-C.**

54. It is the responsibility of the contractor to procure and store explosive required for blasting operation. Department may render necessary possible help for procuring license.

55. For submission of a tender for the work, the 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 materials, Medical aid, labour and Flood stuff etc. and that the rates quoted by him in the tender will be adequate to complete the work according to the specifications attached thereto and that he had taken in to account all conditions and difficulties that may be encountered during its progress and to have quoted labour rates and materials with taxes, Octoroi and other duties lead, lifts, loading and unloading freight for 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 authorized subordinates. After acceptance of the contract rates Government will not pay any extra charges for any reason in case the contractor finds later on to have misjudged the conditions as regards the availability of materials, labour and other factors. The contractor will be responsible for any misuse, loss or damages due to any reasons whatsoever of any departmental material during the execution of work. In case of loss, damage or misuse, recovery at the rate at 5 times the cost of the materials will be deducted from the bills or his other dues.

56. 1.00 % or the prevailing percentage of I.T. Department of the gross amount of the bill towards income tax will be deducted from the contractor's bill.

57. 18% GST (9%OGST+9% CGST) will be added with the agreement value and 2% of the gross amount of the bill will be deducted from the contractor's bill towards sales GST, where Agreement Value is **two lakh fifty Thousand and above.**

58. It must be clearly understood that under no circumstances any interest is chargeable for the dues or additional dues if any payable for the work executed and final bill pending disposal due to any reason whatsoever.

59. No extra payment will be made for removing spreading and consolidating salvaged metals and materials.

60. Under section 12 of contractors labour (Regulation and Abolition) Act. 1970 the contractor who undertakes execution of work through labour should produce valid license from licensing authorities of labour Department.

61. **(A) Performance Security:**The following changes has been made vide works department notification OM 17941, 08-10-2026 regarding the negative threshold limit omission and APS.

a. Additional Performance Security is not required when the bidder has quoted bid price below 0% but not below 10%. (0<Bid ≤10)

b. IF Bid price is between 10% to 20% then (10 <bid ≤20) then additional performance guaranty shall be increased by 0.2% for each percentage of ROPL below 10%.

c. If bid price Is More than 20% and not below 30%(20 <bid ≤30) the additional performance security shall be increased by 0.3% for each percentage below 20% put to tender in addition to 2% of the accepted bid price.

d. If bid price is below 30% and more then the additional performance security percentage shall be incremented by 0.5%for every percentage of ROPL 30% in addition to 5% of accepted bid price. This additional performance guarantee percentage will be applied on the accepted bid price.

e. The additional performance guarantee may be rounded off to next round number if percentage get more than 0.5% and if percentage get less than 0.5% then it will be rounded off to less percentage.

f. This additional performance security will be a part of performance security.

g. Justification for abnormally low bids shall be scrutinized by the departmental Technical Committee and recommended to the competent authority of the administrative department for the approval of APS. An Abnormally low bids is one in which the bid price, in combination with other elements of the bids appears so low that it raises material concern as to the capability of bidder to perform the contract at the offered price. Procuring entity may in such cases seek written clarification from the bidder including detailed price analysis of the bid price in relation to scope , schedule, resource mobilization , allocation of risks and responsibilities and any other requirements of the bid document. If after evaluating the price analysis, the procuring entity determines that the bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the procuring entity may reject the bid proposal. However it would not be advisable to fix a normative percentage below the estimated cost which would automatically be considered as an abnormally low bid.

N.B. – Any percentage below 14.99% will be considered as abnormally low bid. Any price quoted beyond 14.99% will be gone through 61 (f).

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.

63. **DELETED**

64. **DELETED**

65. All reinforced cement work should conform to Orissa Detailed specification and should be of proportion as per Contract Agreement having desired compressive strength (in work test) in 15 Cm cubes at 28days, after mixing and test conducted in accordance with IS 456 and IS 516 .

66. 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 leveling the ground wherever required. The rates quoted should be for finished items of works inclusive of these incidental items of work. It should be understood clearly that no claims whatsoever would be entertained.

67. All fittings for doors and windows if supplied by the contractor should be best quality and should get approved by the Engineer-in -Charge before their use on the work.

68. No part of the contract shall be sublet without written permission of the Officer-in -Charge or transfer is made by power of Attorney authorizing others to receive payment on the contractor's behalf.

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 **concerned Block Development officer,** 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. 1% of the gross amount of the bill will be deducted from the contractor's bill towards Cess as per the Building & Other construction Workers (RE & CS) Act.1996 & Building & Other Construction Worker Welfare Cess Act.1996.

73. 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 Inspectorate.

74. The Tenderer should 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 proforma(s) enclosed herewith in appropriate place of bid document.

75. 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. (Item rate basis)

76. The tenderer may at his option quote reasonable rate for each item of work carefully so that the rate for one item should not be unworkable low and for others too high.

77. 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 will be tested at ***Departmental Control and Research Laboratory***, at the cost of the Contractor with no extra cost to the Department.

78. 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 6 months after completion of work or if any, imperfection becomes apparent to the work within 6 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.

79. The Fly Ash bricks should be 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.

80. Under Section 1 of contract labour Regulation and Abolition Act 1970 the contractor who undertakes execution of work through labour should produce valid license from the licensing authority of labour Department.

81. 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.

82. Engineer Contractor desirous to avail the facility of exemption of E.M.D is required to submit an affidavit to the effect that he has not yet availed the facility / participated in the tender for more than two works (Excluding this work) during the current financial year. The name of work for which participated and the authority to which the tender was submitted must be mentioned in the affidavit, failing which the tender will be rejected.

83. 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.

84. **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.

85. In case of ambiguity between clauses of this D.T.C.N. and the **P-1** contract form, the relevant Clauses of the **P-1** contract form shall prevail over the D.T.C.N. The clauses not covered under **P-1** contract form shall be governed by the clauses of the D.T.C.N.

86. 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.

87. 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.

88. 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 concerned Block Development officer 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 concerned Block Development officer is final and binding on the contractor.

89. 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.

90. The bidder will be responsible for the loss or damage of any departmental materials during transit and in the execution of the work due to reasons what-so-ever and the cost of such materials will be recovered from the bills at stock issue rates or market rates whichever is higher.

91. If the contractor removes Government materials supplied to him from the site of work with a view to dispose of the same dishonesty, 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.

92. The selected contractor may take delivery of departmental supply according to his need for the work issued by the ***Office in-charge*** subject to the availability of the materials. The tenderer shall make all arrangement for proper storages of materials but no cost for raising shed for storage, pay of security guard etc. will be borne by the Department. The Department is not responsible for considering the theft of materials at site. It is the contractor's risk. Under any such plea if the tenderer stops the work, he shall have to pay the full penalty as per clause of F2 agreement.

93. The Department will have the right to supply at any time in the interest of work any departmental materials to be used in the work and the contractor shall use such materials without any controversy or dispute on that account. The rate of issue of such materials will be at the stock issue rates inclusive of storage charges or rates fixed by the Department or current market rate whichever is higher.

94. **DELETED**

95. 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.

96. 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).

97. **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.

98. The contractor is required to pay royalty to Govt. as fixed from time of time and produce such documents in support of their payment to the concerned Block Development Officer with their bills, falling 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.

99. **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.

100. 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 (Twelve) months from the date of successful completion of the work.

101. 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 Orissa 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 any one 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.

102. **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.

103. 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 Officer-in-Charge with their dated signatures and duly noted by the contractor or his authorized 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 Block 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.

104. 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.

105. In case of any discrepancy in printing or omissions of statutory specifications or any other part or portion of the approved document during download of the bid document, the decision of the officer inviting the bid will be binding on the bidder.

106. The rates quoted by the contractor shall cover the latest approved rates of labours, materials, P.O.L. and Royalties. Arrangement of borrow areas; land, approach road to the building site etc. are the responsibility of the contractor.

107. 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.

108. The contractor shall make requisition of claim book from the date of commencement of the work from the Department and shall maintain in proper block form with pages serially numbered in order to record items of works are not covered by his contract and claimable as extra. Claims shall be entered regularly in this book under the dated signature of the contractor or his duly authorized agents at the end of each month. A certificate should be furnished along with the claim to the effect that he has no other claim beyond this claim up-to-date. If in any month there are no claims to record, a certificate to that effect should be furnished by the contractor in the claim book. Each claim must be defined and should be given as for as possible regarding the quantities as well as the total amount claimed. The claim book must be submitted by the contractor regularly by 10th and 16th days of each month for orders of the Engineer-in-Charge or competent authority. Claims not made in this manner or the claim book not maintained from the commencement of the work is liable to be summarily rejected. The claim book is the property of the block. and shall be surrendered by the contractor to the Engineer-in-charge after completion of the work or before recession of the contract by the Department which ever is earlier for record.

109. Number of tests as specified in I.R.C. / MoRT&H / I.S.I 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.

110. Even qualified criteria are met; the bidders can be disqualified for the following reasons, if enquired by the Department

(a) Making a false statement or declaration.

(b) Past record of poor performance.

(c) Past record of abandoning the work half way/ recession of contract.

(d) Past record of in-ordinate delay in completion of the work.

(e) Past history of litigation.

111. In case the 1st 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 dis-incentivizing the tenderer.

112. The following documents which are not submitted with the Bid, will be deemed to be part of the Bid:

Sl. No	Particulars
1	Notice Inviting tender
2	Instruction to the Bidders
3	Conditions of Contract.
4	Contract data
5	Specifications
6	Drawings

113. **Condition for issue of plant & machinery to contractor on hire**: - Tools & plants will be issued to the contractor only if it is desirable in the interest of Govt. works and if these can be spared without inconvenience to the Department. The Sanction of the Chief Engineer shall be necessary in each case. The contractor shall arrange his programme of work according to the availability of the plant & machinery & no claim will be entertained for any delay in supply by the Department.

An agreement shall be entered in to by the contractor to the effect that these hire charges are recoverable from the bills of the contractor regularly and the final payment for the work including refund of security deposit will not be made until the total amount due to the Government on account of hire of machinery etc. is recoverable in full. Full amount of hire charges due from the contractor at any contract at any time shall be recovered from his next subsequent bill. All transit and incidental charges in connection with the dispatch of tools and plants and machineries from workshop shed/ deposit return there to, will be borne by the contractor. The hire charge shall be recovered at the prescribed rates from and inclusive of the date, the plant and machinery is made over up to and inclusive of the date of its return, even though the same day it may not have been utilised for any reason except for a major break down which may take more than 72 hours for repairs. The contractor shall immediately intimate in writing to the Engineer–in-charge when any plant or machinery goes out of order requiring major repairs. The hire charges are for clock hours. In case of tar boilers, hot mix plant and any other machinery requiring similar preparation the working hour will include the time required to make up the boiler temperature and bring plant to the operating conditions before the actual start of work. The machine will work in shifts of 8 hours each. Extra charges towards overtime wages of any of the operating and maintenance staff will be leviable. These charges will be fixed by the Engineer-in-charge from time of time. In no case, the tools and plants shall be operated beyond 8 hours in any shift without prior written permission of the Engineer-in-charge.

The contractor shall release the plant and machinery as and when required for periodical servicing and maintenance. He shall also provide for any labour and water source for washing the plants. In the case of Concrete mixtures, pavers and similar such type of equipments, the contractor shall arrange to get the hopper cleaned and the drums etc. washed at the close of work each day. The plant and machinery once issued to a contractor shall not be returned by him on account of lack of arrangement of labour and material etc. on his part. The same will be returned only when they do not require or when in the option of Engineer-in-charge the work or a portion of work for which issued is completed. The tools and plants shall while in transit and in the custody of contractor be at his sole risk and responsibility for damages and / or loss except fair wear and tear. The damage or loss as assessed by Engineer-in-charge shall be made good by the contractor. In the event of a disagreement as to the extent of damage or the value of article lost, the decision of Collector, Angul shall be final. The contractor shall on or before the supply of plant and machinery sign an agreement in indemnifying the Govt. against loss or damage to the machine. The Contractor shall also be responsible for any claim for compensation for loss of life, injury or damages to property etc. arising from any cause what-so-ever. The contractor shall provide full time choukidar for guarding the plant and machinery at site.

If the articles are not returned within the date originally specified or extended by the Engineer in charge, in addition to the normal hire charge, a surcharge equal to 10% of the hire charges will be levied for the period that the machinery is not returned. Such period will be treated as working time. In the event of the non-return of the machinery, the full value of the

articles at the current market price will be recovered from the contractor's outstanding bills or any bills that may become due in respect of his other work under the state public works Department. The decision of the Chief Engineer shall be final in case of dispute.

FORM OF AGREEMENT – The contractor shall, before taking the possession of the machinery, enter in to an agreement with the Engineer-in-charge or his nominees in the form attached. Log Books for recording the hours of daily works for each of the plant and machinery supplied to the contractor will be maintained by the Department will be attested by the contractor or his authorized agent daily. In case of contractor contests the correctness of the entries and / or fails to sign the logbook, the decision of the Engineer-in-charge shall be final and binding on him. Hire charges will be calculated according to the entries in the logbook and will be binding on the contractor.

114. **ELIGIBILITY CRITERIA FOR QUALIFICATION:**

Applicants shall furnish the followings.

a. Required **"1% E.M.D."** as per the **Clause No. 7 and Clause No.21.**

b. Online payment towards cost of tender paper as per **Clause No.4.**

c. Xerox copy of valid Registration Certificate, Valid GSTIN, PAN card along with the tender documents and furnish the Original Registration certificate, and Pan card, for verification of opening of Cover-I of the tender before **Block Development Officer, Kataka Sadar** as per **Clause No.22.**

d. Information regarding current litigation, debarring / expelling of the applicant or abandonment of work by the applicant in **schedule "E"** and **affidavit to that effect including authentication of tender documents and Bank guarantee in schedule "F"** as per **Clause No.49.**

e. License criteria as per **Clause No.8**.for composite tender.

f. **DELETED**

g. Evidence of ownership of major items of construction equipments, named evidence of arrangement of processing them on hire/lease/buying as defined therein. (As per Annexure-I)

h. **DELETED**

i. Proposal for subcontracting the components of the works for construction/up-gradation, aggregating to not more than 20 percent of the contract price, if desired.

j. Submission of original bid security and tender paper cost as prescribed in the relevant clause of DTCN after last date and time of submission of bid before the stipulated date & time for opening of the bid.

k. The intending tenderer(s) should have the total financial turn over of an amount not less than the amount put to tender(Annexure Column-7) during any 3(three) financial years taken together of the last proceeding five financial years.

l. Joint Venture is not acceptable.

Special Criteria:-

n. The intending Tenderers must not have get any notice during last two years from this office for any kind of irregularities in work. And Neither be debarred in last five years by any department.

o. Those bidders will get preference priorly who have successfully completed work within calender month earlier for this organization in last years in this License.

p. Bidders must not get into any type of conflict of interest during the evaluation and must respect the Official Secretes Act 1923.

115. ***ADDENDUM TO THE CONDITION OF P-1 CONTRACT***

Clause-2(a) of P-1 Contract:-TIME CONTROL :-(Vide Works Department Office Memorandum No.24716 dtd.24.12.2005 and No.8310 dtd.17.05.2006)

2.1. **Progress of work and Re-scheduling programme.**

2.1.1. The Block Development Officer 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.

2.1.2. With in 15 days of issue of the letter of acceptance, the contractor shall submit to the Concerned Block Development for approval a Programme showing the general methods, arrangements, and timing for all the activities in the Works along with monthly cash flow forecast.

2.1.3. 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, ½ of the whole of the work before ½ 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.

2.1.4. If at any time it should appear to the Engineer-in-Charge that the actual process of the work does not confirm 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.**

2.1.5. An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

2.1.6. 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.

2.2. Extension of the Completion Date.

2.2.1. 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.

2.2.2. 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 Engineer-in- Charge and the Contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestone given in contract data.

2.2.3. 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 majored, 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.

2.2.4. 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.

2.2.5. In any such case a fair and reasonable extension of time for completion of work may be given. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the contractor.

2.3. Compensation for Delay.

2.3.1. If the contractor fails to maintain the required progress in terms of clause-2 of P-1 Contract or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the Chief Engineer (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day / month (as applicable) that the progress remains below that specified in Clause-2 of P-1 Contract or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified. **Compensation @ 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.

2.4. The rate quoted by the bidder less than 15% of tendered amount, then such a bid shall be rejected and the tender shall be finalized basing on merits of rest bids. But if more than one bid is quoted at 14.99% (Decimal 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 tender inviting authority/ his authorized representative and Financial Advisor, of DRDA will remain present.

2.5. Management Meetings

2.5.1. 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.

2.5.2. The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

Clause-2 (b) of Item Rate P-1 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 Executive Engineer shall be conclusive evidence), 20% of the value of left over work will be realized from the contractor as penalty.

116. 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.

117. A Contractor may be black listed as per amendment made to Appendix XXXIV to OPWD Code Vol.-II on rules for black listing of Contractors vide letter no.3365 dt.01.03.2007 of Works Department, Orissa.

As per said amendment a Contractor may be blacklisted

a) Misbehavior/threatening of Departmental & supervisory officers during execution of work/tendering process.
b) Involvement in any sort of tender fixing.
c) Constant non-achievement of milestones on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out.

d) Persistent and intentional violation of important conditions of contract.

e) Security consideration of the State i.e. any action that jeopardizes the security of the State.

f) Submission of false/ fabricated / forged documents for consideration of a tender.

118. 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 Energization of the building. The building should be internally electrified and also same goes for plumbing. So that after plaster any damage to civil work will not happen due to electrification and PH work.

119. Percentage rate contract (vide Works Department letter no.8310 dt.17.05.2006) In case of percentage rate tender:-

i. The Contractor has to mention percentage excess or less over the estimated cost (In figures as well as words) in the prescribed format appended to the tender document.

ii. Contractors participated in the tender for more than one work may offer conditional rebate. Rebate offer submitted in separate sealed envelope shall be opened, declared and recorded first. The rebate so offered shall be considered after opening of all packages called in the same Tender Notice. The Contractors who wish to tender for two or more works shall submit separate tender for each. Each tender shall have the Bid Identification No., Name & Sl. No. of the work (as per IFB) to which they refer, written on the envelope.

iii. Only percentage quoted shall be considered. Percentage quoted by the Contractor should be accurately filled-in figures and words, so that there is no discrepancy.

a. If any discrepancy is found in the percentage quoted in words and figures, then the percentage quoted by the Contractor in words shall be taken as correct

b. If any discrepancy is found in the percentage quoted in percentage excess/ less and the total amount quoted by the Contractor, then percentage will be taken as correct.

c. The percentage quoted in the tender without mentioning excess or less and not supported with the corresponding amount will be treated as excess.

d. The percentage quoted in the tender without mentioning excess / less supported with corresponding amount does not tally with either to percentage excess or less then it will be treated as percentage excess.

e. The percentage quoted in the tender without mentioning excess / less supported with corresponding amount if tallied with the percentage then it will be treated as to which side the amount tallies.

f. The Contractor will write percentage excess/ less unto one decimal point only. If he writes the percentage excess / less upto two or more decimal points, the first decimal point shall only be considered without rounding off.

g. The tender shall be written legibly and free from erasures, over writings or corrections of figures. Corrections, over writings & interpolations where unavoidable should be made by making out, initialing, dating and rewriting.

iv. In the contract P1 time is the essence. The contractor is required to maintain a certain rate of progress specify in the contract.

v. **The quantity mentioned can be increased or reduced to the extent of 10% for individual items subject to a maximum of 5% over the estimated cost. If it exceeds the limit stated above prior approval of competent authority is mandatory before making any payment.**

vi. The period of completion is fixed and can not be altered except in case of exceptional circumstances with due approval of next higher authority.

vii. Bills for percentage rate tenders shall be prepared at the estimated rates for individual items only and the percentage excess or less shall be added or subtracted from the gross amount of the bill.

(Total 119 Clauses)

TECHNICAL SPECIFICATION FOR SANITARY & PLUMBING WORKS

(A) Sanitary ware & allied fittings :

1. General:

All Sanitary fixtures and their allied fittings, should be of first quality, manufactured by Hindustan Sanitary Ware / Parryware / Nycer, These should be approved by the Engineer-in-charge of the G.P.H. Wing before use.

2. Squatting Pattern W.C. (pan) (Orissa Pattern Closets):

The water closet shall be of vitreous China of specified size and pattern, with an integral flushing rim. It shall have the flushing inlet at the back. The Orissa closet should be of approved quality confirming to I.S.S.-2656 (Part-Ill).The squatting type Indian Water Closet (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 proportion, 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 leak proof.

3. Flushing Cistern :

The flushing of the Indian water closet (Orissa Closet) shall be done by C.I. or Polyaterine High Level low-level porcelain valve-less syphonic flushing 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 dia O.I. flush pipe, made from G.I. Pipe (Light Quality) or 32 dia P.V.C, Pipe as specified in the tender schedule. The flush pipe with an offset should be fixed to wall by using C.I. Holder Bat Clamps. The capacity of the cistern should be 10 Ltrs. as per I.S.S. 15 Ltrs. In case of low-level cisterns. The Cistern shall be fixed on cast Iron or Rolled Steel Cantiliver Brakets (Bulltin type), which shall be firmly embedded in the wall, with C.C. 1.2.4. The Cistern shall be provided with 20mm dia P.V.C. Overflow Pipe with fittings, which shall terminate into mosquito proof coupling secured in a manner that will permit it to be readily 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 wall by using C.I. Holder Bat Clamps. The bend and the Offset as required in the Flush pipe shall be made cold. The inside of the Cistern shall be painted with two coats of approved black bitumen paint. The Outer face of the Cistern, Brackets 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 rate quoted for the flushing cistern.

The inlet connection to the Cistern shall be made with 450 mm 1 cmg 15 mm dia P.V.C. Heavy type connection Pipe.

4. 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 as specified. Each basin shall be provided with one 15 mm dia C.R Brass Pillar Tap, 32mm dia C.R Waste, C.R. Chain and Rubber Plug, Unions, Joints, C.P Bottletrap cast 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, 1.2.4. These brackets shall be painted to the required shade with two coats of approved synthetic enamel paint over a coat of priming.

The waste of the Basin shall discharge into a floor trap or Channel through bottle traps 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 Pipe, to discharge the waste to the aforesaid floor trap. The inlet connection to the Basin shall be made with 450mm Long 15mm dia Heavy type P.V.C. connection pipe.

5. 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 approved quality, make a brand, confirming to T.S.S, It shall be of one piece construction with integral combined overflow. The size of the sink and Drain Board shall be as specified.

Each Sink shall be provided with one 15mm dia C.P. brass, Bib Cock, long body, 40mm C.P. Waste with overflow C.P. Chain & Rubber Plug, unions 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 1.2.4. 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 P.V.C. Pipe jointed to the waste of the Sink with a Brass union nut.

6. Standing Urinals :

The Urinals shall be flat pattern lipped front basin of required dimension of White 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 RV.C. Waste Pipe, which shall discharge into a channel of floor trap. The lip of Urinals shall be kept at 525mm from floor level, while fixing the Urinal on wall.

Where no. of Urinals are fixed in a line, the distance between the centres to centre of each Urinal shall be kept 750mm. and each Urinal should be separated from one to other by a partition plate. The centre to centre of partition plates shall be kept 750mm apart. The partition plate shall be of one-piece 25mm thick marble plates, cut to size and front corners rounded. The partition plates shall be embedded in wall with cement concrete and finished smooth. The bottom of the partition plate should be kept 350mm above floor level and top should be kept at 1250mm above floor level. The plates should project 600mm from wall surface. The width of the plates to be embedded inside the wall should not be less than 100mm. The thickness of the plates shall be minimum 25mm.

For flushing the Urinals each Urinals shall be connected with one 20mm dia G.I. Pipe (Medium Class), One of this 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 the 25mm dia size Water Pipe Line fixed on the wall horizontal above the Urinals. In each 20mm dia flush pipe one 20mm dia cum-metal Gate value, the water will flow to thermal 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 of Trap. One end of this Waste pipe shall be made a cup size to fit into the projected waste and tightened with screws.

7. Squatting Urinal Plates:

The Urinal Plates shall be of White Glazed Vitreous China with integral flushing rim of size 450 X 350mm of approved make and brand as specified. There shall be white vitreous channel with stop and outlet pieces in 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 Pipeline (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 up to t200mm from floor level just at the centre of each plate, in which one 20mm dia Gate Valves is fixed at 350mm above floor level. At 1200mm height, the 20mm dia flush pipe shall be divided into two branches shall be taken downward and connected to the inlets of the urinals plate 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.

The partition plates shall be of one-piece marble plate, 25mm thick, cut to sizes and front corners rounded. The plates are to be embedded in wall with cement concrete and finished smooth. The bottom of the partition plates shall be kept flushed to urinal top level and the top level of partition plate 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.

(B) Soil and waste pipes and fittings

1. H.C.I. Pipe Fittings

The Cast iron Soil, Waste and design pipes (spigot & socket joints) shall be of make and brand as specified (under specification of materials), confirming to I.S.S. 3989-1970 and ISI marked with approved clamps are to be used. The pipes and fittings shall be free from cracks, laps, pinholes, and other imperfection and carefully cited.

The access door fittings shall be designed and made so as to avoid dead space in which filth may accumulate and door shall be provided with 3mm thick rubber insertion packing when closed and bolted.

WEIGHT OF HCI PIPES

2.

Dia of Pipe in mm	**Thickness in mm**	**Length of pipe & width piece**	
		1.8mtr. D/s	1.8mtr.
50 mm	5mm	16.00kg.	15.00 kg.
75 mm	5mm.	13.83kg.	16.52kg.
100 mm	8mm	24.00kg.	22.00kg.
150mm	8mm	26.70 kg.	31.82kg.

Tolerance 10%

3. The jointing should be done with pig lead confirming to I.S. 782-1966 - grade 99.94.The spigot and of Pipes and Fittings should enter into the socket end. The annular space shall be packed with spun yarn gasket, compacted so as to leave a depth for receiving required quantity of lead in a continuous pouring from ladder. After pouring lead in the joints in full, caulking is to be done three times round with the caulking chisels, so that the joints may be sealed with lead. The depth of lead in a point should be 35mm and the rest depth of the joint should be packed with spun yarn Gasket.

4. 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.**	**Cement kg.**
		(same for lead & cement joint)	
100	1.2kg.	0.13kg.	0.12kg.
50	0.36 kg.	0.06 kg.	0.06 kg.

5. The inside of the pipes and fittings shall be well coated with special tar or bitumen solution of approved quality. Where the pipe and fittings are laid below the ground, the outer surface of the pipes and fittings shall also to be painted with two coats of black anticorrosive paint of approved quality.

   On completion of the work, the exposed pipes and fittings are to be painted with two coats of synthetic enamel paint of approved colour & quality over a coat of red oxide primer. The cost of paint should include in the rates.

6. Soil pipes for ventilation Is to be connected to the sewer at its floor and without a trap and be carried to such a height, at least above roof level, to prevent damage to health by commission of foul air, The pipe shall terminate as open and protected by a cowl.

7. The waste water pipe shall be connected with the nearest yard gully or a surface drain.

8. The traps should be of hard cast iron and should have a water seal at least 50mm deep.

9. All the soil and waste pipes and fittings, after laid and fixed shall be smoke tested, to the entire, satisfaction of the Engineer-in-charge. The Cost of testing is to be included in the offer. For smoke-test the materials usually burat greases cotton waste, which gives out a clear pungent smoke, which is easily detected by sight and small. Smoke shall be pumped to the drains from the lower end from a smoke machine, which consists of lower, and burner.

(e) P.V.C (S.W.R.) & P.V.C. (Rigid) Pipes & Fittings

9.01 The P.V.C. (S.W.R.) and P.V.C. (Rigid), soil Waste & Vant Pipes (Spigot & Socket, & couples joints), shall be of make & brand as specified (Under Specification of materials) confirming to I.S.S., B.S.S. & DIN are tube used.

The main specification of P.V.C. Soil & Waste pipes and fitting are as below.

a) Materials – Un-plasticized Poly Vinyl-Chloride (UPVC).

b) Color - Grey

c) Dimensions -

(i) Diameter - Fittings - 75mm/110mm/63mm & 63mm.
Pipes - 75mm, 110mm, on lengths of 3.or 6 mtr.

d) Wall thickness - Fittings - Minimum 3.2mm at any port.
Pipes - As per application
For Rainwater - 75mrn-1.8. to 2.2.mm, 11 Omm-2.5. to 3mm
Waste & Soil - 75mm -1.8 to 2.2mm, 110mm -2.5 to 3 mm, 63mm –
Underground drainage with light/NIL Traffics - 110mm - 2.5 to 3mm
Light/Nil in Heavy traffic - 110mm 3.7 to 4.3mm

e) Standard Confirming to Attributes Confirms to Standard No.

i) Fittings & Wall B.S.4514, DIN 10531
Thickness - DIN 19534 I.S.7834 - PVC (Rigid)

ii) Pipe Wall thickness - IS 4905

iii) Rubber ring - IS 5382

iv) Fitting dimensions - DIN 19531 - P.V.C.,
DIN 19534-S.W.R.
IS - 7834 V.C. (Rigid)

v) Pipe Dimensions - IS 4985

(a) Laying instructions & Jointing Procedure

a-1 Jointing of P.V.C. (S.W.R.) Pipes & Fittings

Clean the outside of the pipes spigot and the inside of the sealing groove of the fitting. Apply the rubber lubricant, to the spigot end, sealing ring and pass the spigot end into the socket, containing sealing ring, until fully homed. Mark and position of the Socket edge with pencil on the pipe, then withdraw the pipe from the socket by approx. 10mm towards thermal expansion gap.

a-2. Fixing of the Pipes and fittings on wall surface.

P.V.C. pipes both (S.W.R.) & (Rigid), fixed on wall surface, are to be supported by P.V.C. pipe clips, specially made for these pipes, with horizontal runs, the pipe clips should be spaced at intervals of more than 10 times the outside diameter of the pines. In vertical lines the clips are to be spaced at intervals of one meter to a maximum of two metres according to pipe diameter. •

a-3 Jointing of P.V.C. (Right) Pipe Fittings

Clean the Outside of the pipes and inside of the socket of a fitting of the inside of the couplers (where 2 plain ended pipes are jointed) of. Apply solvent cement solution, evenly and smoothly on the outer surface of the pipe end and inside surface of either the coupler of the socket and pass the pipe end into the socket of the fittings. Up to full depth of socket. In case of jointing 2 plain-ended pipes 1st. push the coupler up to half depth on the end of one pipe and the outer half of the coupler should be pushed to the end of other pipe and thus, both pipes are jointed.

a.4 Fixing of P.V.C. pipes and Fittings through holes of Walls or Chajja of roofs etc.

The Walt/concrete slots should allow for a stress free installation, Pipes and fittings to be inserted into the slots, without a cement base, have to be applied first with a thin coat of P.V.C. Solvent cement, followed by sprinkling of dry sand (medium size). Allow it to dry. This process gives a sound base for cement concrete fixation, around the pipes/fittings while mending the damages.

a-5 Antisyphonage Pipes

All the antisyphonage pipes and fittings to be used are of 63mm. If these are not available under the items ot P.V.C. (S.W.R.) materials, 63mm pipes and fittings, manufactured under P.V.C.(right) materials can be used, since the raw materials for both is same.

a-6 All traps should have a minimum water seal of 50mm as per I.S. 5329 and IS 2556 (Part XIII). Where antisyphonage connection is required, the traps to be supplied and used should have a 50mm antisyphonage gent horn on the outlet side. All the Traps used with the closets, should be of the size 125mm X 110mm i.e. Inlet (Socket end) of 125mm & outlet (spirit end) of 110mm only.

a-7 Installation of Water Closet

Determine the correct Location of the P/S Trap & set on a firm base, relative to the floor finish by pouring concrete on a slab. Bedding can be carried out by pouring concrete around the trap, ensuring that the traps outlet is left clear of concrete. Place the W.C. Connector ring to the socketed end of 125/110mm R/S trap. Apply rubber lubricant on W.C. Connector ring as well as outer side of water closet (connection point) and now complete the joint by pushing the W.C. to home of 125rnm socket of the trap.

a-8 P.V.C. (Rigid) Pipes and Fittings

63mm (O.D.) P.V.C. Pipes to be used for these work either in antisyphonage system or else where, should be of "Quick Fit" Pipes Class 2 (4kg. F/Cm^2), Quick Fit, Pipes have one end socketted.

The P.V.C. (Rigid) fittings, such as 63mm elbow, 63mm equal Tees 110mm x 63mm reducer etc. used in the work, should be of injection-molded fittings.

a-9 One -'jointing rubber ring will be available, with each P.V.C. (S.W.R.) pipe and fitting and hence, the cost of therein will not be added in the joint.

10. Measurement

All pipes shall be measured not/length as laid or fixed and shall be measured over all fittings such as bends, junctions, traps etc. The length shall be taken along the counter line of the pipes and fittings. Fittings will be counted extra over.

11. Before fixing and painting, the pipe shall be tested hydraulically to pressure Q.4Kg/Cm^2 for pipes under I.S.-1729/1964 and at a pressure 0.7 Kg/Cm^2 for pipes under I.S. 3989-1970 without showing any sign of leakage, sweating of or her defect of any kind. The pressure should be applied internally and shall be maintained for not less than 15 seconds.

(c) Water Supply Pipes and Fittings:

1. Materials.

All galvanized Iron Pipes are to be of mild steel continuous welded, screwed tubes, medium quality confirming to I.S.S. and bearing ISI Marks manufactured by reputed Firms and approved brands as specified. The pipes shall confirm to LS.1239 (Part-!) -1975.

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

2. Laying of Pipes

The lay out of the mains and service pipe set 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 Engineer In-charge, before taking up the work.

3. 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 for the pipes shall be given as below :

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

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 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 pipe of M.S./G.I., as approved by the Engineer-in-charge. The rate should include such a situation.

2. Where Pipes run along walls, the same 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	2.50m	2.50m	2.50m	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 & roof slabs etc. the holes shall be made by filling with chisels or jumper and not by dismantling the brickwork or concrete. After fixing, the holes shall be made good with cement concrete 1:2:4 and properly finished with C. 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 3 mtrs. for long horizontal lines and inside the lavatory / Kitchen etc.

5. 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^2. The test pressure should maintain without loss of for at least half an hour.

6. Painting

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

7. Measurement

The length shall be measured in running meter. Correct to centimeter 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, Cooks, Valves, PVC connection pipes etc.

8. Ball Valve

The ball valve shall be high or low pressure class as stipulated in the Tender Schedule and shall confirm 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 Bal valve shall be of brass or gun-metal and the float for low pressure polyethylene and for high pressure in copper.

Each and every ball valve while in closed position shall withstand and internally applied hydraulic pressure of 20 Kg/Cm^2 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 10.5Kg/Cm^2 and a low pressure ball valve against a test pressure of 5.3 Kg/Cm^2.

Polyethylene floats shall be watertight and non-absorbent and shall not contaminate water and with do 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.

9. Ferrule

The ferrules for connection with C.I. main shall generally confirm to I.S. 2692-1964 and shall be of nominal bore as specified. The ferrule shall be fitted with 3 screw and 1 plug or valve capable of complete cutting off the supply to the connected pipe as and when required. For fixing the ferrule, the C.I. main shall be drilled and tapped during non-supply hour at 45 to the connected Pipe as that when required. The ferrule must be so fitted, that no portion of the sunk shall be left projecting within the main on which it is fitted. After the ferrule is connected, one C.I. bell mouth cover or with bricks (as specified) shall be kept over the ferrule to cover the ferrule to protect it and the cost thereof is to be included in the item, even if there is no mention.

10. Non-return Valve (Check Valves)

The non-return valve shall be of Brass or Gunmetal and shall be of horizontal or vertical flow type and of the size as specified and confirm to I.S. 7810-1959 and I.S. 778-1957. The approximate weights of the valves are given below.

Dia in mm	Horizontal type (in kg)	Vertical type (in kg)
15	0.30	0.25
20	0.55	0.25
25	0.90	0.75
32	1.25	0.90
40	1.70	1.20
50	2.90	1 .45
65	5.25	2.15
80	7.70	4.10
	±Tolerance 5%	

11. Foot Valve

Foot valve is generally placed at the lower end of the suction pipe of the centrifugal pump to prevent the suction pipe from empting. On vertical non-return valve may also be fixed in place of foot-valve.

The foot valve shall confirm to I.S.038-1967.

12. Water meters (Domestic types)

Water meter up to 50m nominal size shall confirm to I.S.-779-1968.The meter body shall be of bronze/ Gun-metal and marked to read in liters complete with registration box and lid. The water meters shall be provided with Strainers. Strainers shall be of material, which is not susceptible to electrolyte, clean and shall be fitted on the inlet side of water meter. It shall be possible to remove and clean the strainer and not permit disturbing the registration box. The offer should include the same. The water meters shall bear ISI Mark.

13. Bibcock & Stopcock

These shall confirm to I.S.781-1967 and bear ISI Mark. The bibcock is a draw off tap with a horizontal inlet and free outlet and stopcock is a valve with a suitable means of connection for Insertion in a pipeline for controlling or stopping the flow. This shall be of screw down type. The cock shall open in anti-clockwise direction. The stopcocks should be of C.P open type/concealed type/angle valves type as specified in tender schedule. Bibcock should be also C.P Brass bibcock.

14. 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 confirming to I.S, 780-1960, opening Full way and of the size as specified.

Dia in mm	Flanged End Valves in kg	Screwed End Valve in kg
15	1.021	0.567
20	1.503	0.680
25	2.498	1.077
32	5.232	1.559
40	6.082	2.268
50	6.691	3.232
65	10.149	6.840
80	13.281	8.845

15. Gun Metal Full way Valve

This shall be of the Gun-Metal fitted with wheel and shall be of Gate-Valve type opening full way. This shall confirm to I.S, 778-1971. Class I. The Valves should bear ISI Mark.

TECHNICAL SPECIFICATION FOR STONEWARE PIPE ETC.

1. Stoneware Pipes (Materials)

The S.W. pipes & fitting should be of Grade 'A' confirming to I.S 651/1965.The pipes shall be sound, free from visible defects such as fire crack or hair crack and flow or blister. The pipes shall give a sharp clear line when struk with a light hammer and should be perfectly salt glazed.

Internal dia of Pipe in m.m.	Thickness of the Barrel in m.m.	Weight of each pipe in kg.
100	12	14
150	16	23
200	17	33
230	19	44
250	20	52
300	25	79
350	30	100
400	35	125
450	38	147

The length of pipes is 600mm exclusive of the internal depth of socket.

2. Excavation of Trench for laying Sewer Pipes

The trenches for the pipes shall be excavated to the lines & level as directed. The bed of the trench shall have to be evenly dressed throughout from one change of grade to the next. The gradient is to stout by means of sight rails and boning rods and required depth be excavated at any point. The depth of the trench shall not less than one meter, measured from top of the pipe to the surface of the ground under roads and not less than 0.75mm elsewhere. The width of the trench shall be the nominal diameter of the pipe plus 350m. The bed of the trench if in soft or made up earth, shall be well watered and rammed before laying the pipes and the depressions if any shall be properly filled with sand and consolidated in 200mm layers. Depending on soil condition, piling may even be necessary if so desired by the Engineer In-charge. If rock is met with, it shall be removed 150 mm below the level of the pipe and the trench will be refilled with sand and consolidated.

The excavated materials shall not be placed within One Mtr. or half of the depth of the trench whichever is greater from the edge of the trench.

The trench shall be kept free from water. Shoring and shuttering shall be provided wherever required. Excavation below water label shall be done after dewatering the trenches.

After the excavation of the trench is completed, foundation of cement concrete 1.4.8 in hard granite metal (size 40mm) shall be laid with proper level all along under the length of the pipe with launching on all around concrete as per drawing.

3. Laying, Jointing, hunching of the Pipes and fittings.

Drain Pipes (S.W. pipe & other pipes used for drain and Sewer) shall be laid in straight lines and to the even gradients as shown in the layout drawings.

The socket and of the pipes shall face stream. Adequate care shall be exercised in setting out and determining the level of the pipes and the contractor shall provide suitable instruments, templates, sight rails, boning rods and other equipments necessary for the purpose. In the case of pipes with joints to be made with loose collars, the collars shall be slipped on before the next pipe is laid. In those joints, a tight ring of twisted tarred jute soaked in cement mortar filling to ensure proper alignment and prevent. Cement entering the pipes, Cement compound joints is to be finished with proportion 1.1 with 45 beveling. The joints are to be kept wet with wet bag until the same are properly set with. The cement mortar joints shall be cured at least for 7 (Seven) days.

In the case of S.W. Pipe joints (socket & spigot), they should be caulked first with tarred jute (Spun) of required diameter, almost quarter depth of the socket, after which cement mortar 1:1 is pushed in with wooden chisel and finishing beveled at outside at 45 degree. Instead of jute of hump rubber gasket of proper size may also be used. The whole joint must be cured for not less than three days. In case of pipes less than 250m dia, joints should be made at ground level with three pipes at a time and for larger ones two pipes at a time and after curing they should be soiled in foundation with the help of the ropes. All pipes should be properly launched with cement concrete 1.3.6 with washed gravel where the pipes are crossing the drain or all round concrete 1.3.6 with washed gravel is to be done to 150 mm thick over the barrel of the pipe.

The whole of the drain work shall be tested when laid, and at the completion of the contract, to the satisfaction of the Engineer-in-charge and shall be retested if necessary until found satisfactory. The test shall be made by means of water under pressure at the highest point of the Section under test and providing an air pipe at the lower and of the line. Maximum head of 5 (five) fact (1.5m) must be maintained.

4. Excavation and refilling.

Excavation for drain and pipe trenches shall be straight and to correct depth and gradient. The trench bottom shall be of required width as per specification to allow working space for pipe jointing.

Excavated materials shall be dumped away from the site as directed by Engineer-in-charge. Suitable precautions are to be taken to prevent in flow of water into the excavated area, during construction.

The contractor at his own expense shall pump out or otherwise remove any or all water which during the continuance of contract may be found in the excavated trenches to keep the trench clear of water during the work under progress.

The pipeline shall not be refilled and covered, until the line therein has been passed and tested.

5. Burried Services

All pipes, cable mains and other services exposed by the excavations shall be effectively supported by timbering or other means for which no extra payment will be allowed. The contractor shall be responsible for any damage occurring to burried services and make good the same at his own cost to the satisfaction of the Engineer-in-charge.

6. Trench condition:

Where a trench is excavated and refilled after laying the pipe, settlement of the earth in the refilled trench take place. The filling above the top of pipe, settles relatively, more than the sides of the trench, thereby developing frictional resistance. The contractor is required to take special precaution against this, while refilling the trenches. Procedure for backfilling as stipulated earlier should be strictly followed.

7. Inspection Chambers/Manholes

At every change of alignment, gradient or diameter of a drain there shall be a manhole or Inspection Chamber. The maximum distance between man hole chamber shall be 30 metres for the linelaid straight.

All manhole and inspection chamber shall have internal dimension as shown in drawing and B.O.Q. The depth of invert shall be fixed to the gradient.

The foundation for Manhole shall be 175mm thick & with cement concrete 1.3.6 in hard stone metal / granite metal of 40mm size. The concrete shall project 150mm beyond the external faces of the brickwork.

The brick masonry shall be done in cement mortar in the proportion of 1:4 and thickness of the brick wall should be 250mm thick up to 1200mm depth from Ground Level and beyond that the wall thickness shall be maintained 375mm.The inside surface of the walls of the chamber, shall be finished with cement plaster 1.3 and out side with cement pointing 1.3. In addition to this, the inside surface should also be provided with cement punning.

On the top of base concrete channeling on C.C. 1.2.4 with granite chips is to be done keeping the diameter equal to the dia of drain pipe and depth equal to half of the dia of pipe. The channel, 'should[1] be done longitudinally at the centre, connecting both the ends of the pipe. The channel is to be hunched up with concrete 1.2.4 with hard granite chips of size 12mm sloping upwards from the edge of channel to meet the side of chamber at gradient of 1.6. The channel and benching are to be finished smooth and cement mortar 1.3 and punning unless it is unavoidable. The branch should deliver sewerage in the Manhole in the direction of main flow and the junction must be made with care so that the flow in the main is not impeded. Channels for drains coming from the side of the Manhole Chamber, shall be curved to meet the main drainage channels.

The Manhole and Inspection Chambers shall be covered with R.C.C. cover slab of thickness 100mm to 150mm according to the requirement at site. One C.I. Manhole cover of diameter and weight as stipulated in the tender schedule shall be fixed, on the cover slab. Unless otherwise mentioned the C.I. Cover and Frames and shall confirm to I.S. 1726/1960. Heavy duty covers etc., under heavy vehicular traffic condition and capable of bearing wheel loads up to 11.25 tons, are to be used and medium duty under light type wheel traffic loads and light duty for domestic premises are to be used. Covers and Frames shall be clearly cast, double water seal type and they shall be free from all and sand holes. The cover shall be gas tight and water tight with proper water-seal. The C.I. Cover and frame shall be coated with two coats of black bituminous paint. The frame of Manhole cover shall be fixed on the slab while the slab is cast. R.C.C.M.H. covers of 50cm dia and 100mm thickness shall be fitted in line of C.I.M.H. cover if stipulated in the bill of quantity of the tender schedule.

8. Gully Trap Chamber

The size of chamber for 100mm HCI yard gully shall be of 300mm X 300mm (Inside). Foundation with 100mm thick cement concrete 1.3.6 with hard granite metal of size 40mm from outer surface of wall and Brick work in cement mortar 1.4,125rnm thick, depth up to 600mm maximum. The finishing of masonry wall both inside and outside should be done in cement mortar 1.4 cement punning should be provided on the inner surface the trap should be burried in cement concrete 1.2.4 in H.G. chips up to the mouth and one hinged C.I. Grating of size 300mm x 300mm are to be fixed on the top of mouth of Gully trap to arrest rubbishes shall be provided. The foundation, should project 75mm from outer.

9. Kota/Marble Stone flooring

The Kota/Marble stones shall be of thickness specified but not less than 20mm and of uniform with edges absolutely square & straight. They shall be laid in Cement Mortar (1.4) over masonry or concrete base. The sides of the stones shall be arranged to butt against each other truly so as to came the joints practically invisible and certainly not more than 0.8mm in width any where. The joints shall not be filled with mortar but may afterwards be grouted with neat white cement mixed with matching colour pigment. When the floor has completely set, it, should be polished with pumice stone and finally with pads of felt.

10. Glazed tile dado

The glazed porcelain tiles shall be of approved size and thickness 5mm to 6mm with edges absolutely straight & surface accurately plain. They shall be fixed in 6mm. thick cement mortar 1.3 using cement slurry over pre-cement plastered base. The sides of the tiles shall be arranged to but against each other truly so as to make the joints practically invisible. However, the joints may be granted with white cement mixed with colouring materials to match the tiles and neatly cleaned leaving no trace of excess grouting materials. The tiled surface and edges should be perfectly vertical and straight. The corner points must be normally right angled unless the site condition demands.

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 n 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 ofr 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 16SWG/14 SWG/I.G. 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.

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 flushed 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 I 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 or 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 o non current 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 he 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 equipments 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 exercitation 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 he 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 he 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 sufer.

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

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 contact. 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 a 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 tederers 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/copper conductors. The wires used in the lighting installation shall be PVC insulated and PVC sheathed copper wire/aluminium wire 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 metalclad 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 I 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 fame 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 confirm 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 o adequate rating and\ capacity. Power factor improvement capacitors are provided with hermetically sealed housing to ensure long and trouble fee service. Terminal soldering tango shall be provided for easy electrical connections. The capacitors in general shall confirm 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 design, 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.

C O D E S

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

a) Indian Boiler Act, 1923 and Rules and Regulations made their 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

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	IS2675-1966
5)	Enclosure for Low Voltage switchgear	IS214701962
6)	PVC Cables	IS1554-1975
7)	Tabular fluorescent lamps for Cameral lighting service	IS2418-1963
8)	Tungsten Filament Lamps for cameral service	IS415-1963
9)	Ceiling Fans	IS274-1966
10)	Flood lights	IS1947-1961

11)	Wall Glass flame-proof electric light fittings	IS2206-1962 (Part 1)
12)	Water Tight Electric Light Fittings	IS3553-1956
13)	Steel Boxes for Enclosure of Electrical Accessories	IS5133-1969
14)	Fittings for Rigid Steel conduit	IS2667-1979
15)	Rigid steel circuits for electrical wiring	IS3837-1966
16)	Accessories for Rigid Steel Conduits for Electrical Wiring	IS3837-1966
17)	Switch Socket Outlets	IS3837-1966
18)	PVC Wiring	IS694-1977
19)	Switches for domestic and similar purpose	IS3854-1966
20)	PVC wiring	IS694-1977
21)	Call Bell and Buzzers	IS2268-1966
22)	Straight through joint boxes and leads sleeves or paper insulated cables-	EID-0032-1964
23)	Earthing	IS3043-1966
24)	Electrical Wiring installations	IS732-1963
25)	Switchgear	IS3072-1965 (Part I)
26)	Lighting protection	IS2309 –1969
27)	Public Address system	IS1882-1962
28)	Low Tension switch use units	IS4064-1978
29)	Code of Practice for Automatic FIRE ALAM system	IS2189-1970
30)	Specification for Heat Sensitive Fire Detectors	IS2175-1977
31)	Guide for Safety procedure in Electric work	IS5216-1969
32)	Rubber Mats for Electric works	IS5424-1969

p) Other internationally approved standards and / or Rules and Regulations touching the subject matter of the contract

GENERAL CONDITIONS

1. Drawings & Specifications

The Contractor, after the award of the contract and on signing the agreement shall be furnished free of cost two copies of each of the drawings specifications, descriptive schedules and other details necessary for execution of the work. All further drawings and details as may be prepared by the department from time to time for reasonable development of the work described in the contract documents and reasonably necessary to explain and amplify the contract drawings and to enable the contractor to execute and complete the work shall also be supplied in duplicate to contractor free of cost.

Any further copies of such drawings, required by the contractor shall be paid for by him. The contractor shall keep one copy of all the drawings specifications, price schedule of items and quantities at work site and the Engineer-in-charge or his authorised representative shall at all reasonable times have access to the same.

2. Contractor's Responsibility.

a The contractor shall provide at his cost everything necessary for the proper execution of the works according to the intend and meaning of the drawings, schedule of items and quantities and specifications taken together, if the same is not particularly shown or described therein, provided that the same can reasonably be inferred there from, If the Contractor finds any discrepancy in the drawings or between the drawing and schedule of quantities and specifications, he shall .immediately in writing refer the same to the Engineer-in-charge whose decision shall be final & binding.

b) Any work done at any time or even before receipt of such details shall be removed/replaced by the contractor without any expense to the department If the work is not in order and if so directed

by the Engineer-in-charge error inconsistencies in drawings and local conditions affecting the works shall be brought to the notice of the Engineer-in-charge immediately for his decision All drawings, bill of quantities and specifications and copies therefore furnished by the department, are their property. They shall not be used on any other work and shall be returned to the Department on request on completion and before issue of final certificate or termination of the contract.

c) All materials and workmanship shall be of the respect kinds described in the specification. B.O.Q, contract and in accordance with the instruction of the Engineer-in-charge. The contractor must satisfy himself about the same while furnishing samples for approval of the Engineer-in-charge before incorporation in the works.

d) The Engineer-in-charge may from time to time cause at his discretion such tests on samples of materials or workmanship of all/any materials and work, as he may consider necessary at places of manufacture, fabrication, on the site or at such other places. The expenditure incurred for all such tests shall be borne by the contractor.

e) All approved samples are to be preserved by the contractor in a regular manner in the site office for inspection and verification of the Engineer-in-charge or his representative from time to time.

g). It is the responsible of the tenderer to get the prepare verification certificate from the competent authority for electrical works before the final bill.

h) **Alteration / Addition & Omissions**

The Engineer-in-charge shall make any variation of the form, quality or quantity of the works or any part thereof that may be in his opinion be necessary and for that purpose or if for any, other reason it shall, in his opinion be desirable, he shall have power to order the Contractor to do so and the Contractor shall do any or allot followings:.

a) Increase or decrease the quantity of any work included in the contract.

b) Omit any such work.

c) Change the levels, lines, position and dimensions of any part of the works, and

d) Execute additional works of any kind necessary for the completion of the work. No such variation shall in any way ratidate or invalidate the contract, but the value of all such variations shall be taken into account and shall be added to or deducted from the contract sum accordingly, but no such variation shall be made by the contractor without prior written instruction from the Engineer-in-charge.

e) The Schedule of quantities/rates shall be deemed to have been prepared and included in accordance with the method of measurement of work set out and as per the relevant specifications or in its absence relevant I.S. code of practice Any error in the specification or in quantity or omission of any item from the schedule of quantities/ rates shall not vitiate the contract, but he adjusted by adding to or deduction from the contract sum provided that no rectification of errors, if any, shall be allowed in the contract schedule of rates.

4. Valuation of variations

a) All extra or additional work done or work omitted shall be valued at the rates and price set out in the prices schedule of quantities, and/or derived there-from, if in arriving at the contract sum, the Contractor have added to or deducted from the total of the items in the tender any sum either as a percentage or proportion, then the same percentage of proportion shall apply to all. items or works in the prices schedule as also for valuation of variation.

b) If the contract does not contain any rate or price applicable to the extra or additional work, or the rate or price in the priced schedule of quantities has become inapplicable in

the opinion of the Engineer-in-charge by virtues of such addition or omission, then suitable rates or price shall be agreed such rates shall be derived by analysis based on standard schedule of rates of State P.W.D. / P.H.D or in case such is not available therein, form any approved schedule with the various elements valued at local market price plus 15 (fifteen) percent towards over-heads.

5. The Offers are also to include

a) To supply all materials, labour, supervision, services, supports, scaffoldings, approach road, construction equipments, tools and plants etc., as required for proper execution of all the items of the work as per drawing and specification.

b) To provide all incidental items not shown or specified in particular, but reasonable or necessary for successful completion of the work in accordance with the drawings, specifications and schedule of quantities.

c) Cleaning, Uprooting the stumps, vegetation and old masonry etc., met in the trenches and excavations.

d) Providing shoring and shuttering to avoid sliding of the soils and removal of the same or completion.

e) De-watering as required and directed.

f) Excavation at all depths (Unless otherwise mentioned in schedule), stacking separately usable and disposal of surface earth and materials from site as directed.

g) Curing of ail concrete and cement works as per specification and direction,

h) Centering, shuttering as required for all concrete work.

i) Bending, binding, tying the grill & placing in position, including supply of all materials & labour etc.

|) To provide water and power required for construction testing and commissioning,

k) Testing of materials and works as per specification and direction

Annexure- I

List of Plants & Equipments to be deployed on contract work

Sl. No	Type of Equipments	No. of machines required	Marks
1.	Concrete Mixture	1 No	30
2.	Concrete Vibrator Plate type	1 No.	10
3.	Concrete Vibrator Needle type`	1 No.	10
4.	Truck/ Tipper	1 No	10
5.	Tractor	1 No	10
6.	Water Tanker	1 No.	10
7.	Water Pump	1 No.	10
8.	Centering and Shuttering Plate	1 Set	10
			100

CERTIFICATE OF NO RELATIONSHIP

I/We hereby certify that I/We* am/are* **related / not related**(*) to any officer of Panchayat Samiti Office, Kataka Sadar of the rank of Assistant Engineer & above and any officer of the rank of Assistant **/** Under Secretary and above of the P.R & D.W 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.

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

(*) - Strike out which is not applicable

Signature of the Tenderer
Date:-

SCHEDULE – B:- DELETED

SCHEDULE – C

CERTIFICATE OF TOOLS AND PLANTS

I/We hereby certify that the following tools and plants, machineries and vehicles are in my /our possession in working orders.

(i)

(ii)

(iii)

(iv)

(v)

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

Signature of the Tenderer
Date.

SCHEUDLE – D:- DELETED

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 works.	Yes / No
	b) If yes: give details:	
2.	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:	

Note:

If any information in this schedule is found to be incorrect or concealed, qualification application will summarily be rejected.

Signature of Tenderer

SCHEDULE – F

AFFIDAVIT

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 my / our firm / company / individuals_____ _____ 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 authorise(s) 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.
5. The undersigned undertake that in case of any information furnished by me found to be incorrect, the Government has right to reject the Bid.

(Signature of Tenderer)

Title of Officer

Name of Firm

Date

SCHEDULE – G: - DELETED

SCHEDULE – H

Proposed sub-contracts and firms involved. [Refer ITB Clause 3.2 h]

(Admissible in case of composite bids only)

Sanction of the works	Value of Sub-contract	Sub-contractor (Name & Address)	Experience in similar work
1	2	3	4

Attach copies of certificates on possession of valid license for executing water supply/sanitary work/building electrification works [Reference Clause 3.2 h]

Signature of the Tenderer.
Date

SCHEDULE – I

SAMPLE FORMATS
UNDER TAKING

This is to certify that

1. My firm has neither been associated, directly or indirectly, with the Consultant or with any other entity that has prepared the design, specifications, and other documents for the Project nor has any person associated with been proposed as Project Manager for the Contract.

2. My firm has not engaged any agency and any of its affiliates engaged by the Engineer-in-Charge to provide consulting services for the preparation or supervision of this work.

3. My firm has not engaged any Engineer of gazetted rank employed in Engineering or Administrative duties in an Engineering Department of the Government of Orissa or other gazetted officer retired from Government service during last two years without prior permission of the Government of Orissa in writing on or before submission of this tender. I am aware that my contract is liable to be cancelled if either I or any of my employees is found any time to be such a person who had not obtained the permission of the Government of Orissa as aforesaid.

Signature of the Tenderer.
Date:-

Note: i. Strike out whichever is not applicable
ii. In case any person is under his employment with due permission from Government, the same may be cited in a separate letter.

SCHEDULE – J

RELATIONSHIP DECLARATION

To,

The Tender Inviting Officer,
Subject: (Name of the Work)
Reference : (Bid reference number)

Sir,

Pursuant to clause 2.2 of the ITB, it is to inform that I have relative(s) employed as an Officer in the rank of an Assistant Executive Engineer/Under Secretary under the _____ Department. His (Their) details are as follows.

Pursuant to clause 2.3 of the ITB, I am to submit herewith the names of persons who are working under my firm having near relatives to any gazetted officer in the rank of an Assistant Executive Engineer/Under Secretary in the _____ Department.

Sl no	Name of the my employee and his designation in the firm	Presently working at	Details of his relatives working in the Department
			Relationship Name: Designation Office Address
			Relationship Name: Designation Office Address

I am also duty bound to inform the relationship of any subsequent employment with any gazette officer in the rank of an Assistant Engineer/Under Secretary in the _____ Department. **I am aware that a**ny breach of this condition would render my firm liable for penal action for suppression of facts.

Yours Sincerely

Signature of the Tenderer.
Date:-

Form of Bid-Security Declaration

Date_____ Tender No_____

To

[*Insert complete name and address of the Authority/ Employer/ Tender Inviting Authority*]

1/We, the undersigned, declare that:

1. We understand that, according to your conditions, bids must be supported by a Bid-SecurityDeclaration.

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 of180 days, if I/ we are in breach of our obligation(s) under the bid conditions, because we:

(a) Have withdrawn our 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,

   1. fail or refuse to furnish the Performance Security and, Additional Performance Security, if required in accordance with the ITB/ Terms of the Bid Document/RFP, or

   2. fail to agree to the decisions of the contract negotiation meeting or

   3. fail or 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 (i) your notification of the name of the successful Bidder through award of contract or(ii) 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.]

DECLARATION REGARDING EXPERIENCE

I of At/PO-, Block- , Odisha, PIN- declare that I have experience regarding this Building projects. I have worked under Mr. and executed these kind of works. I can execute this work undoubtedly without any fault and deviation from tender schedule. I will work as per the plan and instruction given by the Engineer in Charge. If any thing wrong happens by me during work schedule, bills will get deducted as per rules and procedure. For the reference I am submitting my experience certificate with this declaration.

Submitted by

Special condition: - All materials, labour, machineries, and equipments required to complete the work in all respect shall be arranged by the tenderer at his own cost. The employer will bear no responsibility in this aspect.

My /Our quoted rate is _____**% Excess over**

_____**% Less than**

_____ **Equal to the corresponding estimate rate.**

Signature of the Contractor.

Notes: 1. The Contractor should not write anything except quoting of percentage, excess/ less / equal to the estimated cost

No. of corrections…….

No. of overwriting…….

No. of interpolations……..

No. of omission…….

Block Development Officer
Kataka Sadar

Signature of the Tenderer
with date of submission of tender
Date:-

Official use only

1. Name of the work:-……..

2. Approximate estimated cost put to tender:-Rs-

3. Value of E.M.D as per tender call notice:-

4. (a) E.M.D deposited by the tenderer in shape of :-

   (b) Amount pledged/ un pledged:-

5. GSTIN

7. Stipulated period of completion:-

8. Cost of tender paper:-

9. Date & time of opening of the tender paper:-

10. Tender paper in ----------/ sheets

11. No of items tendered:-

12. Total overwriting and correction:-

Sold to -_____

_____

_____class contractor

Vide UTR No_____dated_____

Block Development Officer
Kataka Sadar
(Office Seal)