

ICHALKARANJI TEXTILE DEVELOPMENT CLUSTER LTD.  
ICHALKARANJI.DIST KOLHAPUR.

TENDER NO. 1

Providing & Laying Drainage Work from R.S.No.668 to Nalla at Ichalkaranji

1. ESTIMATED COST: Rs. 13.20Lacs
2. EARNEST MONEY DEPOSIT: Rs. 13200/-
3. INITIAL SECURITY DEPOSIT: Rs. ( 2% +1%EMD)
4. TOTAL SECURITY DEPOSIT: Rs. ( 3% +5% )
5. TIME LIMIT: Rs. 3 MONTHS
6. TENDER COST: Rs. 1000 /-
7. CONSULTING ENGINEER
8. NAME & ADDRESS OF .....  
THE CONTRACTOR: .....
- ...../
9. DATE OF ISSUE : **27<sup>th</sup> Aug. 2009 to 8<sup>th</sup> Sep. 2009**
10. LAST DATE OF SUBMISSION : **9th Sep. 2009, UP TO 2.00 P.M.**

ICHALKARANJI TEXTILE DEVELOPMENT CLUSTER LTD.  
ICHALKARANJI.

Upgradation of Infrastructure facilities at Textile Cluster, Ich. Maharashtra.

Project under Industrial Infrastructure Upgradation scheme (IIUS)-2003.

**Ministry of Commerce & Industry.**

**Government of India.**

**TENDER DOCUMENTS FOR THE WORK OF-**

**Providing & Laying Drainage Work from  
R.S.No.668 to Nalla at  
Ichalkaranji.**

**ICHALKARANJI TEXTILE DEVELOPMENT  
CLUSTER LTD., ICHALKARANJI.**

5/617, SWIMMING POOL PRIMISES, NEAR VED BAVAN,  
ICHALAKARNJI-416115. DIST. KOLHAPUR.(MAHARASHTRA).

Phone No. : (0230)2421009, FAX : (0230)2421143

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**Managing Director**

## **INSTRUCTIONS FOR THE TENDERER**

Sr. No.	Particulars
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### **PLEASE DO NOT FORGET TO ATTACH**

1. The demand Draft in favour of Ichalkaranji Textile development Cluster Ltd. payable at Ichalkaranji towards earnest money to be enclosed.

### **THESE SHOULD BE IN A SEPARATE COVER**

2. Valid income Tax Clearance Certificate in original Photostat copy.
3. A certificate or attested copy of valid Registration Certificate.
4. Photostat or attested copy of Partnership deed and power of attorney.
5. A list of work tendered for and in hand (Statement No. 1)
6. A list of work of similar type and magnitude carried out (Statement No. II)
7. List of machinery and plants available with the tendered for immediate use on his this work (Statement No. III)
8. Details of Technical Personnel on the roll of the tender (Statement No. IV)

**Important Note :** Please note that omission to attach any documents is likely to invalidate the tender.

**Contractor**

**Hydraulic Engineer  
ITDC**

**Managing Director**

## ICHALKARANJI TEXTILE DEVELOPMENT CLUSTER LTD.

5/617, Swimming pool Premises, Near Ved Bhavan, ICHALKARANJI-416115 DIST.KOLHAPUR (Maharashtra)  
Phone: (0230) 2421009, Website: [www.ichcluster.com](http://www.ichcluster.com) Email : [chairperson@ichcluster.com](mailto:chairperson@ichcluster.com)

### **TENDER NOTICE**

Sealed Percentage rate tenders are invited for the following works from reputed Experienced or Registered Contractors.

Sr. No.	Name of the Work	Estimated Cost In Rs .	Earnest Money Deposited in Rs.	Period of Completion of work	Tender Form Cost In Rs.
1	Providing & Laying Drainage Work from R.S.No.668 to Nalla at Ichalkaranji.	1320405.00	13200.00	3 Months	1000.00
2	Annual maintenance of Road Work At Ichalkaranji.	473465.00	4750.00	12 Months	500.00
3	Construction of Island Around High Mast At Ichalkaranji.	369961.00	3700.00	2 Months	500.00

1. Blank Tender Forms, will be issued at cluster office between date 27<sup>th</sup> Aug. 2009 to 8<sup>th</sup> Sep. 2009 on payment of tender form fee and fulfilling eligible criteria as per tender form
2. Sealed tenders will be accepted in cluster office on or before Wednesday 9<sup>th</sup> Sep. 2009 up to 2.00 P.M. Tender will be opened on the same day at 4.00 P.M. in the presence of tenderers.  
If any change in the date on tender opening it will be informed.
3. Ichalkaranji textile development cluster reserves the rights to reject any or all tenders without assign any reasons.
4. This Tender Notice is also available at our website [www.ichcluster.com](http://www.ichcluster.com)

**Sd/-**  
**Managing Director.**

**Sd/-**  
**Chairman**

Managing Director, Ichalkaranji Textile Development Cluster Ltd., Ichalkaranji invites sealed tender on two envelope system on prescribed formats from bonafied reputed experienced or Registered contractors who are qualifying following “Essential Qualifying Criteria”. Detail of execution of work is mentioned in Tender Notice.

Tender documents can also be downloaded from Company’s website [www.ichcluster.com](http://www.ichcluster.com) and in such a case, the tenderer shall deposit the cost of tender documents along with submission of the tender, failing which his tender will not be opened. The cost of tender documents shall be deposited in the form of demand draft/pay order and enclosed in the envelope containing the Earnest Money Deposit. Tenderers are advised not to make any corrections, additions or alterations in the downloaded tender document. In case, any correction, additions or alterations in the downloaded standard documents are made, such tender shall not be considered.

### **Essential Qualifying Criteria**

1. The Contractor should possess the experience of having successfully completed similar works or supply of pipes during the last 3 years (ending last day of 31<sup>st</sup> March every year.) which should be any one of the following.
  - i) Three similar completed works each costing not less than amount equal to 30% of the estimated cost.
  - ii) Two similar completed works each costing not less than amount equal to 40% of the estimated cost.
  - iii) One similar completed works costing not less than amount equal to 65% of the estimated cost.

The financial turnover during the last three years should be at least 30% of the estimated cost.

**Notes:-** The financial turnover shall be judged from ITCC or Annual reports including Profit and Loss A/c.

2. The Contractor should have its net worth not less than 10% of the estimated cost of the tender. This will be judged from the audited balance sheet of the last financial year ending on a date not prior to 18 months from the due date of submission of the tender.
3. The contractor should submit performance certificate in reference to S. No.1 (Minimum 3 Nos., 2 nos., or 1 n. as the case may be) above from clients for having successfully completed similar works in the last three years.
4. There should not be any unsatisfactory performance report of the contractor from any source.

**1. Name of Work: Providing & Laying Drainage Work from R.S.No.668 to Nalla at Ichalkaranji.**

2. Cost of each blank tender form :- Rs. 1000/-  
(Non Refundable)
3. Estimated Cost of Works :- Rs. 13.20 Lakhs
4. Earnest Money :- Rs. 13200/-
5. Initial Security Deposit (2%+1% EMD) :-  
and Further Security Deposit,  
to be deducted from bills. (5%) :- Rs. \_\_\_\_\_
6. Date and time upto which  
blank tender forms will be issued.:- 27<sup>th</sup> Aug.2009 to 8<sup>th</sup> Sep.2009.
7. Date & time of receipt of tender. :- 9<sup>th</sup> Sep.2009, 2.00pm
8. Probable date and time of  
opening of tender. :- 9<sup>th</sup> Sep.2009, 4.00pm
9. Validity Period :- 120 Days

The offer of the contractor shall remain valid for acceptance for a minimum period of 120 days from the date fixed for opening of Envelope No. 2 (Main Tender) and thereafter until it is withdrawn by the contractor by notice in writing duly addressed to the authority opening the tender and sent by Registered Post Acknowledgement due.

10. The tender notice shall form a part of the contract agreement.
11. The tenders are invited on Company design only.
12. The blank tender forms will be sold only to the eligible Contractors and above on production of original or attested copy of valid registration or renewal certificate at the time of applying for issue of blank tender forms otherwise blank tender forms will not be issued to them.
13. The tenderer if firm or company shall in their forwarding letter mention the names of all the partners of the firm or the company (as the case may be) and the name of the partner who holds the power of attorney if any, authorizing him to conduct transaction on behalf of the firm or company.
14. Right is reserved to revise or amend the contract documents fully or part thereof prior to the date notified or amended for the receipt of tender. Such deviations/amendments if any shall be communicated in the form of corrigendum or by a letter as may be considered suitable.
15. Right is reserved to or rejects any or all tenders without assigning any reason thereof.
16. Tenders that do not fulfill all or any conditions or are incomplete in any respect are liable to summary rejection.

#### **17. EARNEST MONEY:-**

- 17.1 The tender should be accompanied by an earnest money deposit which should be paid by DD in favour of Ichalkaranji Textile Development Cluster Ltd., Payable at Ichalkaranji. and described as earnest money for the work which the tender is given.
- 17.2 Earnest money in any other form will not be accepted.
- 17.2 The amount of earnest money will be forfeited in case of successful contractor does not pay the amount of initial security, deposit within the time specified as stipulated by the Company and complete the contract documents in all other cases earnest money will be refundable.

18. **Security Deposit:**

- 18.1 The successful tenderer shall have to pay, 2% Security Deposit of the work value in addition to amount of EMD by DD in favour of Ichalkaranji Textile Development Cluster Ltd., payable at Ichalkaranji and the additional 5% of work value is recoverable through running account bills.
- 18.2 In the event of failure of the tenderer to pay security deposit within 10 days (Unless extended in writing by the Company) from the date of receipt of notice of acceptance of his tender, the amount of earnest money shall be forfeited to Govt. and the acceptance of his tender shall be considered as withdrawn Except that, in the event of the notice of acceptance of the tender not being issued within 90/120 days of the date of opening of tender, the tenders shall; have the option (to be intimated in writing in good time before the expiry of (90/120 days period) of withdrawing his tender, in which case the earnest money should be refunded in full. All the tenders shall be kept open for (90/120) days from the date of opening of the tenders.
- 18.3 Earnest money of the un-successful tenderers will be refunded on their application only after an intimation of rejection of their tender is sent to them or on the expiry of the validity period which ever is earlier.
- 18.4 The acceptance of the tender may be intimated to the contractor telegraphically or otherwise and either competent to accept the tender or by higher authorities such as Managing Director such intimation shall be deemed to be an intimation of acceptance of the tender given by the authority competent to accept the tender.
- 18.5 In case of B2 tender, the contractor should quote rate-in Rupees and praise both in words and figures. The amount of each item should also be worked out by him and requisite total given. The contractor should particularly note the units on which the rates are based in case of difference between the rates, written in figures and words, the rate adopted by the correct rate for working out the total amount of the item, shall be taken as correct. In other cases the correct rate would be that which is lower. All the columns in the schedule should be filled in by ink. All pages of tender documents conditions, specifications and drawing etc. shall be initialed at lower left hand corner and signed where required in the tender papers by the tenderer or a person holding the power of attorney authorizing him to sign on behalf of the partnership before submission of the tender. All corrections in the tender shall be initialed by the contractor.
- 18.6 In case of B1 Tender, the tenderer shall enter in the blank space on page No. 3 of the printed B1 form under para "Tender the world the Percentage in figures and words and score out one of the words "below/above" as necessary under his attestation in case there is difference between percentage written in figures and words the lower offer will be taken as final.
19. No pages should be removed from, added in, or replaced in the Tender.

20. **Submission of Tenders:-**

The tender should be submitted in two separate sealed covers as under:-  
(One sealed cover should contain the following documents only.)

- i) Forwarding letter clearly indicating the documents attached therein in case if contractor desires to submit the tender with any conditions etc. These conditions should also be submitted in the first cover.
- ii) Earnest money in the form of DD.
- iii) Certificate of registration as approved contractor or attached copy duly attested by Gazatted Officer in case of Registered Contractor.

- iv) An upto date and valid Income-Tax clearance certificate in original or true copy thereof duly attested by Gazatted Officer.
- v) Details of works of similar type and magnitude carried out by the tenderer during last three years as per Proforma attached with the tender with the certificate from head of Office concerned.
- vi) Details of other works in head.
- vii) Details of plant and machinery immediately available with the tenderer for exclusive use on this work as per Proforma attached with the tender.
- viii) Details of technical persons who will be exclusively spared for this work by the tenderer as per Proforma attached with the tender.
- ix) In case of partnership firm attached copy of partnership deed and power of attorney should be attached.
- B) The other sealed cover should contain the tender set itself prescribing the name of work, both the sealed cover should be together submitted to Managing Director.

### **Opening of tenders-**

- (i) The authority competent to open the tenders will first opens the sealed cover as mentioned in 6 (A) above in the presence of the tenderers or their authorized representative as may be present on the date and time mentioned in this notice. All the quotations thus received will first be examined by the authority opening the tender and clarifications sought if necessary on the conditions which may have been stipulated by the tenderer and are at variance with the stipulations of the notice inviting tenders.
- (ii) The second cover containing the Sealed Quotation will be opened in the presence of tenderers or his authorized representatives only after the part of the tender referred to above has been scrutinized and the conditions got clarified if necessary.
- (iii) The sealed quotations based on the Company Design as well as on tender's alternative design when so permitted will be considered for opening only when the authority opening the tenders is satisfied about the compliance of condition mentioned in "A" of para 6. Otherwise the sealed cover containing the quotations will not be opened at all but will be returned to the tenderer treating it as invalid and his acknowledgment obtained in token of receipt of the same.

21. The contractor will have to sign the original copy of the tender papers and the drawings.

### **22. Liquidated Damage:**

In case of delay in execution of contract work within prescribed time limit penalty will be impose 1% per week and maximum 10% of the Contract value.

### **23.Arbitration:**

In case of any dispute between Company and Contractor in the matter will be referred to sole arbitrator as per arbitration Act. Award of Arbitrator will be binding to both the parties.

24.Any legal action will be subject to Ichlakaranji jurisdiction.

### **25. Defect Liability Period:**

For pipeline work the defect liability period shall be Six month.

The amount of additional Security Deposit of 5% will be released after completion Six Month Defect Liability Period.

**Contractor**

**Hydraulic Engineer  
ITDC**

**Managing Director**

## **GENERAL CONDITIONS**

1. Unless otherwise specifically provided for either in sender items or in specifications or in the schedule of supply of materials, all items in the tender are inclusive of cost of all materials required for the execution of the items and these, as are provided as per relevant ISS or standard specifications.
2. All the materials used in the work shall be of best quality and any materials rejected shall be removed from the site within 24 hours.
3. All other rules regarding Workmen's Compensation, etc. shall be binding on the Contractor.
4. All items to be executed in the course of the work have to be executed by the Contractor as specification in the P.W.D. Hand-books, the books of standard specifications, published by the Public Works M.J.P. of Government of Maharashtra, relevant I.S. specification, latest editions, and practice in vogue, at the rates as per rules of the M.J.P. and conditions of agreement in this respect The Contractor shall be responsible and liable to pay for damage to public property caused by him. He should keep the accounts of such materials in suitable look which would be available for inspection to the Engineer - in - charge. The Contractor shall be responsible for proper handling and safe custody of all material delivered by him for use on work. The material including pipes shall be procured by the Contractor as per requirement of work and no excess material shall be procured. Only used material shall be paid to the Contractor.
5. For all accidents on the contracted works the Contractor shall be responsible to pay the compensation to the sufferer or his legal dependents as per the Legal Compensation Act in force.
6. The Contractor shall engage an authorized agent or an experienced qualified supervisor for the work capable of managing and guiding the work on his behalf. He shall take such orders as may be given to him the Engineer - in - charge from time to time and shall be responsible to carry them out promptly.
7. A work order book shall be maintained at the works site. The Contractor shall sign the orders given by the Engineer - in - charge and shall carry them promptly. After completion of the work the work order book shall be surrendered to the Company.
8. Quantities given in the tender are approximate and are liable for variation. Excavation of the trenches will be according to actual strata met with. the Contractor shall have no claim for compensation on account of any variation in the quantities and also for any variation in the depth for trenches shown in the drawings.

9. The Contractor shall at his own expenses make all necessary provisions for housing water supply and sanitary arrangements for his employees and for the work under tender shall pay direct to the authorities concerned all taxes and other charges. The Contractor shall also comply with all requirement of the Health M.J.P. in regard to antimalaria.
10. All items occurring in the work and as found necessary in actual execution shall be carried out in workmanship like manner as per specifications given in P.W.D. Hand Book and as per the current specifications prevalent in Maharashtra Jeevan Pradhikarn Circle, as per orders of the Engineer-in-charge; as stated above.
11. It must be clearly understood that the conditions of the contract and specifications are intended to be rigidly enforce and no relaxation on the ground of conditions prevailing is to be allowed.
12. The Contractor will be entirely responsible for breach of laws of local bodies. Government etc. while using private or public conveyance procuring and stacking materials. Employment of labour etc. and he will meet out all expense in this contract without any claim whatsoever on the company and the Company shall not take any responsibility on this account.
13. Before entering any property, plot, land, premises or areas etc., the Contractor shall make his own independent investigation through the Collector or Inspector of Land Records. etc. on his own about the ownership of the plot, etc. and he will be liable for action for act of encroachment, trespass, etc. committed by him or his labour or for the steps taken by the party concerned.
14. The Contractor shall have to clear the site of work before the commencement of work and after the completion of the work without any extra cost. The Contractor shall construct at his cost a temporary shed of about 20 sq.mt. as per specification, carpet area for use as office for inspection of the work by the officers and for discussing the details of work writing work order, etc. Necessary furniture such as chairs, tables, wooden box, etc. will be constructed and provided for within fifteen days from the date of receipt of work order. It will be maintained properly till the work is completed. The shed and furniture will be allowed to be taken back by the Contractor after the work is completed. The Company shall not pay any rent. charges for the shed. etc. and no Company materials will be issued by the Company for this shed.
15. A jeepable service road, wherever necessary shall be provided and maintained by the Contractor at his cost till the completion of the work.
16. The Contractor shall arrange for final lineout of works at his own cost and under supervision of company.
17. All cement concrete shall be machine mixed and machine vibrated unless otherwise instructed by the Engineer.
18. The Contractor shall furnish a list of machinery in his possession which he proposes to use on the work.

**Unit.**

1. The rates quoted for each item are for units mentioned in Schedule - B against each item.

**Site Conditions. :**

1. It shall be presumed that the Contractor has satisfied himself as to the nature and location the works, general and local conditions, particularly those bearing on transport handle storage of materials, availability of labour, weather conditions and has estimated the cost quoted his rates accordingly company will bear no responsibility for lack of such acquaint with site conditions and consequences thereof.
2. Set of tender documents as and conditions (upto a maximum of three sets) at the description of the Engineer will be supplied to the Contractor after acceptance of tender.

**Extras, Omissions and Discrepancies.**

In all cases of the omissions, doubts or discrepancies in the dimensions in the drawing and in of works, reference shall be made to the Engineer, whose elucidation and elaborate shall be considered final.

**Supply of Material by the Contractor.**

1. The Contractor should supply all materials mentioned in Schedule "B". This shall conforming to relevant ISS enclosed herein. All types of pipes, valves will be accepted after due inspection of EIL, SGS or RITES. The charges for the same shall be borne by Contractor. The payment will be made only after submission of third party inspection certificate from the contractor..
2. Other material such as cement, tor steel, etc. shall be conforming to relevant ISS. Tested charges for cement, tor steel shall be borne by the Contractor. L and T A.C.C., Ambuja cement shall preferred be used for water retaining structures.
3. 90% of procurement price will be paid to the contractor on receipt of pipes, valves, etc. due inspection; 5% amount will be released after lowering, laying job and remaining 5% be released after satisfactory hydraulic testing.
4. The Contractor shall provide, at the site of work satisfactory storage for not less than month's average consumption of works and shall keep the cement stored in a manner that satisfy the Engineer. The arrangement of storage and utilization of cement in order of its arrival at the stores and the Contractor shall maintain satisfactory records, which would at any time show the dates of receipt and proposed utilization of cement lying in storage.
5. The Engineer-in-charge shall at all the times have access to the stores and sites method of storage records, and security provided by the Contractor. The Contractor shall comply with instructions that will be given by Engineer in this behalf.

The Contractor shall further at all times satisfy the Engineer on demand by production of books. of submission of returns in proforma as directed, other proofs, that the cement supplied is being used for the purpose for which it is supplied and the Contractor shall at all times keep his records up-to-date and available to the Engineer.

**Contractor**

**Hydraulic Engineer  
ITDC**

**Managing Director**

## **ACQUAINTANCE WITH SITE CONDITIONS AND WORK CONDITIONS**

1. The Contractor shall study the site conditions; general conditions and data included in the tender papers and get it verified from actual inspection of the site etc. before submitting the tender. In case of doubts about any items or data included in this tender or otherwise, it shall be got clarified by applying in writing to the Engineer, 15 days in advance before date of submission of the tender. Once the tender is submitted, it shall be considered that the Contractor has verified and made himself conversant with all the details as required for quoting the rates and completing the work as per tender conditions and specification.
2. Contractor shall not sell or otherwise dispose off or remove except for the purpose of this contract, the rubble, stone metal, sand or other material which may be obtained from any excavation, made for the purpose of the contract. All such materials shall be company's property and shall be directed by the Engineer-in-charge. Contractor may with the permission of the Engineer-in-charge in writing and when directed by him, use any of the materials free of cost.
3. Other unforeseen items to be done in the course of work will have to be done by the Contractor as per specifications in P.W.D. Hand Book Volume I and II and will be paid at mutually agreed rates, ISS and standard practice in vogue.

Extra charge of claims in respect of extra work shall not be allowed unless the work to which they relate are in the spirit and meaning of the specifications or unless such works are ordered in writing by the Engineer-in-charge and claimed for in the specified manner before the work is taken in hand.

### **Materials**

3. The Contractor shall make his own arrangements for obtaining rubble. Khandki, headers, metal, sand, murum, etc. from private quarry. Applications of the Contractor for reasonable area of Government land required for this purpose can be recommended to Revenue Authorities without any guarantee of making the land for quarry available.
4. All the materials involved in the construction shall be of best quality and specifications and shall be got approved from the Engineer-in-charge before use. If necessary, materials shall be got tested from the Laboratory at his cost, Samples requiring approval shall be submitted by the Contractor to the Engineer-in-charge in good time before the use of each material. The samples shall be properly marked to show the name of the materials place.
5. The Contractor shall provide all labour, skilled as well as unskilled, pegs, lime, strings, site rails (wooden as well as steel, etc.) as and when required as per approved design and make available such other materials for surveying, lining out, setting out, checking of work, taking measurements, testing of hydraulic and other structures, without any payment by the company to him. He will also provide proper approach and access to all his works and stores without any extra cost over his tendered rates for the items to be inspected.

6. Rates quoted include clearance of site (prior to commencement of work and its closure) in all respects and hold good for work under all conditions of sites, moisture, weather, etc.
7. Failure to comply with any of the above instructions will result in the company doing the needful at the risk and cost of the Contractor. These conditions are for all items and as such no extra payment shall be made for observing these conditions.
8. The Contractor shall make his own arrangements for quarrying of rubble, stone, murum, sand, lime, metal, etc.
9. Overburden in a quarry will have to be removed by the Contractor at his own cost.
10. Unless a separate item is provided in Schedule "B" minor dewatering of foundations in excavation and during the construction of foundation masonry if required shall be done by the Contractor without claiming extra cost.
11. Masonry shall be kept wet for atleast 15 days and concrete work shall be kept wet for atleast 21 days commencing from the date of its final laying in position. In case during execution curing is found inadequate, it will be carried out by company and the cost thereof shall be recovered from the Contractor. The Contractor shall make his own arrangements for getting water at site at his own cost.
12. The proportions of cement concrete specified in the Schedule 'B' are nominal and are only an indication of approximate proportion of cement, fine aggregate and coarse aggregate which may have to be altered suitably at site to obtain the desired strength and work-ability. However quantity of cement shall not be less than the one specified below.

Nominal Mix

1:1/2:3	(M 200)	7.90	bags/one cum of Cement Concrete
1: 2: 4	(M 150)	6.27	bags/one cum of Cement Concrete
1: 3: 6	(M 100)	4.42	bags/one cum of Cement Concrete
1: 4: 8	(M 80)	3.39	bags/one cum of Cement Concrete

In case of major items of concrete for RCC works the Contractor shall prepare test blocks as per IS Specifications for testing its tensile and compressive strength at his own cost. These blocks will be tested in any of the Government Test Laboratories at the cost of the Contractor. The number of test blocks, frequency, etc. shall be directed by Engineer-in-charge.

13. **Damage by Floods or Accident**  
The Contractor shall take all precautions against damage by floods and from accidents. No compensation will be allowed to the Contractor for his plant, material and work, etc. lost or damaged by floods or from other causes. The Contractor shall be liable to make good any part of material which is in charge of the Contractor and which is lost or damaged by floods or from any other cause. If the work executed is damaged, trenches filled due to any reason. Contractor shall have to make it good at his cost only.

14. **Testing of Structure**

In the case of work which creates reasonable doubts about the quality of workmanship or materials used in the construction, the Engineer may order the Contractor satisfy the company by carrying out a suitable load test or test of the structure or thereof, in the manner as prescribed in Clause-8, 4 .The Indian Standard Code of Practice for plain and reinforced concrete for general building construction as may be approved by him, in regard to the sufficiency of the strength as designed and the event of any deficiency being noticed as a result of the test, the Contractor shall carry necessary strengthening or dismantling as may be directed by the Engineer.

The load test and strengthening or dismantling whenever directed shall be carried out by Contractor entirely at his risk and cost and to the entire satisfaction of Engineer-in- charge his authorized agent and till then the work shall not be considered to have been completed .No payment for dismantled work shall be made.

15. **Supply of Rate-analysis in case of Extra Items**

In case of the EIRL the Contractor shall supply Rate Analysis based on labour and material in case he is called upon to do so. The payment shall be made only after approval from the company.

16. **Water required for Construction:**

The Contractor has to make his own arrangements at his cost for water required construction, testing, filling, structures, etc. either from local bodies or from elsewhere paying the charges directly and arranging tankers, etc. as per necessity. No claim for payment on account of non-availability of water nearby, or extra lead for bringing water be entertained. All required piping arrangements and pumping if required for water shall made by the Contractor at his cost. If Contractor fails to pay the water charges to log bodies or private parties these shall be recovered by the company from his bills. In case company water supply is available, a connection at a suitable place may be sanction but all further arrangements of pumping if required, piping, etc. shall be done by Contractor at his cost, and water charges in such a case shall be paid by the Contractor at rates as decided by the Engineer, which shall be final and binding on Contractor.

Whenever Schedule 'B' provides for any dewatering item payment shall be admissible that item but apart from that item, no extra claims for dewatering required for execute various tender items, and for executing such items in wet condition shall be entertained as these expenses are deemed to be included in the dewatering item.

17. **Leads and Lifts:**

Unless otherwise specifically mentioned in the tender item the tendered rate for all item in tender shall cover all lifts and leads encountered for the execution of the work as direct and no extra claims for additional lifts and leads shall be entertained.

18. Unless otherwise specifically provided for in the tender or a separate item is provided in Schedule 'B' all the sides of excavated trenches after the work is completed or in progress are to be filled by the Contractor to the original ground level from excavated stuff at no extra cost to the company.
19. Unless otherwise specifically mentioned in tender items, the net dimensions of RCC or CC Members actually cast are only admissible for payment under RCC or PCC items. No. increase in dimensions due to plastering or finishing shall be admissible for payment under RCC or PCC items.
20. Cement that will be supplied by the Contractor shall be in Jute/PVC bags.
21. No claims for any desilting of trenches, foundation, etc. filled due to floods, untimely rains, or any other reasons whatsoever shall be entertained and Contractor shall have to do this desilting operation together with dewatering operations entirely at his cost.
22. Electricity supply required for construction of work/labour camp, etc. shall be arranged by the contractor at his own cost.

### **ITEMWISE DETAILED SPECIFICATIONS**

#### **General**

Following specifications are in amplification OR in addition to the specifications for the respective items given in P.W.D. Hand Book Volume I and II Latest Edition , Red Book of Government of Maharashtra and shall be strictly adhered to. relevant ISS shall also be referred.

#### **Alignment**

Alignments and line out for the work is to be given by the Company's officials and the work shall be carried out as per the M.J.P.'s line out and alignment for which Contractor has to provide at his cost all materials such as sight-rails, boning rods, peg nails, chunna flags, etc. and also the required labour for line outs. The cost of constructing pillars, platforms for temporary bench marks is also to be borne by the Contractor.

#### **IDS I Excavation in Soft Materials and Hard Materials**

The classification for all excavation met with shall be in two categories only, as under :  
Soft Materials

Soft material shall include all types of earthy or sandy materials, soils of all types clay, soft, average hard murum i.e. all kinds of disintegrated rock, shingles, clay, sand made-up soils, bricks, bats and isolated boulders upto the size of 0.1 cum. The excavation macadam bound surfaces shall also be classified in soft materials.

#### **Hard Materials**

Hard materials will include boulders of size bigger than 0.1 cum, all types of rock, soft and hard, which can be best removed by blasting. Blasting will not be permitted in inhabited localities or in vicinity of properties, where damage to human life and property will be involved in the opinion of the Engineer and in that case work will have to be done by chiselling and the like methods in the same tendered rates. By the term "SOFT ROCK" is meant rock in masses but of a softer variety. crystalline structure, which is otherwise Like hard rock. It only indicates the degree of softness, but will not include the disintegrated masses of rock, which generally have fractures or cleavages. Soft rock can be removed by a pick but for mass removal blasting has to be done. On hard rock a crow

bar or a pick will only rebound removing but in significant quantity. The excavation in asphalt or concrete shall be classified as hard materials.

The excavation shall be taken down to such depths as shown in drawings and/ or as directed and shall be done in extra sections shown in drawings and stipulated in specifications elsewhere herein. Extra excavation done over and above specified for whatever reasons shall not be paid for. The bottom of the foundation pits shall be perfectly rammed. No filling will be allowed for bringing the foundation pit to proper level.

The excavation may go down deeper by 3.0 M more to reach proper foundations and arriving certain levels, etc. and no extra rate for such deeper excavation over and above the tendered rate shall be admissible.

The section of excavation, however, may be increased correspondingly, if necessary as directed by the Executive, for such extra depths and such increased section as directed by Engineer, shall be admissible for payment at respective tendered rates.

All foundation pits shall be filled on the sides of masonry and concrete by the excavated stuff to the original surface of ground as required, watered and rammed, in 20cms. thick layers and the tenderd rate includes this operation.

Excavated material from foundations shall not be placed nearer than 1.2 M from the edges of excavation.

In case of excavation in towns and inhabited places, it shall be strongly fenced and lighted during night by red lights in charge of watchman at Contractor's cost. Material should not be dumped on road.

Unless otherwise specific lifts and leads are mentioned in the tendered item the tendered rate shall be for all lifts and leads involved in the work. The Contractor shall provide shoring and strutting of approved size and type for normal conditions wherever necessary for excavation in soft materials without extra cost unless otherwise provided for in separate tender item.

Excavation carried out in excess of the width specified shall be at Contractor's own risk and shall not be measured. So also the excavation carried out in excess of the required depths shall be made good to the required level by either concrete or masonry of proportion as directed by the Engineer without extra cost. The tendered rate for excavation items shall include lifting and removing the excavated materials for proper disposal in the vicinity as directed by the Engineer-in-charge. Nothing extra shall be paid for removal of masonry concrete structures, or for removal of stumps or roots of trees met with during excavation and for filling of holes or hollow due to removal of roots, etc. of existing originally which shall be filled up by earth and will be rammed and leveled.

**Contractor**

**Hydraulic Engineer  
ITDC**

**Managing Director**

## **SPECIAL CONDITIONS OF CONTRACT**

### **Payment against Excess Quantities of Various Items**

1. Before making payment of excess quantities as per rules, the concerned Engineer should get himself satisfied regarding genuineness of the claim and he should also exercise a compulsory check of 100% of measurements for a particular item by M.D. of the company.. Responsibility of informing the excess beyond quantities as per Schedule 'B' of the tender for approval to Engineer and also for correctness of claims to be submitted in future shall rest with the Engineer. While submitting the proposal for approval, concerned authorities should consider the exact position of the revised estimates, if necessary due to this excess.
2. For executing any quantity, the excess over the quantity specified in the tender, the Contractor should be authorized by the Engineer in writing.
3. While asking the Contractor to execute such excess quantity, the concerned Engineer should inform the Contractor in writing specifically that the payment in excess of quantities specified in the tender will be made only after following concerned prescribed rules.

### **General**

1. The quoted rate shall be total rate for the completed item of work as per the specifications and shall be inclusive of all incidental charges such as lifts, leads for materials, water for construction, etc. The rates for excavation are inclusive of the fine edge of excavated pit beyond foundations.
2. The tenderer must obtain on his own responsibility and his own expenses all the information which may be necessary for the purpose of making a tender and for entering into a contract and must consider and satisfy himself with all local conditions, sites and quarries, means of accesses, the nature of rock, material to be met with in all execution and all materials pertaining to work.
3. Specifications of item stipulated for other sub works, shall be made applicable, where relevant.

### **Outline of Works**

1. The work will be on the lines of plans attached to tender documents. The plans are, however, liable to be changed and strata as shown there is approximate.
2. The items of work and their approximate quantities are given in Schedule-B of tender.

### **Unit**

1. The rates quoted for each item are for units mentioned in Schedule-B against each item.

### **Site Conditions**

1. It shall be presumed that the Contractor has satisfied himself as to the nature and location of the works, general and local conditions, particularly those bearing on transport handling, storage of materials, availability of labour, weather conditions and has estimated the cost and quoted his rates accordingly. Company will bear no responsibility for lack of such acquaintance with site conditions and consequences thereof.
2. Set of tender documents as and conditions (upto a maximum of three sets) at the discretion of the Engineer, will be supplied to the Contractor after acceptance of tender.

### **Extras, Omissions and Discrepancies**

In all cases of the omissions, doubts or discrepancies in the dimensions in the drawing and items of works. reference shall be made to the Engineer in charge, whose elucidation and elaboration shall be considered final.

**ANNEXURE I**

DETAILS OF RESPECTIVE ISS AND APPROVED MAKES FOR MATERIALS TO BE  
USED FOR EXECUTION OF WATER SUPPLY SCHEMES  
LATEST VERSION OF ISS SHALL BE REFERRED

<b>Sr. No.</b>	<b>Material</b>	<b>ISS No.</b>	<b>Approved Make</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	Cement		Approved manufactures
2	RCC NP3 class pipe		Approved manufactures

Notes:

1. In case of cement and steel, Contractor shall submit manufacture's test certificate. However samples of the materials supplied by the Contractor will be tested by the company from Govt. Engineering College/ Recognized institutes.
2. Pipes shall be tested by EIL, SGS or Rites before dispatched from Manufacturer's places at Contractor's cost.
3. The Contractor shall purchase A.C./PVC pipes, C.I.D. joints at RC rates from any RC holder SSI unit of his choice.

**Contractor**

**Hydraulic Engineer  
ITDC**

**Managing Director**

**NAME OF WORK :-**

**Providing & Laying Drainage Work from R.S.No.668 to Nalla at Ichalkaranji.**

**DECLARATION OF THE CONTRACTOR**

I/We hereby declare that I/we made myself carefully examined the drawing, documents, forms, statements, schedules, additional conditions and specifications of the contract and have made myself/ ourselves thoroughly conversant with site conditions (viz. location, materials, labour, geographical and whether conditions) and in general with all necessary information and data pertaining to and needed for the work and then only.

I/We have based my/ our rates for the work. I/we are particularly aware that no deviation decrease/ increase in rates after acceptance of the contract can be made. No suit shall lye or proceed in any court of law of the land against department.

Signature of the Contractor(s).

**Contractor**

**Hydraulic Engineer  
ITDC**

**Managing Director**

## STATEMENTS

Details of Machinery Immediately Available with the Tenderer for Use of this Work						
Name of the Tenderer:-						
Sr. No.	Name of Equipment	No. Of Unit	Name of Make	Capacity	Age & Condition	Remarks

N.B. : This statement may please be taken out and submitted through Envelope No. 1.

Contractor

Managing Director

Details of Machinery Immediately Available with the Tenderer for Use of this Work					
Name of the Tenderer:-					
Sr. No.	Designation	Name	Qualification	Professional Experience and details of works carried out	Remark

N.B. : This statement may please be taken out and submitted through Envelope No. 1.

Contractor

Managing Director

Details of Work of Similar Type & Magnitude carried out by the Tenderer					
Name of the Tenderer:-					
Sr. No.	Designation	Name	Qualification	Professional Experience and details of works carried out	Remark

N.B. : This statement may please be taken out and submitted through Envelope No. 1.

Contractor

Managing Director

Details of other Tendered for & in hands on the data of Submission of this Tender.									
Name of the Tenderer:-									
Sr No	Name of Work	Place of Work	Works in Hand			Works Tendered for			Remark
			Est. Cost Tendered Cost with % of offer	Cost of remaining Work	Stipulated date of Completion	Reasons for remaining Work	If abandoned for decision when it is expected	Anticipated period for Completion	

N.B. : This statement may please be taken out and submitted through Envelope No. 1.

Contractor

Hydraulic Engineer  
ITDC

Managing Director

## FORM B-1

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### PERCENTAGE RATE TENDER AND CONTRACT FOR WORK.

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DEPARTMENT : Ichalkaranji Textile Development Cluster Ltd.  
Dist-Kolhapur

CIRCLE :

DIVISION :

### **General Rules and Directions for the Guidance of Contractors.**

1. All works proposed to be executed by contract shall be notified in a form of invitation to tender passed on a board hung up in the office of the Managing Director and signed by the Chief Officer.

This form will state the work to be carried out as well as the date for submitting

and opening tender, and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender and the amount of security deposit to be deposited by the successful tender, and the percentage, if any, to be deducted from bills. It will also state whether a refund of a quarry fees, royalties and ground rents will be granted. Copies of the specifications, designs and drawings, estimated rates, scheduled rates and any other documents required in connection with the work shall be signed by the Managing Director for the purpose of identification and shall also be open for inspection by contractors at the office of the Managing Director during office hours.

Where the work are proposed to be executed according to the specifications recommended by a contractor and approved by a competent authority on behalf of the Governor of Maharashtra such specifications with designs and drawings shall form part of accepted tender.

2. In the event of the tender being submitted by a firm, it must be signed by each partner thereof, and in the vent of the absence of any partner, it shall be signed on his behalf by a person holding a power of attorney authorizing him to do so.

2.(A) (i) The contractor shall pay alongwith the tender the sum of Rs.7600/- (Rupees) Seven Thousand Six Hundred only as and by way of earnest money. The contractor may pay the said amount by forwarding alongwith the tender. Demand Draft of any Nationalized Bank in favor of Ichalkaranji Textile Development Cluster payable at Ichalkaranji. The said amount of earnest money shall not carry any interest what so ever.

- (ii) In the event of his tender being accepted, subject to the provisions of Sub - Clause (iii) below, the said amount of earnest money shall be appropriated towards the amount of security deposit payable by him under conditions of General Conditions of Contract.

- (iii) If after submitting the tender, the contractor withdraws his offer or modifies the same, or if after acceptance of his tender the contractor fails or neglects to furnish the balance of Security deposit without prejudice to any other rights and powers of the company hereunder, or in law , company shall be entitled to forfeit the full amount of earnest money deposited by him.
  - (iv) In the event of his tender being accepted, the amount of earnest money deposited by the contractor shall , unless it is prior there to forfeited under the provisions of sub clause (iii) above, be refunded to him on his passing receipt therefore.
3. Receipts for payments made on account of any work, when executed by a firm, should also be signed by all partners except where the contractors are described in their tender as a firm, in which case the receipt shall be signed in the name of the firm by one of the partners or by some other person having authority to give effectual receipts for the firm.
  4. Any person who submits a tender shall fill up the usual printed form starting at what percentage above or below the rates specified in Schedule B. (Memorandum showing items of work to be carried out ) he is willing to undertake the work. Only one rate or such percentage on all the estimated rates / scheduled rates shall be named. Tenders, which propose any alteration in the work specified in the said form of invitation to tender or in the time allowed for carrying out the work, or which contain any other conditions of any sort will be liable to rejection. No printed form of tender shall include a tender for more than one work, but contractors who wish to tender for two or more works they shall submit a separate tender for each. Tenders shall have the name and number of work to which they refer, written outside the envelope.
  5. Managing Director or his duly authorized assistant shall open tenders in the presence of the contractors who have submitted tenders or their representatives who may be present at the time, and he will enter the amounts of the several tenders in comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall for the purpose of identification, sign copies of the specification and other documents mentioned in Rule-1 . In the event of tender being rejected , the Divisional officer shall authorized to refund the amount of earnest money deposited to the contractor making the tender, on his giving a receipt for the return of the money.
  6. The officer competent to dispose of the tenders shall have the right of rejecting all or any of the tenders.
  7. No receipt for any payment alleged to have been made by a contractor in regard to any matter relating to this tender or the contract shall be valid and binding on the Company.
  8. All work shall be measured net by standard measure and according to the Rules and customs of the ITDC and without reference to any local custom.
  10. Under no circumstances shall any contractor be entitled to claim enhanced rates for items in this contract.

11. Every registered contractor should produce alongwith his tender certificate of registration as approved contractor in the appropriate lass and renewal of such registration with date of expiry.
12. All corrections and additions or pasted slips should be initialed.
13. The measurements of work will be taken according to the usual methods in use in the Ichalkaranji Textile Cluster Development Cluster Department and no proposals to adopt alternative methods will be accepted. The Managing Director's decision as to what is the usual method in use in the Ichalkaranji Textile Cluster Development Cluster will be final.
14. The tendering contractor shall furnish a declaration alongwith the tender showing all works for which he has already entered into contract, and the value of work that remains to be executed in each case on the date of submitting the tender.
15. Every tender shall furnish alongwith the tender, information regarding the income-tax circle or ward the district in which he is assessed to income tax the reference to the number of assessment and the assessment year, and a valid Income Tax clearance certificate.
16. In view of the difficult position regarding the availability of foreign exchange no foreign exchange would be released by the installment for the purchase of plant and machinery required for the execution of the work contracted for.
17. The contractor will have to construct shed for storing controlled and valuable materials.
18. The contractors shall also give a list of machinery in their possession and which they propose to use on the work.
19. Every unregistered contractor should furnish along with tender a statement showing previous experience and technical staff employed by him.
20. Successful tendered will have to produce to the satisfaction of the accepting authority a valid and current license issued in his favour under the provision of Contract Labour (Regulation and Abolition) Act, 1970 before starting work, failing which acceptance of the tender will be liable for withdrawal and earnest money will be forfeited to Copany.

The contractor shall comply with the provision of the Apprentices Act 1961 and the rules and orders issued there under from time to time If he fails to do so his failure will be a breach of the contract and the Managing Director may, in his discretion cancel the contract. The contractor shall also be liable, for any pecuniary liability arising on account of any violation by him of the provisions of the Act.

## TENDER FOR THE WORKS

I/We hereby tender for the execution, for the Ichalkaranji Textile Development Cluster (herein before and hereinafter referred to as "ITDC") of the work specified in the under written memorandum within time specified in such memorandum at .....

(In words .....  
.....)percent above/ below the estimated rates centered in Schedule "B' (memorandum showing items of work to be carried out) and in accordance in all respects with the specifications, designs, drawing and instructions in writing referred to in Rule I hereof and in clause 12 of the annexed conditions of the contract and agree that when materials for the work are provided by the ITDC, such materials and the rate to be paid for them shall be as provided in Schedule "A' hereto.

**Signature of contractor**

# Conditions of Contract

<p><b>Clause</b> <b>1</b></p>	<p>The person/persons whose tender may be accepted (hereinafter called the contractor, which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators, and assigns) shall</p> <p>(A) Within 10 day for correction of Rs. 1,000,00 less or 2 days for contract of more than Rs. 1000 batless than Rs. 2000 and so on upto a limited 10 days which may be extended by the Engineer concerned upto 15 days if the Engineer think fit to do so for a contract of over Rs. 10000 of the receipt by him of the notification of the acceptance of his tender deposit with the Engineer (if deposited for more than 12 months) of sum sufficient which will made up the full security deposit specified in the tender o</p> <p>(B) (Permit ITDC by way of security deposit.) Provided always that in the tender or (B) (permit ITDC at the time of making any payment to him for work done under the contract to deduct such as will amount to*..... percent of all moneys so payable such deductions to be held by company by way of security deposit.) Provided always that in the event of the contractor depositing a lump sum by way of security deposit as contemplated at (A) above, then and in such case, if the sum so deposited shall not amount to.....percent of the total estimated cost of the work, it shall be lawful for Company at the time of making any payment to the contractor for work done under the contract to make up the full amount of                      percent by deducting a sufficient sum from every such payment as last aforesaid until the full amount of the security deposit is made up. All compensation or other sums of money payable by the contractor to company under the terms of his contract may be deducted from or paid by the sale of sufficient part of his security deposit or from the interest arising there from or from any sums which may be due or may become due by Company to the contractor under any other contract or transaction of any nature on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid, the contractor shall, within ten-days thereafter, make good in cash or Company securities provided that the depositor has</p>	<p><b>Security deposit</b> <b>P.W.D.</b> <b>Resolution</b> <b>No. CAT/1087</b> <b>C.R.94</b> <b>Bldg. - Date 14-</b> <b>02-89</b></p>
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	<p>expressly desired this in writing.</p> <p>If the amount of the security deposit to be paid in a lump sum within the period specified at (A) above is not paid the tender/contract. Already accepted shall be considered as cancelled and legal steps taken against the contractor for recovery of the amounts.</p> <p>The amount of the security deposit lodged by a contractor shall be refunded alongwith the payment of the final bill, if the date upto which the expiry of period upto which the contractor has agreed to maintain the work in good order is over. If such date is not over, only 90% amount of security deposit shall be refunded alongwith the payment of the final bill.</p> <p>The amount of security deposit retain by the Company shall be released after expiry of period upto which the contractor has agreed to maintain the work in good order is over. In the event of the contractor has agreed to maintain the work in good order, then subject to provisions of clauses 17 and 20 hereof the amount of Security Deposit retained by Company shall be adjusted towards the excess cost incurred by the department on rectification work.</p>	
<p><b>Clause 2</b></p>	<p>The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall through the stipulated period of the contract be proceeded with, all due diligence (time being decmed to be the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount equal to one percent or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide, of the amount of the estimated cost of the whole work as shown by the tenderer for every day that the work remains uncommnted, or unfinished, after the proper dates. one month to complete And further to ensure good progress during execution of the work, the contractor shall be bonds, in all cases in which the time allowed for any work exceeds one month to complete.</p> <p style="text-align: center;">Of the work in      Of the time Do                      do Do                      do</p> <p>* Note – The quantity of the work to be done within a particular time to be specified above shall be fixed and inserted in the blank space kept for the purpose by the Officer competent to accept the contracts after taking into consideration the circumstance of each case. And following proportion will usually be found suitable.</p> <p>In 1/1, 1/2, 3/4, of the time</p>	<p><b>Compensation for delay</b></p>

	<p>Reasonable progress of earth work. 1/6, 1/2, 3/4, of the total value of the work to be done.</p> <p>Do Do of masonry work 1/10, 1/10, 8/10 Do. D0.</p> <p>In the event of the contractor failing to comply with these conditions he shall be liable to pay as compensation an amount equal to one percent or such smaller amount as the Chief Officer (whose decision in writing shall be final) may decide of the said estimated cost of the whole work for every day that the due quantity of work remains incomplete provided always that the total amount of compensation to be paid under the provisions of this clause shall not exceed 19 percent of the estimated cost of the work as shown in the tender.</p>	
<p><b>Clause 3</b></p>	<p>In any case in which under any clause of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit (Whether paid in one sum or deducted by installment) or it in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause the Chief Officer, on behalf of the Company, shall have power to adopt any of the following courses, as he may deem best suited to the interest of Company.</p> <p>(a) To rescind the contract (for which decision notice in writing to the contractor under the head of Managing Director shall be conclusive evidence) and in that case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of company</p> <p>(b) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure Incurred on tools and plant, and charges on additional supervisory staff including the cost of work-charged crediting hem with the value of the work done department in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Managing Director as to the cost and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.</p> <p>(c) To order that the work of the contractor be measured up and to take such part there of as shall be unexecuted out of his hand, and to give it to another to contractor to completed, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisor staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be</p>	<p><b><i>Action when whole of security deposit is forfeited.</i></b></p>

	<p>debited to the contractor and the value of the work done or executed though the new contractors shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Engineer as to all the cost of the work and other expenses incurred as aforesaid for or it getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.</p> <p>In case the contract shall be rescinded under clause (a) above the contractor shall not be entitled to recover or be paid, any sum for any work therefore actually performed by him under this contract unless and until the Managing Director shall have certified in writing the performance of the such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in clause (b) or (c) being adopted and the cost of the work executed departmentally or though a new contractor and other allied expenses exceeding the value of such work credited to the contractors the amount of excess shall be deducted from any money due to the contractor, by Company under the contract or otherwise howsoever of from his security deposit or the sale proceeds thereof provided, however that contractor shall have no claim against Company even if the certified value of the work done departmentally or though a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three course mentioned in cause (a), (b) or (c) is adopted by the Managing Director, the contractor shall have no claim to compensation for any loss sustained by him a reason of his having purchased or procured any materials , or entered into any engagement, or made any advance On account of or with a view to the execution of the work or the performance of the contact.</p>	
<b>Clause 4</b>	<p>If the progress of any particular portion of the work is unsatisfactory the Managing Director shall notwithstanding that the general progress of the work is in accordance with the conditions mentioned in cause 2, be entitled to taking action under clause 3 (b) after giving the contractor 10 days notice in writing. The contractor will have no claim to compensation for any loss sustained by him owing to such action.</p>	<b><i>Action when the progress of any particulars portion of the work is unsatisfactory.</i></b>
<b>Clause</b>	In any case in which any of the powers conferred upon	<b>Contractor</b>

5	<p>the Managing Director by clause 3 &amp; 4 hereof shall have become exercisable and the same shall not have been exercised the non-exercise thereof shall not constitute a waving of any of the conditions hereof and such powers shall notwithstanding be exercise in the event of any future case of default by the contractor for which under any clause hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Managing Director taking action under sub-clause (a) or (c) of clause 3, he may if he so desires, take possession of all any tools and plant, materials and stores in or upon the work of site Thereof or belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates to be certified by the Managing Director whose certificate thereof shall be final. In the alternative the Managing Director may, after giving notice in writing to the contractor or his clerk of the work, foremen or other authorized agent required him to remove such tools and plant, materials, or stores from the premises within a time to be specified in such notice, and in the event of the contractor failing to comply with any such requisition, the Managing Director may remove them at the contractor's expenses or sale them by auction or private sale on account of the contractor and at his risk in all respects and the certificate of the Managing Director as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.</p>	<p><i>remains liable to pay compensation if action not taken under clause 3 and 4.</i></p>
<i>Clause 6</i>	<p>If the contractor shall desire and extension of the time for completion of work on the ground he shall apply in writing to the Managing Director before the expiry of the period stipulated in the tender or before the expiration of 30 days from the date on which he was hindered as afforested or on which the cause for asking for extension occurred, whichever is earhtier and the Chief Officer, there were reasonably grounds for granting an extension, grant such extension as he thinks necessary or proper. The decision of the Managing Director in this matter shall be final.</p>	<p><i>Extension of time</i></p>
<i>Clause 7</i>	<p>On the completion of the work the contractor shall be furnished with a certificate by the Managing Director (hereinafter called the Engineer-in-charge) of such completion, but no such certificate shall be given nor shall the work be considered to be complete until the</p>	<p><i>Final certificate</i></p>

	<p>contractor shall have removed from the premises on which the work have been executed, all scaffolding, surplus materials and rubbish, and shall have cleaned off, the dirt from all wood work, door, windows, wall, floor or other parts of any building in or upon which the work has been executive or of which he may have had possession for the purpose of executing the work, nor until the work shall have been measured by the Engineer-in-charge or where the measurement have been taken by his subordinates until they have received approval of the Engineer-in-charge, the said measurements being binding and conclusive against contractor. If the contractor shall fail to comply with the requirements of this clause as to the removal of scaffolding surplus materials and rubbish and cleaning of dirt on or before the date fixed for the completion of the work the Engineer-in-charge may at the expense of the contractor, remove such scaffolding, surplus material and rubbish, and dispose off the same as he thinks fit and clean off such dirt as aforesaid and the contractor shall forthwith pay the amount off the expenses so incurred, but shall have no claim in respect of any such scaffolding or surplus material as aforesaid except for any sum actually realized by the sale thereof.</p>	
<p><b>Clause 8</b></p>	<p>No payments shall be made for work estimated to cost less than rupees one thousand till the whole of work shall have been completed and the certificate of completion given. But in the case of work estimated to cost more than rupees on thousand the contractor shall on submitting a monthly bill therefore be entitled to receive payment proportionate to the part of the work than approved and passed by the Engineer-in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actually done and completed and shall not preclude the Engineer-in-charge from requiring any bad, unsound imperfect or unskillful work to be removed or taken away and reconstructed or re-erected nor shall any such payment be considered as admission of the due Performance of the contract or any part thereof in any respect or the occurring of any claim nor shall it conclude determine or affect in any other way the powers of the Engineer-in-charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way very or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for the</p>	<p><b><i>Payment on intermediate certificate to be regarded as advances.</i></b></p>

	completion of the work, otherwise the Engineer-in-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.	
<b>Clause 9</b>	The rates for several items of work estimated to cost more than Rs. 1,000 agreed to within, shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In cases where the items of work are not accepted as so completed by the Engineer-in charge may take payment on account of such items at such reduced rates as he may consider reasonable in the preparation of final or on account bills.	<b><i>Payment at reduced rates On account as work not accepted as completed to be at the discretion of the Engineer-in-charge.</i></b>
<b>Clause 10</b>	A bill shall be submitted by the contractor in each month or before the date fixed by the Engineer-in-charge for all work executed in the previous month, and the Engineer-in-charge shall take or cause or be taken the requisite measurement for the purpose of having the same verified and the claim, so far as it admissible, shall be adjusted, if possible, within ten days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the contractors or his duly authorized agent whose countersignature to the measurement list shall be sufficient warrant, and Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor in all respects.	<b><i>Bills to be submitted monthly.</i></b>
<b>Clause 11</b>	The contractor shall submit all bills on the printed form to be had on application at the office of the Engineer-in-charge. The charges to be made in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender at the rates hereinafter provided for such work.	<b><i>Bills to be on printed forms</i></b>

<b>Clause</b>	<p>If the specification or estimate of the work provides for the use of any special description of material to be supplied from the store of the Dept. Store or if it is required that the contractor shall use certain store to be provided by the Engineer-in-charge (such material and stores and the prices to be charged therefore as hereinafter mentioned being so fast as practicable for the convenience of the contractor but not so as in any way to control the meaning or effect of this contract specified in the schedule or memorandum hereto annexed) the contractor shall be supplied with such materials and stores as may be required from time to time to be used by him for the purpose of the contract only, and value of the full quantity of the materials and stores so supplied shall be set off or deducted from any sums then due, or thereafter to become due to the contractor under the contract, or otherwise, or from the security deposit or the proceeds of sale thereof if the security deposit is held in Company securities, the same or a sufficient portion thereof shall in that case be sold for the purpose. All materials supplied to the contractor shall remain the absolute property of Company and shall on no account be removed from the site of the work, and shall at all time be open for inspection by the Engineer-in-charge. Any such materials unused and in perfectly good condition at the time of completion or determination of the contract shall be returned to the Department store of the Engineer-in-charge so required by a notice in writing given under his hand but the contractor shall not be entitled to return any such materials except with consent of the Engineer-in-charge and he shall have no claim for compensation on account of any such material supplied to him as aforesaid but remaining unused by him or any wastage in or damage to any such materials.</p>	<b>Stores supplied by Company</b>
<b>Clause 12 (A)</b>	<p>All stores of contractor materials such as cement, steel etc. supplied to the contractor by Company should be kept by the contractor under lock and key and will be accessible for inspection by the Managing Director or his agent at all the times.</p>	
<b>Clause 13</b>	<p>The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner, and both as regards materials and every other respect in strict accordance with specifications. The contractor shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or the site of the work during office hours. The contractor will be</p>	<b>Works to executed in accordance with specifications, drawings, orders, etc.</b>

	entitled to receive these sets of contract drawings and working drawing as well as one certified copy of the accepted tender along with the work order free cost.	
<b>Clause 14</b>	<p>The Engineer-in-charge shall have power to make any alteration in or additions to the original specifications, drawings, design and instructions that may appear to Him to be necessary or advisable during the progress of the work and the contractor should be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract, and any additional work which the contractor may be directed to be in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agreed to do the man work and at the same specified in the tender for the main work. And if the additional and altered work includes any class of work for which no rate is specified in this contract, then such class of work shall be carried out at the rates entered in the Schedule of Rates of the Division or at the rates mutually agreed upon between the Engineer-in-charge and the contractor, whichever are lower. If the additional or altered for which no rate is entered in the schedule of Rates of Division as ordered to be carried out before the rates are upon then the contractor shall within seven days of the rate which it is his intention to charge for such class of work. And if the Engineer-in-charge does not agree to this rate he shall be notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry out in such manner as he may consider advisable provided always that if the contractor shall commence work or incur any expenditure in regard thereto before the rates shall only be entitled to be paid in respect of the rate as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of a dispute the decision of Managing Director of the Circle will be final. Where, however, the work is to be executed to the designs, drawings and specifications recommended by the contractor and accepted by the competent authority the alterations above referred to shall be within the scope of such designs, drawings, and specification and specifications appended to the tender.</p> <p>The time limit for the completion of the work shall be extended in the proportion that increase in its cost occasional by alterations or additions bears to the cost of the original control work, and the certificate of the</p>	<p><i>Alternations in specifications and designs not to invalidate contracts. Rates for work not entered in estimate or schedule of rate of the district.</i></p> <p><i>Extension of time in consequence of additions or alterations.</i></p>

	<p>Engineer-in-charge as to such proportion shall conclusive.</p> <p>The time limit for the completion of the work shall be extended in the proportion that increase in its cost occasional by alterations or additions bears to the cost of the original control work, and the certificate of the Engineer-in-charge as to such proportion shall conclusive.</p>	
<b>Clause 15 (1)</b>	<p>If at any time after the execution of work of the contract documents the engineer shall for any reason whatsoever (other than default on the part of the contractor for which the Company is entitled to rescind the contract) desires that the whole or any part of the work specified should be suspended for any period or that the whole part of the work should not be carried out, at all he shall give to the contractor a notice in writing of such desire and upon the receipt of such notice the contractor a notice in writing of such desire and upon the receipt of such notice the contractor shall forthwith suspend or stop the work wholly or in part as required, after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any part of it could be or could have been safety stopped or suspended shall be final and conclusive against the contractor. The contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.</p>	<p><i>No claim to any payment or compensation for alteration in or restriction of work.</i></p>
<b>(2)</b>	<p>Where the total suspension of work ordered as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer, within 30 days of the expiry of the said period of 90 days, of such intention and requiring the Engineer to record the final measurement of the work already done and to pay final bill. Upon giving such notice the contractors shall be deemed to have be deemed to be discharge from his obligation to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payments as may be finally due to the contractor within a period of 90 days from the receipt of such notice in respect of the work already done by the contractor. Such payments shall not in any manner</p>	

	prejudice the right of the contractor to any further compensation under the remaining provisions of this clause	
(3)	Where the Engineer required the contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate, the contractor shall be entitled to apply to the Engineer within 30 days of the resumption of work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained idle on the site or on the account of his having and to pay the salary or wages of labour engaged by him during the said period suspension provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect or any suspension whatsoever occasioned by Unsatisfactory work on any other default his part. The decision of the Engineer in this regard shall be final and conclusive against the contractor.	
(4)	<p>In the event of-</p> <p>(i) Any Total stoppage of work on notice from Engineer under Sub clause (1) in that behalf.</p> <p>(ii) Withdrawal the contractor from of contractor obligation to complete the remaining unexecuted work under sub-clause (2) on account of continued of work for a period exceeding 90 days.</p> <p>(iii) Curtailment in the quantity of item originally tendered on account of any alteration, omission or substitution in the specification, drawings, design or instructions under clause 14 (1) where which such curtailment exceeds 25% in quantity and the value of the quantity curtailed beyond 25 percent at the rates for item specified in the tender is more than Rs.5,000/-. It shall be open to the contractor, within 90 days from the service of</p> <p>(i) the notice of stoppage of work or</p> <p>(ii) the notice of withdrawal from the contractual obligations under the contract on account of the continued suspension of work of</p> <p>(iii) notice under clause 14 (1) resulting in such curtailment to produce to the Engineer satisfactory documentary evidence that he had purchased or agreed to purchase material for use in the contractor work, before receipt by him of the notice of</p>	<p><b><i>No Claim to compensation on account of loss due to delay in supply of materials by Company</i></b></p>

	<p>stoppage, suspension or curtailment and require the Company to take over on payment such material at the rates at which the same was acquired by the contractor. The Company shall thereafter take over the material so offered, provided the quantities offered, are not in excess of the requirement of the unexecuted work as specified in the accepted tender and are of quality and specifications approved by the Engineer.</p>	
<b>Clause 15 (A)</b>	<p><b>The contractor shall not be entitled to claim any compensation from Company for the loss suffered by him on account of delay by Company in the supply materials entered in Schedule A where such delay in caused by</b></p> <p>(i) Difficulties relating to the supply of railway waggons.  (ii) Force majeure.  (iii) Act of God.  (iv) Act to enemies of the State or any other reasonable cause beyond the control of Company</p> <p>In the case of such delay in the supply to materials. Company shall grant such extension of time for the completion of the work as shall appear to the Managing Director to be reasonably in accordance with the circumstances of the case. The decision of the Managing Director as to the extension of time shall be accepted as final by the contractor.</p>	<i>No claims to compensation on account of loss due delay in supply of materials by Company</i>
<b>clause 16</b>	<p>Under no circumstances whatever shall the contractor be entitled be entitled to any compensation from Company on any account unless the contractor shall have submitted a claim writing to the Engineer-in-charge within one month of the case of such claim accruing.</p>	<i>Time limit for unforeseen claims.</i>
<b>Clause 17</b>	<p>If any time before the security deposit or any part thereof is refunded to the contractor it shall appear to the Engineer-in-charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality, or that any materials or articles provided by him for the execution of the work are unsound, or of a quality inferior to the contracted for, or are otherwise not in accordance with the contract, it shall be lawful for the Engineer-in-charge to intimate this fact in writing to the contractor and then not withstanding the fact writing to contractor and then not withstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the</p>	<i>Action and compensation payable in case of bad work.</i>

	<p>contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part as the case may require or if so required shall remove the materials or articles so specified and provided other proper and suitable materials or articles at his own charge and cost and in the event of his failing to do so within period to be specified by the Engineer-in charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding 10 days, during which he failure so continues and in the case of any such failure the Engineer-in-charge may rectify or remove and re-execute the work or remove, and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor. Should the Engineer -in-charge consider that any such inferior work or materials as described above may be accepted or made use or it shall be within his discretion to accept the same at such reduced as he may fix therefore.</p>	
<b>Clause 18</b>	<p>All works under or in course of execution or executed in pursuance of the contract shall at all time be open to the inspection and supervision of the Engineer-in charge and his subordinates, an the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge and his subordinate to visit the work shall have been given to the contractor, either himself be present to receive order and instruction or have responsible agent duly accredited in writing present for that purpose. Order given to the contractors duly authorized agent shall be considered to have the some force and effect as if they had been given to the contractor himself.</p>	<p><b><i>Work to be open to inspection Contractor or responsible agent to be present.</i></b></p>
<b>Clause 19</b>	<p>The contractor shall give not less than five days notice in writing to the Engineer-in-charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof taken before the same is so covered up or place beyond the reach or measurements and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charges or his subordinate in charge of the work, and if any work shall, be covered up or placed beyond the reach of measurement, without such notice having been given or consent obtained the same shall be uncovered at the contractors expenses, and in default thereof no payment or allowance shall be made for such work or</p>	<p><b><i>Notice to be given before work is covered up</i></b></p>

	for the materials with which the same was executed.	
<b>clause 20</b>	<p>If during the period of Months/years from the date of completion as certified by the Engineer-in-charge pursuant to Clause-7 of the contract or Months/years after commissioning the work, whichever is earlier in the option of the Chief Officer, the said work is defective in any manner whatsoever, the contractor shall forthwith on receipt of notice in that behalf from the Chief Officer, duly commence execution and completely carry out at his cost in every respect all the work that may be necessary for rectifying and setting right the defects specified therein including dismantling and reconstruction of unsafe portion strictly in accordance with and in the manner prescribed and under the supervision of the Chief Officer. In the event of the contractor failing or neglecting to commence execution of the said rectification work within the period prescribed therefore in the said notice and or to complete the same as aforesaid as required by the said notice, the Managing Director get the same executed and carried out departmentally or by any other agency at the risk on account and at the cost of the contractor. The contractor shall forthwith on demand pay to the Govt. the amount of such costs, charges and expenses sustained or incurred by the Company of which the certificate of the Managing Director shall be final and binding on the contractor. Such costs, charges and expenses shall be deemed to be arrears of land revenue and on the event of the contractor failing or neglecting to pay the same on demand as Aforesaid without prejudice to any other rights and remedies of the Company, the same may be recovered from the contractor as arrears of land revenue. The Company shall also be entitled to deduct the same from any amount which may then be payable or which may thereafter become payable by the company to the contractor either in respect of the said work or any other work whatsoever of from the amount o security deposit retained by Company.</p>	<b><i>Contractor liable for damage done and for imperfections.</i></b>
<b>Clause 21</b>	<p><b>The contractor shall supply at his own cost all material (except such special materials if any as may in accordance with the contract, be supplied from the stores),</b>  Plant, tools, appliances, implements, ladders, cordage tackle scaffolding and temporary works requisite or proper for the proper execution of the work, whether in the original altered or substituted form and whether included in the specification or other documents</p>	<b><i>Contractor to supply plant, ladder, scaffolding etc.</i></b>

	<p>forming part of the contract or referred to in these conditions or not and which may necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitles to require together with the carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of person with the means and materials necessary for the purpose off setting out works and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or the materials, failing which the same may be provided by the Engineer-in-charge at the expenses of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof. The contractor shall provided all necessary fencing and lights required to protect the public the public from accident and shall also be bound to bear the expenses of defense of every suit, action or other legal precautions, and to pay any damages by any person for injury sustained owing to neglect of the above precautions, and to pay any damages and cost which may be awarded any such suit action or proceedings, to any such person or which may with consent of the contract, be paid for compromising any claim be any such person. Above precautions, and to pay any damages and cost which may be awarded any such suit action or proceedings, to any such person or which may with consent of the contract, be paid for compromising any claim be any such person.</p>	<p><i>And is liable for damages arising from non-provisions of light, fencing etc</i></p>
<p><b>Clause 21(A)</b></p>	<p>The contractor shall provide suitable and working platform gangway and stairways and shall comply with the following regulations in connections herewith.</p> <ul style="list-style-type: none"> <li>(a) Suitable Scaffolds shall be provided for workmen for all works that cannot be safely done from a ladder or by other means.</li> <li>(b) A scaffold shall not be constructed, taken down or substantially altered except <ul style="list-style-type: none"> <li>(i) Under the supervision of competent and responsible person and</li> <li>(ii) As far as possible by competent workers possessing adequate experience in this kind of work.</li> </ul> </li> <li>(c) All scaffold and applicants connected there with and ladder shall- <ul style="list-style-type: none"> <li>(i) be of sound material</li> <li>(ii) be of adequate strength having regard to the</li> </ul> </li> </ul>	

	<p>loads and trains to which they will be subjected, and</p> <p>(iii) be maintained in proper condition.</p> <p>(d) Scaffold shall be constructed that no part thereof can be which consequence of normal use.</p> <p>(e) Scaffold shall not be over loaded and so far as practicable the load shall be evenly distributed.</p> <p>(f) Before installing lifting gear on scaffold special precautions shall be taken to ensure the strength and stability of the scaffold.</p> <p>(g) Scaffold shall be periodically inspected by the competent person.</p> <p>(h) Before allowing a scaffold to be used by his workmen the contractor shall, whether the scaffold has been erected by his workmen or not, take steps to ensure that it complies fully with the regulations here in specified.</p> <p>(i) Working platform, gangway stairway shall-</p> <p>(iii) (i) Be so Constructed that no part there of can sag unduly or unequally. be so constructed and maintained having regard to the prevailing conditions as to reduce as far as practicable risks of person tripping or slipping, and</p> <p>(iv) Be kept free from any unnecessary obstruction.</p> <p>(j) In the case of working platform, gangway, working places and stairway at the height exceeding _meters. (to be specified)</p> <p>(i) every working platform and every gangway shall be closely bordered unless other adequate measures are taken to ensure safety.</p> <p>(ii) every working platform and gangway shall have adequate with and</p> <p>(iii) every working platform, gangway, working place and stairway shall be suitable fenced.</p> <p>(k) Every opening in the floor of a building or in a working platform shall except for the time and to extent required to allow excess of person or the transport of shifting of materials be provided with suitable means to prevent the fall of person or materials.</p> <p>(l) When person are employed on roof where there is a danger of falling from a height exceeding suitable precautions shall be taken to prevent the fall of person of materials (to be prescribed)</p> <p>(m) Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffold or there working places.</p> <p>(n) Safe means of access shall be provided to all working platform and other working places.</p>	
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	The contractor (s) will have to make payments to the labourers as per minimum Wages Act.		
<b>Clause 21(B)</b>	<p>(a) Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect</p> <p>(b) Hoisting machine and shackle shall be examined and adequate tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by the Company.</p> <p>(c) Every chain, ring, hook, shackle swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.</p> <p>(d) Every crane driver or hoisting appliance operator shall be properly qualified.</p> <p>(e) No person who is below the age of _____ years shall be in control of any hoisting machine, including an scaffold which, or give signals to the operator.</p> <p>(f) Of away hoisting machine and or every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering as means of suspension, the safe working load shall be ascertained by adequate means.</p> <p>(g) Every hoisting and all gear referred to in preceding regulation shall be plainly marked with the safe working load.</p> <p>(h) In the case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is appliance shall be clearly indicated.</p> <p>(i) No part of any hoisting machine or of any gear referred to in regulation 7 above shall be loaded beyond the safe working load except for the purpose of testing.</p> <p>(j) Motors, gearing transmissions, electric wiring and other dangerous part of hoisting appliance shall be provided with efficient safeguards.</p> <p>(k) Hoisting appliance shall be provided with such means as will reduce to a minimum and the risk of the accident descent of the load.</p> <p>(l) Adequate precaution shall be taken to reduce to a minimum the risk of accidentally displaced.</p>		
<b>Clause 22</b>	The contractor shall not set fire to any standing, jungle, trees, brush-wood or grass without a written permit from the Chief Officer. When such permit is given, and also in all cases when destroying cut or dug up trees brushwood grass etc. By fire, the contractor shall take the necessary measure to prevent such fire spreading to or otherwise damaging surrounding property. The contractor shall make his arrangements	<i>Measures for prevention of firm.</i>	

	for drinking water for the labour employed by him.	
<b>Clause 23</b>	<p>Compensation for all damage done intentionally by contractors labour whether in or beyond the limits of Company property including any damage caused by the spreading of the fore mentioned in clause 22 shall be estimated by the Engineer-in-charge subject to the decision of the Managing Director on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand, failing which, the same will be recovered from the contractor as damages in the manner prescribed in clause 1 or reduced by the Engineer-in-charge from any sums that may be due or become due from Company to contractor under this contract or otherwise.</p> <p>The contractor shall bear the expenses of defending any action or other legal proceeding that may be any person for injury sustained by him owing to neglect of precautions to prevent the spread of fire and he shall pay any damages and cost that may be awarded by the court in consequence.</p>	<b><i>Liability of contraction for any damage done in or outside work area</i></b>
<b>Clause 24</b>	The employment of female labour or works in neighbour-hood of soldier's barracks should be avoided as far as possible.	<b><i>Employment for female labour.</i></b>
<b>Clause 25</b>	No work shall be done on a Sunday without the sanction in writing of the Engineer-in-charge.	<b><i>Work no to Sunday.</i></b>
<b>Clause 26</b>	The contract shall not be assigned or sublet without the written approval of the Engineer-in-charge. And if the contractor shall assign or sublet his contract, or attempt so to do, or become insolvent or commence and proceeding to get himself adjudicated and insolvent or make any composition with his creditors, or attempts so to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise shall either directly or indirectly be given, promised, or offered by the contractor, or any of his servants or agents to any public officer or person in the employ of Company in any way relating to his office of employment, or if any such officer or person shall becomes in any way directly or indirectly interested in the contract, the Engineer-in-charge may thereupon by notice in writing rescind the contract, and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Company, and the same consequence shall ensure as if the contract had been rescinded under clause 3 hereof and in addition the contractor shall not be entitled to recover or be paid for any work	<b><i>Work no to sublet.</i></b>  <b><i>Contract may be rescinded and security deposit forfeited for subletting it without approval or for conming a public officer or if contractor becomes insolvent.</i></b>

	therefore actually performed under the contract.	
<b>Clause 27</b>	All sums payable by a contractor by way of compensation under any of these conditions shall be considered as a reasonable compensation to be applied to the use of Company without reference to the actual loss of damage sustained and whether any damage has or has not been sustained.	<i>Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss.</i>
<b>Clause 28</b>	In the case of tender by partners, any change in the constitution of a firm shall be forthwith notified by the contractor to the Engineer-in-charge for his information.	<i>Change in the constitution of firm to be notified.</i>
<b>Clause 29</b>	All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Managing Director of the Circle, for the time being, who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.	<i>Works to be under direction of superintending Engineer.</i>
<b>Clause 30</b>	1) Except where otherwise specified in the contract and subject to the powers delegated to him by Company under the code, rules then in force, the decision of the Managing Director of the circle for the time being shall be final, conclusive, and binding on all parties of the contract upon all questions relating to the meaning of the specifications, designs, drawings, and instructions, herein before mentioned and as to the quality of workmanship, or materials used on the work, or as relating to the contract, claim, right matter or thing whatsoever, in any way arising out of, or relating to the contract, design, drawings, specifications, estimates, in subtractions, orders, or these conditions or otherwise concerning the works, or the execution, or failure to execute the same, whether arising, during the progress of the work, or after the completion or abandonment thereof.	

<b>Clause 31</b>	When the estimate on which a tender is made includes lump sums in respect of parts of this work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for each item, or if the part of work in question is not in the opinion of the Engineer-in-charge capable of measurement, the Engineer-in-charge may as his discretion pay of the lump sum amount entered in the estimate and the certificate in writing of the any sums payable to him under the provision of this clause.	<b><i>Lump sums in estimates.</i></b>
<b>Clause 32</b>	In the case of any class of work for which there is no such specification as is mentioned in rule 1 such work shall be carried out in accordance with the Divisional Specifications, and in the event of there being no Divisional specifications, then in such case the work shall be carried out in all respects in accordance with all instructions and requirements of the Engineer-in-charge.	<b><i>Actions where on specifications.</i></b>
<b>Clause 33</b>	The expression work or works where used in these conditions, shall unless there be something in the subject or content repugnant to such construction, be construed to mean the work of work constructed to be executed under or in virtue of the contract. Whether temporary or permanent and whether original altered substituted or additional.	<b><i>Definition of work</i></b>
<b>Clause 34</b>	The percentage referred to in the tender shall be these conditions, shall unless gross amount of the bill before deducting the value of any stock issued.	<b><i>Contractor's percentage whether applied to net or gross amount of bill</i></b>
<b>Clause 35</b>	All quarry fees, royalties, octroi dues and ground rent for stacking materials, if any, should be paid by the contractor, who will, however, be entitled to a refund of such of the charges as are permissible under rules, on obtaining a certificate from the Engineer-in-charge that the materials were required for use on Company work.	<b><i>Refund of quarry fees and royalties.</i></b>
<b>Clause 36</b>	The contractor shall be responsible for and shall pay any compensation to his workmen payable under the Workmen's Compensation Act, 1923(VII of 1923), (hereinafter called the said act) for injuries caused to the workmen. If such compensation is payable paid by Company as principle under Sub-Section (1) of section 12 of the said Act on behalf of the Company, it shall be recoverable by Company from the contractor under subsection (2) of the said section. Such Compensation shall be recovered in the manner laid down in clause 1 above.	<b><i>Compensation under Workmen's Compensation Act.</i></b>
<b>Clause</b>	The contractor shall be responsible for and shall	

<b>36(A)</b>	pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses as incurred by Company the same shall be recoverable from the contractor forthwith and be deducted without prejudice to any other remedy of Company from any amount due or that may become due to the contractor.	
<b>Clause 36 B</b>	<p>The contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the persons employed on the site, and shall maintain the same in condition suitable for immediate use at any time shall comply with the following regulation in connection therewith.</p> <p>(a) The workers shall be required to use the equipment so provided by the contractor and the contractor shall take adequate steps to ensure proper use to the equipment by these concerned.</p> <p>(b) When work is carried on in proximity to any place where there is a risk of drawing all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.</p> <p>(c) Adequate provision shall be made for prompt first-aid treatment of all injuries like be sustained during the course of the work.</p>	
<b>Clause 36 (C) -</b>	The contractor shall duly comply with the provisions of The Apprenti Act, 1961 (L to 1961) the rules made there under and the orders that may be issued from time to time under Act the said rules and on his failure or neglect to do so, he shall be subject to the liabilities and penalties provided by the said Act and said Rules.	
<b>Clause 37</b>	Quantities shown in the tender are approximate and no claim shall certificate for quantities of work executed begin either more or less then those entered in tender or estimate.	<b><i>Claim for quantities entered in the tender or estimates.</i></b>
<b>Clause 38</b>	The contractor shall employ any famine, convince or other labour of a particular kind or class if ordered in writing to do so by the Engineer .	<b><i>Employment Of famine labor etc</i></b>
<b>Clause 39</b>	No compensation shall be allowed for any delay caused in the work on account of acquisition of land or in the case of clearance works on account of any delay in according to sanction of estimates.	<b><i>Claim for compensation for delay in starting the work.</i></b>
<b>Clause 40</b>	No compensation shall be allowed for any delay in the executive of the work on account of water, standing borrow pits or compartments. The rates are inclusive for hard or cracked soil, excavation in mod, soil, water	<b><i>Claim for compensation for delay in executive of work.</i></b>

	standing in borrow pits and no claim for and extra rate shall be entertained, unless otherwise expressly specified.	
<b>Clause 41</b>	The contractor shall not enter upon or commence any portion of work except with the written authority and instruction of the Engineer-in-charge or of his subordinate in charge of the work. Failing such authority the contractor shall have no claim to ask for measurement of all payment for work.	<i>Entering upon to commencing any portion of work.</i>
<b>Clause 42</b>	<ul style="list-style-type: none"> <li>(i) No contractor shall employ any person who is under the age of 12 years.</li> <li>(ii) No contractor shall donkeys or other animals with breeching of string or this rope. The breeching must be least three inches wide and should be of tape (Newer)</li> <li>(iii) No animal suffering from sores, lameness or emaciation or which is immature shall be employed on the work.</li> <li>(iv) The Engineer-in-charge or his Agent is authorised to remove from the work any person or animal found working which does not satisfy these conditions and no responsibility shall be accepted by Company for any delay caused in the completion of the work by such removal.</li> <li>(v) The contractor shall pay fair and reasonable wages to the work employed by him, in the contractor undertaken by him. In the event of any dispute arising between the contractor and his workmen on the ground that the wages paid are not fair and reasonable, the dispute shall be referred without delay to the Chief Officer, who shall decide the same. The decision of the Managing Directoeshall be conclusive and binding on the contractor but such decision shall not in any way affect the conditions in the contract regarding the payment to be made by Company at the sanctioned tender rates.</li> <li>(vi) Contractor shall provided drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.</li> <li>(vii) Contractor to take precaution against accident which taken place on account of labour using loose garments while working near machinery.</li> </ul>	<i>Minimum age of person employed, the employment of donkeys and/or other animals and the payment of fair wages.</i>
<b>Clause 43</b>	Payment to contractors shall be made by cheque drawn on any treasury within the division convenient to them, provided the amount exceeds Rs. 10 Amounts not exceeding Rs. 10 will be paid in cash.	<i>Method of payment.</i>

<b>Clause 44</b>	Any contractor who does not accept these conditions shall not be allowed to tender for works.	<b>Acceptance of conditions compulsory before tendering for work.</b>
<b>Clause 45</b>	If Company declares a state of scarcity or famine to exist in any village situated within 10 miles of the work, the contractor shall employ upon such parts of the work, as are suitable for unskilled labour, any person certified to him by the Managing Director or be any person whom the Managing Director may have delegated this duty in writing to be in need of relief and shall be bound to pay to such person wages not below the minimum which Company may have fixed in this behalf. Any disputes which may arise in connection with the implementation of this clause shall be decided by the Managing Director whose decision shall be final binding on the contractor.	<b>Employment of scarcity labour.</b>
<b>Clause 46</b>	The price quoted by the contractor shall not in any case exceed the control price, if any, fixed by Govt. or reasonable price which it is permissible for him to charge a private purchaser for the same class and description the controlled price or price permissible under Hoarding and Profiteering Ordinance, 1948 as amended from time to time. If the price quoted exceeds the controlled price or the price permissible under Holding and profiteering Prevention Ordinance, the contractor will specifically mention this fact in his tender along with the reason for quoting such higher prices. The purchaser at his discretion will in such case exercise the right of revising the price at any stage so as to conform with the controlled price on the permissible under action that may be taken against the contractor.	
<b>Clause 47</b>	The tendered rates shall be inclusive of all taxes, rates and cesses & shall also be inclusive of the tax leviable in respect of works contract under the provision of the Maharashtra Sales Tax on transfer of property in good involved in the execution of works Contract Act 1985 (Maharashtra Act No. XLX of 1985).	<b>Maharashtra Act XLIX of 1985, Clause regarding Turnover tax vide P.W.D. circular No. CAT-1086/CR-330 Bldg-2 dated 10<sup>th</sup> June 1987</b>
<b>Clause 47 A</b>	The rates to be quoted by the contractor must be inclusive of sales tax No. extra payment on this account will be made to the contractor	
<b>Clause 48</b>	The case of materials that may remain surplus with the contractor from those issued for the work contractor for, the date of ascertainment of the materials being surplus will be taken as the date of sale for the	

	purpose of sales tax and the sales tax will be recovered on such sale.	
<b>Clause 49</b>	<p>The contractor shall employ the unskilled labour to be employed by him on the said work only from locally available labours and shall give preference to those persons enrolled under Maharashtra Company Employment and Self Employment Department's Scheme.</p> <p>Provided, however, that if the required unskilled labour are not available locally, the contractor shall in the first instance employ such number of persons as is available and thereafter may with previous permission, in writing of the Chief Officer-in-charge of the said work, obtain the rest of requirement of unskilled the labour from outside the above scheme</p>	<b>P.W.D. Company Resolution No. Cat/1097. PK 478/ Bldg 2dt. 23-3-98.</b>
<b>Clause 50</b>	<p>Wages to be paid to the skilled and unskilled labourers engaged by the contractor.</p> <p>The contractor shall pay the labourers skilled and unskilled according to the wages prescribed by the Minimum Wages Act of 1948 applicable to the area in which the work of the Contractor is in progress.</p> <p>The contractor shall comply with the provisions of the Apprentices Act 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Superintending Engineer, may in his discretion cancel the contract. The contractor shall also be liable, for any pecuniary liability arising on account of any violation by him of the provision of the Act. The contractor shall pay the labourers skilled and unskilled according to the wages prescribed by the Minimum Wages Act of applicable to the area in which the work of the lies.</p>	
<b>Clause 51</b>	<p>The contractor shall duly comply with all the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 (37 of 1970) and the Maharashtra Contract Labour (Regulation and Abolition) Rules, 1971 as amended from time to time and all other relevant statues and statutory provisions concerning payment of wages particulars to workmen employ by the contractor and working on the site of the work. In particulars the contractor shall pay wages to each worker employed by him on the site of the work in particular the rates prescribed under the Maharashtra Contract Labour (Regulation and Abolition) Rule, 1971. If the Contractor fails or neglects to pay wages at the said rates or makes short payment and the Company makes such payment of wages in full or part thereof less paid by the Contractor as the case may be, the amount so paid by the Company to such workers shall be deemed to be areas of land Revenue and the Company shall be entitled to recover the same as such</p>	<b>P.W.D. Dept. No. CAT 1284 (120) Building-2 Dated 14-8-85.</b>

	from Contractor or deduct same from the amount payable by the Company to the contractor hereunder or from any other amount/s payable to him by the Company.	
<b>Clause 52</b>	Where the workers are required to work near machine and are liable to accident they should not be allowed to wear cloth like dhoti, jhabba etc.	
<b>Clause 53</b>	The contractor shall engage apprentices such as brick layer, carpenter, wiremen, plumber, as well as black smith by recommended by the State Apprentice Ship Advisor Director of Technical Education, Dhobi Talaw, Mumbai-1 the construction work (on Company of Maharashtra, Education Department No. TSA/5170/T/56689, dated 7-7-72.)	
<b>Clause 54</b>	<p>(a) The anti-malaria and other health measure shall be as directed by the Joint Director (Malaria and Filaria) of Health Services Pune.</p> <p>(b) Contractor shall see that mosquitqenic conditions are not created so as to keep vector population to minimum level.</p> <p>(c) The contractor shall carry out prescribed anti-malaria in the area as per guidelines prescribed under National Malaria Eradication Programme and as directed by the Joint Director (Malaria and Filaria) of Health Service Pune.</p> <p>(d) In case of default in carrying out prescribed for draining away the sewerage water as well as water coming from the bathing and washing places and shall dispose of this water in such a way as not to cause any nuisance. He shall also keep the premises clean by employing sufficient number of sweeper.</p> <p>The contractor shall comply with rules, regulation, bye-laws and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charges which are leviable on him without any extra cost to Company.</p>	<b><i>Relation with Public Authorities.</i></b>

**Ichalkaranji Textile Development Cluster Ltd. Ichalkaranji.**

**Schedule A**

Schedule showing approximate material to be supplied by the company for Work Contracted to be executed at the rates for which they are to be charged for.

**Not Applicable**

Contractor

Hydraulic Engineer  
ITDC.

Managing Director

**Ichalkaranji Textile Development Cluster Ltd. Ichalkaranji.**

**Name of Work:**

**Providing & Laying Drainage Work from R.S.No.668 to Nalla at Ichalkaranji.**

**SUMMARY**

<b>Sr.No</b>	<b>Description of Sub-work</b>	<b>Cost put to Tender</b>
<b>1</b>	<b>Providing &amp; Laying Drainage Work from R.S.No.668 to Nalla at Ichalkaranji.</b>	<b>13.20 Lacs</b>

Schedule B

**Ichalkaranji Textile Development Cluster Ltd.**

**Name of work: Providing & Laying Drainage Work from R.S.No, 668 to Nalla at Ichalkaranji.**

Sr. No	Items	Quantity		Rate	Per	Amount
1	Excavation for foundation in earth ,soil of all types ,sand gravel and soft murum, including removing the excavated material upto a distance of 50m beyond the building area & stacking and spreading as directed, dewatering .preparing the foundation and necessary back filling ,ramming,watering including shoring and strutting etc. complete.(Lift Upto 1.5M) Spec. No;BdA 1 Page No . 259	1419.0 0	m <sup>3</sup>	78.75	m <sup>3</sup>	111746.25
2	Excavation for foundation in earth ,soil of all types ,sand gravel and soft murum, including removing the excavated material upto a distance of 50m beyond the building area & stacking and spreading as directed, dewatering .preparing the foundation and necessary back filling ,ramming,watering including shoring and strutting etc. complete.(Lift Upto 1.5 to 3.0 M) Spec. No;BdA 1 Page No . 259	1019.0 0	m <sup>3</sup>	84	m <sup>3</sup>	85596
3	Filling in plinth and floors with approved excavated materials in 15cm to 20cm layers including watering and compaction. complete. Spec. No. Bd. F.10 Page No. 262.	80.00	m <sup>3</sup>	33.6	m <sup>3</sup>	2688

4	<p>Providing and fixing in position mild steel bar reinforcement of various diameters for R.C.C pile caps, footing ,foundations slabs,beams ,columns, canopies staircase newels,chajjas, lintels,pardis ,coping. fins. arches etc.as per detiled desings, drawing and schedules inclunding cutting bending hooking the bar .binding with wires or tack welding and supporting as required complete. Spec. No. Bd. F 17 Page No. 364.</p>	0.60	m <sup>3</sup>	57814. 3	M.T.	34688.55
5	<p>Providing and fixing in position HYSD steel bar reinforcement of various diameters for R.C.C pile caps, footing ,foundations slabs,beams ,columns, canopies staircase newels,chajjas, lintels,pardis ,coping. fins. arches etc.as per detiled desings, drawing and schedules inclunding cutting bending hooking the bar .binding with wires or tack welding and supporting as required complete. Spec. No. Bd. F 17 Page No.306.</p>	1.25	M.T.	58385. 5	M.T.	72981.9125
6	<p>Providing and laying in situ cement concrete of trap/granite/ gneiss metal for R.C.C work in foundations.like raft ,strip, foundations. Grillage and footing of R.C.C columns and steel stanchions etc. including bailing out water ,formwork compaction, curing and roughening the surface if special finish is to be provided (Excluding reinforcement &amp;structural steel) complete. Spec. no. Bd.F3 page No.38 a) M-15</p>	30.00	M	2823.6 5	M	84709.5
7	<p>Providing second class Burnt Brick masonry with conventional/I.S . Type brick in cement mortar 1;6 in foundations and plintjh of inner walls including balling out water ,striking joint on exposed faces and watering , Complete Spec. No Bd.G.1 Page No 313</p>	78.00	m <sup>3</sup>	2165.5	m <sup>3</sup>	168909

<b>8</b>	Providing internal cement plaster 20mm. Thick in a single coats in cement mortar 1;3 without neeru finish ,to stone masonry surfaces ,in all position including scaffolding and curing complete Spec.No.Bd.I.3 page no .368	151.00	m <sup>3</sup>	119.52	m <sup>3</sup>	18047.52
<b>9</b>	Providing flush grooved pointing with cement mortar 1;3 for brick work including scaffolding and curing complete Spec. No.Bd. L.15 Page No. 372	242.00	m <sup>3</sup>	38.75	m <sup>3</sup>	9377.5
<b>10</b>	Providing and laying cement concrete pipe of I.S. NP-2 class of required diameter in proper line, level & slope including providing ,fixing collars in cement mortar 1;2,curing complete Spec. No.;CD.7 page No 162 (b)For 900 mm ,Dia.	340.00	R.M	2044.9 5	R.M	695283
<b>11</b>	Providing and laying cement concrete pipe of I.S. NP-3 class of required diameter in proper line, level & slope including providing ,fixing collars in cement mortar 1;2,curing complete Spec. No.;CD.7 page No 162 (b)For 600 mm ,Dia.	17.50	R.M	1828.9 5	R.M	32006.625
<b>12</b>	Providing and Fixing M.S. grill Door 24kg /sqm. Of various size as per detailed drawings without hot dip coating iron fixtures and fastenings and 3coats of oil painting etc. Spec.; As directed by Engineer -in-charge.	3.00	M <sup>2</sup>	1457.1	M <sup>2</sup>	4371.3
						<b>1320405.16</b>
				<b>Say</b>		<b>1320405.00</b>

Managing Director  
Ichalkaranji Textile Development Cluster.

# DETAIL SPECIFICATIONS

## Ichalkaranji Textile Development Cluster Ltd. Ichalkaranji.

### **Providing RCC Np3 pipe socket and spigotted suitable for rubber ring joint**

The required diameter of RCC NP3 class socketed and spigotted pipes rubber ring shall be supplied and produced by contractor and carted to work site at his own cost. The pipe shall conform to specification as per IS 458-1971.

The pipes shall be stacked along the trench before lowering, trenching shall be so that no foreign materials find access in to the pipes. The pipes shall then be lowered in to the trenches very carefully by suitable means as per necessity vize manual, labour , ropes, gantry, shear tongs, chain pulley blocks etc or any other specials arrangements as directed suiting to the site conditions cost of this is included in the tender

### **S.W. 2 B.3**

### **EXCAVATION IN SOFT MATERIALS**

#### **1) General :-**

The whole work should be carried out in good workmanship manner in accordance with the specifications stipulated in the tender, standard practice of environmental Engineering Organisation/clients or as directed by the Engineer in charge or authorised representatives. The trench shall be so dug that the pipe may be laid to required alignment and grade at required depth. When the pipe line is under road way, a minimum cover of 1.0 m is recomended for adoption, but it may be modified to suite the local conditions. The trench shall be excavated only in the advance of pipe laying as directed by the Engineer in Charge. The trenches shall be so braced & drained that the workman may work therein efficiently. the discharge of the trench shall be safely disposed by dewatering pumps and conveyed either to drainage channels or to natural drains.

#### **2)THE LINEOUT:-**

The correct line out shall be marked on the approved site in consultation with the Engineer in charge or his representatives. Before the excavation work is started, the Engineer-in- charge or his representative shall take the ground levels at the site, jointly with the contractor and enter in the field book duly signed by him and contractor. for ensuring correct levels necessary temporary bench mark pillers as directed shall be erected by the contractor at his cost without claiming any extra cost.

#### **3) SITE CLEARANCE:-**

The contractor shall make himself familiar with the local municipal rules and regulations and/or those governing the land clearance industry, special requirement of forest areas wherever application and work shall be carrie out in strict accordance therewith. The site for the work shall be clear of all rubbish, shrubs, trees, crops, heaps etc without claiming any extra cost.

#### **4) TRENCHING BY MACHINE OR BY HAND:-**

Hand methods for excavation shall be employed in locations shown on the drawings given by the Engineer-in-charge. In other place the excavation may be done by hand or by machine.

#### **5) WIDTH OF TRENCH**

The width of trench at bottom between faces of excavation shall be such as to provide not less than 300 mm clearance on either side of the pipe except where rock excavation is involved. Trenches shall be of such extra widths wherever required will permit the convenient placing of timber supports, strutting and planking and handling of specials.

#### **PROVISION FOR JOINTS:-**

Additional width shall be provided at positions of sockets and flanges for jointing to be made properly. Depths of pits at such places shall also be sufficient to permit finishing of joints.

#### **PIPE CLEARANCE IN ROCKS:-**

Large rocks, boulders, and large stones shall be removed to provide a clearance of at least 150 mm below and on each side of pipes, valves and fittings for pipes 600 mm in diameter or less.

5.2, 1) The specified minimum clearances are the minimum clearances which will be permitted between any part of the pipe or appurtenance being laid and any part, projection or point of such rock, boulders or stone.

#### **LIMITS OF EXCAVATION RELATIVE TO GRADIENTS:-**

Except where special foundations are to be provided for the reasons given in 5.6, the trenches shall be excavated in accordance with one of the following alternatives as may be considered appropriate by the Authority.

- a) The trench shall be excavated in the exact gradient specified so that no making of the sub-grade by backing of the sub-grade by backfilling is required and the pipe rests on solid and undisturbed ground when laid.
- b) When the bottom of the trench at the specified gradient is found to be unstable or to include ashes and cinders, all types of rubbish, vegetables or other organic material, or large pieces or fragments of inorganic material, they shall be removed to the satisfaction of the authority.

#### **TRIMMING OF TRENCH BOTTOMS:-**

Where rock and large stone or boulders are encountered, the trench shall be trimmed to a depth of at least 150 mm. Below the level at which the bottom of the barrel of the pipe is to be laid and filled to like depth with granular material to pass through a sieve of 12.5 mm aperture size (See IS 2405 (Part 2)-1963) and well rammed to form a fair and clean bed pipes.

#### **FINISH OF SURFACES:-**

In all cases there shall be a uniform and continuous bearing and support for the pipe at every point between the sockets or flanges except that it will be permissible to disturb or otherwise damage the finished surface over a maximum length of 450 mm near the middle of each pipe length by the withdrawal of pipe slings or other lifting tackle. The finished sub-grade shall be prepared accurately by means of hand tools. The sub grade beneath the centerline of the pipe shall be finished to within one cm of a straight line between the pipe joints or batten boards.

**SPECIAL FOUNDATION IN POOR SOIL:-**

Where the bottom of the trench and sub-grade is found to consist of material which is unstable to such a degree that, in the opinion of the authority, it can not be removed and replaced with an approved material thoroughly compacted in place to support the pipe properly, a suitable foundation for the pipe, consisting of pilling, timbers or other materials. In accordance with plans prepared by the authority shall be constructed.

**PREVIOUS EXCAVATION :-**

Where the trench passes over a sewer or other previous excavation, the trench bottom shall be sufficiently compacted to provide support equal to that of the native soil or conform to other regulatory requirements in a manner that will prevent damage to the existing installation. The maximum permissible width of the excavation shall be specified for the diameter to be laid in the trench as per table given below.

Sr. No. of pipe	Internal Dia. of trench	Width of excavation
1.	600mm	1.20m

The maximum permissible width as per table above or the actual width of excavation whichever less shall only be recorded and paid under the respective item of excavation. No extra width or depth necessary for collar, sockets, valve or other specials shall be recorded and paid separately, similarly extra width required for assembly of tropic deric, pulley block etc. shall not be paid.

**6) CLASSIFICATION OF SOFT MATERIALS.**

Soft material shall include all sorts of soils, made up soils, earth, sift,sand, shingle, gravel, inundated clay, soft/average and hard murum kankar, isolated boulders upto 0.1 M<sup>3</sup> which do not need blasting, all kinds of disintegrated rock, shale, and any other materials, which can best removed with a shoal, after loosening with pick and/or bar. This shall also include excavation in macadam road.

**7) EXCAVATION WORK:-**

The excavation shall be taken down to such depth and carried out to sections as per the approved profile of excavation shown in the drawing or as directed. Extra excavation if carried out over and above the approved profile for convenience of contractor's labour or machinery etc. shall not be paid for. The bottom of foundation shall be properly levelled or sloped as directed before further work of concrete or masonry is started and shall be allowed for bringing the foundation must be passed by the Engineer-in-charge.

**8) DEWATERING**

If pumping or draining of water is required to be done at any time during excavation, the contractor shall arrange for such draining by excavating channels, pumping or otherwise and shall maintain such arrangements to the satisfaction of Engineer-in-charge for such a period as may be required. The discharge of the dewatering pumps shall be conveyed to drains and shall not be allowed to be spread in the vicinity of the work site. All cost of such arrangements including pumping shall be admissible for such operation unless specifically provided in separate item in the tender.

**9) SHORING**

Open cutting shall be suitably shored, sheeted, and braced if required by the Engineer in charge or by site conditions, or to meet local laws, for protecting life, property of the work. Adequate shoring and strutting shall be provided by the contractor at his own cost, unless specifically provided in the tender separately. The shoring materials and work shall be to the entire satisfaction of the Engineer in charge.

**10) Stacking & Disposal of Excavated Materials.**

The excavated materials from the foundation of whatever kind shall be stacked as directed not nearer than 1.5 M from the outer edge of the excavation pit, or disposed off as directed within a lead prescribed in the item.

**11) Excess Excavation.**

Excavation carried out in excess width shall be at contractor's risk and cost. Excavation carried out in excess of required depths shall have to be made good to required level by laying concrete of mix M-100 or by masonry as may be directed without claiming any extra cost. If the excavation pits get filled up or silted up for any reasons, the contractor shall re-excavate them, as directed without claiming extra cost. Nothing extra shall be paid for removal of any structures or for removal of stumps or roots of trees, met during excavation & for filling the holes or holders to removing roots etc. or existing originally which shall be filled up by earth and well rammed and levelled off as directed.

**12) FOR PIPE TRENCHES:-**

I) The specifications stipulated as above are also applicable for this work unless found irrelevant. In addition the following specifications shall be applicable.

ii) Before the excavation is started, the working drawing should be obtained from the Engineer in Charge and the alignment of pipe line should be fixed and got approved by the contractor.

III) The site rails shall be fixed at every change of direction, change of gradient, and at 30 M apart on straight alignment. The depth of excavation should be checked by means of boning rod. All labour and materials required for providing and rising the sight rails and boning rod shall be supplied by the contractor at his own cost.

IV) The work of excavation shall be as per standard specifications and practice or as directed by the Engineer in Charge and shall be measured from G.L. a) spot from chainage to chainage.

V) The total depth of excavation shall be arrived at by measuring the depth from G.L to top of diameter of pipe and 0.20 M thick murrum bedding is added. The extra depth of excavation shall be made good by providing additional murrum bedding at contractor's cost.

**VI) ADDITIONAL REQUIREMENTS:-**

If the contractor fails or makes delay to give the hydraulic test of the pipe laid in any of the section, without any genuine reason, he shall be responsible to get any part of the length of trenches refilled in such case i.e. before testing for safety of pedestrians and/or vehicle traffic as found necessary by the Engineer in Charge, without any extra cost. If found necessary as directed by the Engineer in Charge, the contractor shall have to excavate the refilled trenches, during hydraulic test without any extra cost.

In case of excavation across a road, permission of road authorities shall have to be obtained. All road crossed in trenches shall be excavated for half of the portion, other half shall be excavated only after back filling of the laid pipe line and making it suitable for traffic. The Contractor shall provide diversion, when pipe line is to be laid along the road as required shall maintain the diversion or any part of it, if damaged without any extra cost. At all road crossing, the pipe shall be laid well below the crest of road.

The contractor shall break the road surface by excavation or chiseling to the exact width and length as shown on the drawing or as directed by the Engineer-in-Charge. Unless specifically mentioned or separate provision made, the rate of excavation shall include the breaking of road surface of any type (makadam, tar/asphalt road, cement concrete road, stone paving etc.) The excavated stuff shall be deposited in layers to avoid mixing with other kind of materials at non objectionable place as directed by the Engineer-in-Charge.

#### **VII) PROTECTION:-**

The trenches shall be strongly fenced and red light signals shall be kept from dusk to dawn and watchman posted on site to prevent accidents. Sufficient care and protective measures shall be taken to see that excavation shall not affect or damage the adjoining structure. The contractor shall be entirely responsible for any injury to life and damage to the properties etc. Necessary protection work such as guide ropes, crossing places, barricades, caution boards, etc shall be provided by the contractor at his own cost.

#### **VIII) MEASUREMENT AND PAYMENTS:-**

The payment of various class of excavation shall be made at the unit rate per Cu. Mt for the quantity actually excavated and accepted by the Engineer-in Charge as per specifications above. Extra quantity above the sanctioned dimensions shall not be paid.

The rate for the item of the excavation shall include (unless and otherwise mentioned in the item)

- a) Cleaning of site.
- b) Setting out work including all materials and labours.
- c) Providing and subsequently removing shoring and strutting or cutting slopes etc.
- d) Excavation and removal, sorting and stacking of all excavated stuff as directed.
- e) Necessary protection work including labour, material equipment etc. to ensure safety and protection against risk or accidents.
- f) Providing facilities for inspection and measurement at any time by the concerned board officials.
- g) Compensation for injury to life and damage to property if caused during progress of work.
- h) Dewatering of excavated pit/trenches during the progress of work.
- i) Restoring of water supply connections, sewer connections, telephone lines or any underground structures if damaged by the contractor without extra payment.
- j) Clearing the site on completion of work as directed by the Engineer -in Charge.
- k) The excavation of trench for length of valve chamber (out to out).

**S.W.2.B.3.1****EXCAVATION IN HARD MATERIALS:-**

By Blasting & By Chiseling.

The specifications stipulated in item No. 1 above are also applicable for work unless found irrelevant.

**2) CLASSIFICATION OF HARD MATERIALS.**

Hard materials shall include all types of rock, such as soft rock including conglomerate, old masonry which do not require blasting and which can be removed with pickaxe, crow bars, wedges and hammer with some difficulty. Also hard rock occurring in masses which can be removed by blasting, but which owing to the proximity of structures, possibility of shattering the rock below or for any other reason required to be cut by means of cold chisels or wedges or line drilling. This also includes boulders of size larger than 0.1 Cu. M if broken down by whatever measures for removal in small pieces, this include excavation in road surface or tar road, concrete road, stone paving etc. This classification of the various strata met with during excavation will be decided by Engineer in Charge and his decision shall be final and binding on the Contractor.

The hard rock referred to above would include Basalt, Trap Granite, quartzite, gneiss laterite and other types.

**3) MODE OF EXCAVATION:-**

The excavation will be done by either by:

- 1) Blasting or controlled blasting or,
- 2) By chiselling.

In general blasting will be allowed for speedy execution. However, where blasting will not be possible, the work will have to be done by chiselling and like methods. Bottom 0.15 M layer of excavation shall be done far as possible by chiselling for levelling foundation.

Blasting shall be allowed under permit from District Magistrate if all necessary safety measures are taken. However, it shall be totally the contractor's responsibility to obtain permission from the District Magistrate for use of explosives etc. pertaining to the acquisition, transport, storage, handling, and use of explosives shall be rigidly followed. Contractor will be responsible for damages to public property or accidents and bear the cost of damages and compensation.

**4) Blasting:**

Blasting for excavation shall be permitted only after securing the approval of the Engineer-in-Charge and only when proper precautions are taken for the protection of persons or property.

The hours of blasting shall be fixed by the Engineer-in-charge.

The procedure of blasting shall conform to the requirements of the local controlling authority.

**5) Braced and Sheeted Trenches:-**

Open -cut trenches shall be sheeted and braced as required by any governing state laws and municipal regulations and may be necessary to protect life, property or the work. When close sheeting is required , it shall be so driven as to prevent adjacent soil from entering the trench either below or through such sheeting.

The Engineer in Charge shall have the right to order the sheeting to be driven to the full depth of the trench or to such additional depths as may be required for the protection of the work. Where the soil in the lower limits of a trench has the necessary stability, the Authority at discretion, may permit stopping of the driving of sheeting at some designated excavation above the trench bottom. Sheetting and bracing which have been ordered to be left in place should be removed for a distance of 900 mm below the established street level or existing surface of the street, whichever is lower. Trench bracing, except that which should be left in place, may be removed when the back filling has reached the respective levels of such bracing. Sheetting, except that which except that which should be left in place, may be removed upto the back filling has been completed or has been brought up to such an elevation as tp permit its safe removal. Sheetting and bracing may be removed before filling the trench, but only in such manner as will ensure the adiquate protection of the completed work and adjascent stuctures

**6) CARE OF SURFACE MATERIAL FOR RE-USE:**

All surface materials which in the opinion of the Engineer in Charge are suitable for re-use in restoring the surface shall be kept separate from the general excavation meterial as directed by the Authority.

**7) Stacking Excavated Material:-**

All excavated material shall be stacked in such a manner that it will not endanger the wotk or workman and it will avoid obstructing footpaths and roads driveways. Hydrants under pressure surfaces boxes, fire or other utility contrles shall be left unobstructed and accessible untill the work is completed. Gutters shall be kept clear or other satisfactory provisions made for street drainage, and natural water- courses shall not be obstructed.

**8) Barricades, Gaurds and Safety Provisiopns:-**

To protect persons from injury and to avoid damage to property, adequate barricades constructin signs, torches, red lanterns and guards as required shall be placed and maintained during the process of the costruction work and untill it is safe for traffic to use the roadways. All material piles, equipement and pipe which may serve as obstructions to traffic shall be enclosed by fences or barricades and shall be protected by proper lights when the visibility is poor. The rules and regulations of the municipal council, locla authorities, respective safety provisions shall be observed.

**9)MAINTENANCE OF TRAFFIC AND CLOSING OF STREETS:-**

The work shall be carried in such a manner which will cause the least interruption to traffic, and the road street may be closed in such a manner that it causes that it causes least intrruption to the traffic. Where it is necessary for traffic to cross open trenches , suitable bridges shall be provided. Suitable signs indicating that a street is closed shall be place and necessary detour signs for the proper maintenance of traffic shall be provided.

**10) STRUCTURE PROTECTION:-**

Temporary support, adequate protection and maintenance of all underground and surface structures, drains sewers and other obstructions encountered in the progress of the work shall be furnished under the direction of Engineer in Charge. The structure which may have been disturbed shall be restored upon completion of the work.

**11) PROTECTION OF PROPERTY AND SURFACE STRUCTURES:-**

Trees shrubbery fences, poles and all other property and surface structures shall be protected unless their removal is shown on the drawings or authorised by the Engineer in Charge. When it is necessary to cut roots and trees branches, such cutting shall be done under the supervision and direction of the authority.

**12)INTERRPTION OF SERVICE:-**

No valve or other control of the existing services shall be operated without the permission of the Engineer in charge.

**13)MODE OF MEASUREMENT & PAYMENT:-**

same as per specifications in SP-1 above.

**S.W.2.B.4**

**MURUM BEDDING/ FILLING:-**

The selcted excavated stuff or murum shall be got approved from the Engineer in Cahrge before using the same for providing bedding on trench bed. The filling of the selected excavated stuff or murum shall be done in 150 mm thick layers as specified in item, and it should be well watered and cosolidated. Big clods shall be broken into small pieces and tree roots, weeds, and big stones and other objectionable material liable to decay shall not be used in the work. The quantity of the shall be paid on the cubical measurements of the completed bedding after proper consolidation and watering.

**MODE OF MEASUREMENT & PAYMENT.**

The rate shall be per cum of refilled volume. The measurement shall be for volume filled up, it includes loading corting unloading bracking clods. Watering & consolidation to the required thickness.

**S.W.2.B.6**

**LOWERING, LAYING & JOINTING C.I. PIPES.**

**1)DELIVERY OF PIPES:**

The pipes shall be supplied to the contractor at the stores mentioned in schedule 'A' of the tender. The contractor shall examine them for cracks etc. there only. The pipes shall be carted to the side of trenches and kept in proper position for laying, near the trenches. Where such distribution is not possible, the pipes shall be cut by contracotr neatly and chamered property.

**2)LAYING OF PIPES.**

**UNLOADING OF PIPES:-**

While unloading, pipes shall not be thrown down from the trucks on hard roads. Unloading them on timber skids without a stoyding rope and thus allowing the pipes to bump hard against one another should not be allowed. In order to avoid damage to the pipes and specially to the spigot end, pipe should not be dragged along concrete and similar pavements with hard surface.

**DETECTION OF CRACKS IN PIPES:-**

The pipe and fittings shall be inspected for defects and be rung with a light hammer preferably while suspended to defects cracks. Smearing the outside with chalk dust helps the location of cracks. If doubt persists further confirmation may be obtained by pouring a little kerosene on the inside of the pipe at the suspected spot, if a crack is present the kerosene seeps through and shows on the outer surface. If a pipe is mishandled either accidentally or due to carelessness during unloading or lowering operation it should be thoroughly inspected before laying and shall be rejected if found unsuitable by the Engineer-in-charge.

**3) LOWERING OF PIPES AND FITTING:-**

Proper implements, tools and facilities satisfactory to the Engineer-in-charge shall be provided and used for the safe and convenient prosecution of the work. All pipes, fittings, valves and hydrants shall be carefully lowered into the trench, piece by piece by means of a derrick, ropes or other suitable tools or equipment, in such a manner as to prevent damages to pipe materials and protective coatings and linings, under no circumstances shall pipes materials be dropped or dumped into the trench. Pipes over 300 mm diameter shall be handled and lowered into trenches with the help of chain pulley blocks. Tripod supports used for these purposes shall be regularly checked to prevent all risks of accidents.

**4) CLEANING PIPES AND FITTING:-**

All lumps, blisters and excess coating material shall be removed from the socket and spigot end of the pipe and the outside of the spigot and the inside of the socket shall be wirebrushed and wiped clean and free from oil and grease before the pipe is laid.

**5) LAYING PIPE:**

Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. If the pipe laying team cannot put the pipe into the trench and in place without getting earth into it, the authority may require that before lowering the pipe into the trench a heavy tightly woven canvas bag of suitable size shall be placed over each end and left there until the connection is to be made to the adjacent pipe during laying operations no debris, tools, clothing or other material shall be placed in the pipe.

**CARE TO BE TAKEN FOR MATERIAL:-**

All the pipes specials / and brushed clear off rust and paint at both spigot and socketed ends

**CARE FOR LAYING PIPE LINE:-**

Before the pipe lines and specials are lowered and laid in the trenches the contractor shall see that the bedding is plain or the surface is brought to uniform grade levelled with the help of cross site rails and boning staff and shall approved in advance for three days by sub divisional officer / Engineer.

**SITE RAILS:-**

The contractors shall provide and fix and maintain cross site rails and boning staff wherever required untill the time of compensation with any extra claim for cost etc. and which shall be considered inclusive of rates for excavation and lowering and laying.

**BENCH MARKS:-**

The temporary bench mark shall be provided by the contractor if called upon at minimum distance of every 150 mts. Without any claim for the extra cost. The bench mark shall be either on stonemasonry or mass concrete not less than 0.03 Cu.m.

After placing a length of pipe in the trench, spigot end shall be entered in the socket and the pipe forced home and aligned to gradient. The pipe line shall be secured in place with approved back fill material tamped on either except at the socket. Pipe and fittings which do not allow a sufficient and uniform space for joints shall be removed and replaced with pipe and fitting of proper dimensions to ensure such uniform space. Precautions shall be taken to prevent dirt from entering the joint space.

At times when pipe laying is not in progress, the open end of pipe be closed by water tight plug or other means approved by Engineer in charge. Joints of pipes in the trench which cannot be poured shall be caulked with jointing materials to make them as watertight as possible.

**6) NUMBER OF PIPES LAID BEFORE JOINTING:-**

Whenever the jointing material specified is cement six or more lengths of pipe shall be laid in place of each joint before such a joint is finished.

**8) DIRECTION OF LAYING OF SOCKET END:-**

On level ground, the socket end should face the upstream, when the line runs uphill the socket ends should face the upgrade.

**9) PERMISSIBLE DEFLECTION AT SOCKET AND SPIGOT END.**

Where necessary to deflect the pipe from a straight line, either in vertical or horizontal plane to avoid obstructions or where long radius curves are permitted, deflection at joints shall not exceed the following,

- a) lead joints 2.5°
- b) rubber joints
  - i) for nominal bore 80 to 300 mm 5°
  - ii) for nominal bore 350 to 400mm 4°
  - iii) for nominal bore 450 to 750 mm 3°

Where the pipes run beneath tram or railway tracks or are located in area where similar vibratory effects are likely, care should be taken to avoid any direct transmission of the vibrations to the pipes itself. Ample cover with soft well-packed filling is essential.

**10) CONDITION UNSUITABLE FOR LAYING OF PIPE:**

No pipe shall be laid in or when, in the opinion of the Engineer in charge trench conditions are unsuitable.

**11) CASING PIPES:-**

When the pipes run beneath the heavy loads suitable size of contract casing. Pipes may be provided to protect the carrier pipe.

**12) CLEARANCE:-**

When crossing existing pipelines or other structures alignment and grade shall be adjusted as necessary with the approval of the Engineer in Charge to provide clearance as required by state or local regulations or as deemed necessary by Engineer in Charge to prevent future damage or contamination of either structure.

**13) JOINTING OF PIPES:-**

**JOINTING OF SOCKETS AND SPIGOT PIPES:**

Jointing may be done with any one of the following materials.

a) Tyton joints (with tyton rubber Gasket.)

(1) All the materials mentioned in 3.1, 1 shall be handled with care in order to prevent contamination and shall be dry when put into place in the joint. The material used shall be free of oil tar or greasy substances. In cement joints, jarring materials may be obtained if so specified.

Note: Spun yarn used as jointing material shall be sterilized quality. It shall have been exposed to vapours of 40 % formaldehyde in air tight chamber for three hours before using it in water main.

**14) HYDROSTATIC TESTS:-**

**Types in tests:-**

After a new pipe has been laid, jointed and backfilled in accordance with 4.1.3 it (or any valved section thereof ) shall be subjected to the following two tests:-

a) Pressure test at a pressure as specified in 4.2 and

b) Leakage test at a pressure to be specified by the authority for duration of two hours.

**PROCEDURE FOR PRESSURE TEST:-**

**Pressure test:-**

The field test pressure to be imposed should be not less than the greatest of the following:

a) One and a half times the maximum sustained operating pressure.

b) One and half times of the Maximum pipeline static pressure, and

c) Sum of the maximum pressure and surge pressure subject to the works test pressure.

Where the field test pressure is less than two thirds the works test pressure, the period of test should be increased at least 24 hours.

The test pressure shall be gradually raised at the rate of nearly 0.1N/mm<sup>2</sup> per minute

If the pressure measurements are not made at the lowest point of the section, and allowance should be made for static head between the lowest point, and the point of measurement to ensure, that the maximum pressure occurs, the quantity of water added in order to re-establish the test pressure should be carefully measured. This should not exceed 0.1 litre per mm of pipe dia per Km of pipeline per day for each 30 meters head of the pressure applied.

**PRESSURIZATION:-**

Each valved section of pipe shall be filled with water slowly and the specified test pressure, based on the elevation of lowest point of linear section under test and corrected to the elevation of the test gauge, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the authority.

**EXAMINATION UNDER PRESSURE:-**

All exposed pipes, fittings, valves hydrants and joints should be carefully examined during the open-trench test. When the joints are made with lead, all such joints, showing visible leaks shall be recaulked until tight. When the joints are made with cement and show a seepage or sight leakage, such joints shall be cut out and replaced as directed by the authority. Any cracked or defective pipes, fittings, valves or hydrants discovered in consequence of this pressure test shall be removed and replaced by sound material and the test shall be repeated until satisfactory to the authority.

**PROCEDURE FOR LEAKAGE TEST:-**

A leakage test shall be conducted concurrently with pressure test, leakage is defined as the quantity of water to be supplied in to the newly laid pipes, or any valved section thereof within 0.035N/mm<sup>2</sup> of the specified leakage test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.

No pipe installation shall be accepted until the leakage is less than the number of cm<sup>3</sup>/hr as determined by the formula

$$q_1 = ND P/3$$

where

q<sub>1</sub> = the allowable leakage in cm<sup>3</sup>/hr.

N=number of joints in the length of the pipeline,

D= Diameter in mm, and

p= the average test pressure during the leakage test in Kg/Cm<sup>2</sup>.

**VARIATION FROM PERMISSIBLE LEAKING:-**

Where any test of pipe laid indicates leakages greater than that specified in 4.3.2 the defective joints shall be repaired until the leakage is within the specified allowance.

The water required for testing shall have to be provided by the contractor at his cost. Assistance for obtaining water from local authorities or other possible sources as per site locations shall be given by the MWSS Board, However, MWSS Board shall not be responsible for the delays on this account.

Until satisfactory hydraulic test of pipes, 20 % payment will be withheld for all items. Viz. excavation, lowering, laying, jointing, backfilling etc.

**PREREQUISITE OF TEST:-**

Where any section of a main is provided with concrete thrust blocks or anchorages in accordance the pressure test shall not be made until at least five days have lapsed after the concrete was cast. If rapid hardening cement has been used in these blocks or anchorages, the test shall not be made until at least two days have lapsed.

**Back-filling:-**

Before testing the trench can be partially back filled, if required by site conditions, except at the joints in accordance with IRM-8L Such back-fillings shall be done after obtaining the permission from the Authority concerned.

**TIME FOR TESTING OF LEAD JOINTED PIPE:-**

If the requirements of 4.4,1 have been complied with a lead jointed pipe may be subjected to hydrostatic pressure, inspected and tested for leakage at any convenient time after the trench has been back-filled in accordance with 4.4,2.

**TIME FOR TESTING OF CEMENT JOINTED PIPE:-**

after the requirement of 4.4, 1 have been complied with and the trench back-filled in accordance with 4.4,2 the main shall be filled with water in the manner specified in IRM-12L 2(3) and 4.2, 1 and shall not be subjected to hydrostatic pressure inspected and tested for leakage till at least 36 hours have lapsed thereafter. The pipe shall remain full of water until all test have been made. In case where there are no valves, or valved sections are too long, the testing may be permitted to be carried out in suitable segments with the permission of the engineer in charge.

**MODE OF MEASUREMENTS FOR PIPE LAYING:-**

The payment of the item shall be admissible on the basis of actually laid lengths (in R M ) at site including length occupied by all pipes of specials and incidental small pipe pieces other types(e.g. small C.I. Pipes/ MS pipes & specials.)

**S.W.2.B.6.**

**REFILLING THE PLINTH FLOOR/ TRENCHES:-**

**General :**

Refilling shall be done in the systematic manner by the contractor. Before refilling starts, the contractor shall get the trenches checked by the Engineer-in- Charge and obtain his permission. All space between foundation masonry, concrete, pipeline and the side of excavation and/or bottom foundation shall be refilled to the original surface or upto plinth level with earth or selected materials in layers of 15 cm. but not more than 20 cm. well watered and rammed.