

PRESS NOTICE
PUBLIC HEALTH ENGINEERING DEPARTMENT, HARYANA
PUBLIC HEALTH ENGINEERING DIVISION, JIND
NOTICE INVITING TENDER

No. 12080

Dated: 25/06/2013

Online bids are hereby invited on behalf of Governor of Haryana for the following work as mentioned below:-

1. Providing and installing 1 No. deep tubewell in village Morkhi Tehsil Safidon Distt. Jind."Providing & installing 1 No. T/well of size 10"X8" dia upto 244 meters depth below ground level by Reverse Rotary Rig according to ISI specification No.2800-1991 (Part-I) and IS 2800-1979 (Part-II) as amended up to date, Supplying & fixing of 1 No. Submersible pumping set on tubewell and electric control panel, C.I. Specials for connecting of Tubewell Construction of 1 No. Pump Chamber, Laying of rising main and all other works contingent thereto."

Sr. No. of work	Estimated Cost (Rs. In Lacs)	Earnest Money (Rs.)	Tender Document Fee (Rs.)	Time Limit (Months)	During date & time	
					Downloading of Tender Document & Payment of Tender Document fees	Online Bid preparation and hash submission
1.	12.85	25700	1000	06	From date 27/06/13 & time 20.01 Hrs. to date 12/07/13 & time 17.00 Hrs.	From date 27/06/13 & time 20.01 Hrs. to date 12/07/13 & time 17.00 Hrs.

- Possession of Digital Signature Certificate (DSC) and registration of the contractors on the portal i.e. <http://haryanaphed.etenders.in> is a prerequisite for e-tendering. Kindly contact o/o Nextenders (India) Pvt. Ltd., at Basement, HSRDC Building, Bay No.13-14, Sec-2, Panchkula. Contact Numbers 09815034028 / 09592259876
- For any other queries, please contact Executive Engineer, PHE Div. Jind Tel. (O) 01681-246354, (M) 946603272 Address: Executive Engineer, Public Health Engineering Division, Behind Mini Sectt., Jind.

For further details and e-tendering schedule, visit website <http://haryanaphed.etenders.in>

For & on behalf of Governor Haryana

Executive Engineer
Public Health Engineering Division,
Jind.

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Tender documents can be downloaded online from the Portal: <http://haryanaphed.etenders.in> by the Firms / Individual registered on the Portal.

1. As the Bids are to be submitted online and are required to be encrypted and digitally signed, the Bidders are advised to obtain Digital Signature Certificate (DSC) at the earliest. For obtaining Digital Certificate, the Bidders should follow point No. 3 under "Annexure-A - Conditions of e-tendering".

Key Dates

Sr. No.	PHED Stage	Contractor Stage	Start Date and Time	Expiry Date and Time
1	Release of Tender document	-	26-06-13 10.00 hrs.	27-06-13 20.00 hrs.
2	-	Downloading of Tender Document & Payment of Tender Document fees	27-06-13 20.01 hrs.	12-07-13 17.00 hrs.
3	-	Online Bid Preparation, Hash Submission & Earnest Money Deposit	27-06-13 20.01 hrs.	12-07-13 17.00 hrs.
4	Technical & Financial Lock	-	12-07-13 17.01 hrs.	15-07-13 17.00 hrs.
5	-	Re-encryption of Online Bids	15-07-13 17.01 hrs.	16-07-13 17.00 hrs.
6	-	Manual Submission of additional documents	28-06-13 09.00 hrs.	16-07-13 17.00 hrs.
7	Open EMD & /PQ bid	-	16-07-13 17.01 hrs.	21-07-13 17.00 hrs.
8	Eligibility criteria evaluation	-	16-07-13 17.01 hrs.	21-07-13 17.00 hrs.
9	Open Financial / Price-Bid	-	16-07-13 17.01 hrs.	21-07-13 17.00 hrs.

The Bidders can download the tender documents from the Portal: <http://haryanaphed.etenders.in>. Tender Documents Fees has to be paid online through payment gateway during the “Downloading of Tender Document & Payment of Tender Document fees” stage and **Earnest Money Deposit has to be deposited through RTGS (Real Time Gross Settlement) / NEFT (National Electronic Fund Transfer) only which must be deposited in the account of Executive Engineer, Public Health Engineering Division, Jind in Axis Bank account No. 909010044499568, IFSC CODE UTIB0000725 upto 12/07/13 upto 17.00 Hrs. otherwise tenders will be rejected if the payment is deposited in above mentioned account after the time & date given above.**

Following particulars are to be given online at the e-tendering web portal of the department.

- a) Name of a/c holder from whose a/c payment for earnest money has been made by the agency
- b) A/C No.
- c) Name of the Bank
- d) Transaction ID
- e) Date & time of transaction
- f) Amount of Payment

Willing Contractors shall have to pay the Tender Document Fees through payment gateway during the “Downloading of Tender Document & Payment of Tender Document fees” stage. However, the details of the EMD are required to be filled at the time of Bid Preparation and Hash Submission stage, the Bidders are required to keep the EMD details ready beforehand.

2. The tender shall be submitted by the bidder in the following two separate envelopes online:

1. Earnest Money and all the documents in support of eligibility criteria - Envelope ‘ED’
2. Price Bid - Envelope ‘C I’

Note: Online Bidders shall submit the EMD through RTGS/ NEFT. EMD will not be accepted in parts i.e. whole amount of EMD should be deposited in one instance. Documents in support of eligibility criteria shall also be submitted in Envelope ‘ED’. Price Bids are to be submitted mandatory online and shall not be accepted in any physical form.

Reference of the EMD is to be mentioned online.

In the first instance, the Envelop – ‘ED’ of all the Bidders containing the statement of Earnest Money and documents supporting eligibility criteria shall be opened online as well as physically. If the Earnest Money and eligibility of bidder is found proper, the Envelop ‘C1’ containing financial bids shall be opened online in the presence of such bidders who either themselves or through their representatives choose to be present. The financial bid shall be opened only if the bidders meet the eligibility criteria as per the Bid document.

The bidder will submit the necessary documents as under.

Envelope ‘ED’ – Earnest Money Deposit and eligibility criteria Envelope

Physical EMD Envelope – Photocopies in support of eligibility criteria and photocopy of document of transaction made in support of deposit of Earnest Money.

Online EMD Envelope—Reference details of the Earnest Money Deposit instrument and scanned copy of documents supporting deposition of EMD and eligibility criteria.

Envelope ‘CI’ – Price Bid Envelope

To be submitted mandatory online- “Information related to Price Bid of the Tender”.

The bidder can submit their tender documents as per the dates mentioned in the schedule above.

CONDITIONS:-

- 1) NIT, if required, can be seen on any working day during office hours in office of the undersigned.

- 2) Conditional tenders will not be entertained & are liable to be rejected.
- 3) The undersigned reserves the right to reject any tender or all the tenders without assigning any reason.
- 4) The societies shall upload & produce a copy of the resolution of the Co-Operative department for e-tendering.
- 5) The tender without earnest money payment will not be opened.
- 6) The jurisdiction of court will be at Jind.
- 7) The tender of the bidder who does not satisfy the eligibility criteria in the bid documents will be rejected summarily without assigning any reason and no claim whatsoever on this account will be considered.
- 8) Bids would require to be valid for 3 months from the date of expiry of online "Bid preparation, Hash submission stage & Earnest Money Deposit" stage. The bid for the work shall remain open for acceptance during the bid validity period to be reckoned from the expiry date of "Online Bid preparation, Hash submission & Earnest Money Deposit" stage. If any bidder withdraws his bid during bid validity period, any modifications in the terms and conditions of the bid, the said earnest money shall stand forfeited.

For and On Behalf of Governor of Haryana

Executive Engineer
PHE Division, Jind

Endst No. 12081-12161 Dated 25/06/2013

A copy of above is forwarded to the following for information and wide publicity:

- (1) Deputy Commissioner, Jind.
- (2) Engineer-in-Chief Haryana, PHED, Panchkula
- (3) All Superintending Engineers/Executive Engineer, PHED Haryana.
- (4) Notice Board.

For and On Behalf of Governor of Haryana

Executive Engineer
PHE Division, Jind

ANNEXURE-A
CONDITIONS OF E-TENDERING

Instructions to Contractors on Electronic Tendering

- 1. These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.**
2. All the Contractors intending to participate in the tenders processed online, are required to get registered for the Electronic Tendering System on the Portal <http://haryanaphed.etenders.in>
For more details, please see the information in Registration info link on the home page.
- 3. Obtaining a Digital Certificate:**
 - 3.1** The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. A digital signature certificate has two keys i.e. Public Key and Private Key. Public Key is used to encrypt the data and Private Key is used to decrypt the data. Encryption means conversion of normal text into coded language whereas decryption means conversion of coded language into normal text. These Digital Certificates are issued by an approved certifying authority, by the controller of Certifying Authorities, Government of India.
 - 3.2** A Digital Certificate is issued upon receipt of mandatory identity proofs and verification letters attested by the Notary Public / Chartered Account / Any Gazatted Officer whose stamp bears emblem of Ashoka. Only upon the receipt of the required documents, a digital certificate can be issued.
 - 3.3** The contractors may obtain Class II B digital certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities on the portal <http://cca.gov.in>. or may obtain information and application format and documents required for issue of digital certificate from one such certifying authority given below which is :-
 1. TATA Consultancy Services Ltd.
11th Floor, Air India Building, Nariman Point,
Mumbai-400021 website – www.tcs-ca.tcs.co.in
 2. Sify Communications Ltd.
III Floor, Tidel Park, 4 Canal Bank Road, Taramani, Chennai-600113. Website – www.safescrypt.com
MTNL Trustline CA
O/o DGM (IT-CA), 5515, 5th Floor, Core-V Mahanagar
Doorsanchal Sadan, CGO Complex, MTNL, Delhi-110003. Website – www.mtnltrustline.com
 3. iTrust CA (IDRBT)
Castle Hills, Road No.1, Masab Tank, Hyderabad, Andhra Pradesh -500057.
Website – idrbtca.org.in
 4. (n)Code solutions
301, GNFC Tower, Bodak Dev, Ahmedabad-380054,
Gujarat. Website – www.ncodesolutions.com
 5. National Informatics Centre Ministry of Communication and Information
Technology
A-Block CGO Complex, Lodhi Road,
New Delhi-110003. Website <https://nicca.nic.in>
 6. e-Mudhra CA
3i Infotech Consumer Services Ltd, 3rd Floor, Sai Arcade, Outer Ring Road,
Devarabeesanahalli, Bangalore560036, Karnataka. Website – <http://www.e-Mudhra.com>

Contractors may also obtain information and application format and documents required for issue of digital certificate from the following:-

1. Nextenders (India) Pvt. Ltd. YUCHIT, Juhu Tara Road, Mumbai-400049
Email-Chandigarh@nextenders.com
2. Nextenders (India) Pvt. Ltd.
o/o HSRDC, Bays No.13-14, Sec-2, Panchkula-134151
Contact Person: Manmit – 09815034028, Chintan - 09592259876
- 3.4 Bid for a particular tender may be submitted only using the digital certificate, which is used to encrypt the data and sign the hash during the stage of bid preparation and hash submission. In case, during the process of a particular tender, the user loses his digital certificate (i.e. due to virus attack, hardware problem, operating system problem), he may not be able to submit the bid online. Hence, the users are advised to keep their Digital Signature Certificates in safe custody.
- 3.5 In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney to that User. The firm has to authorize a specific individual via an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm for Public Health Engineering Department, Haryana tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm. It shall be the responsibility of management / partners of the registered firms to inform the certifying authority or Sub Certifying Authority, in case of change of authorized user and that a fresh digital certificate is procured and issued an 'authorization certificate' for the new user. The procedure for application of a digital certificate will remain the same for the new user.
- 3.6 The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.
4. **Set up of machine**
In order to operate on the electronic tender management system, a user's machine is required to be set up. A help file on setting up of the system can be obtained from NexTenders (India) Pvt. Ltd. or downloaded from the home page of the website - <http://haryanaphed.etenders.in>.>> "Information for new users".
5. **Online Viewing of Notice Inviting Tenders:**
The contractors can view the N.I.T and the time schedule (Key Dates) for all the packages floated using the electronic tendering system on the Haryana PHED website <http://haryanaphed.etenders.in>. Contractor may refer to NIT in the office of Executive Engineer.
6. **Opening of an Electronic Payment Account:**
 - 6.1 For purchasing the tender documents online, contractors are required to pay the tender documents fees online using the electronic payments gateway service as mentioned at S.No.8.
 - 6.2 For the list of payments using which the online payments can be made, please refer to the Home page of the Portal <http://haryanaphed.etenders.in>
7. **Submission of Earnest Money Deposit:**
 - 7.1 Contractors have to deposit EMD into the account of the concerned Executive Engineer through RTGS/NEFT. Earnest Money in parts either through different banks or on different dates will not be accepted. EMD should be deposited through RTGS / NEFT as consolidated amount in single transaction so that there is no difficulty in accounting and also that there is no ambiguity for relating a transaction to a particular tender.
 - 7.2 Refund of Earnest Money Deposit to the unsuccessful bidders will be made through cheque issued in the name of contractor / agency.

7.3 Payment of EMD may be made upto specified time of “Online bid preparation, Hash submission & Earnest Money Deposit” as per key dates schedule of tender. Scanned copy of the proof i.e receipt of transaction of EMD should be uploaded while submitting the tender. A photocopy of document of transaction made should also be physically submitted in envelop ED.

7.4 If any agency withdraws its bid after re-encryption stage, then the Earnest Money Deposit of such agency shall be forfeited.

8. Submission of Tender Document Fees:

The Payment can be made by eligible contractors online directly via Credit Card / Internet Banking Account / Cash Card / Debit card. The contractors have to pay for the tender documents online by making online payment of tender document fees using the service of the secure electronic payment gateway. The secure electronic payments gateway is an online interface between contractors and credit card / online payment authorization networks.

If the tenders are cancelled or recalled on any grounds, the tender document fees will not be refunded to the agency.

9. Purchase of Tender Documents:

Download of Tender Documents: The tender documents can only be downloaded from the Electronic Tendering System on the Portal <http://haryanaphed.etenders.in>

10. Submission of Bid Seal (Hash) of online Bids:

Submission of bids will be preceded by submission of the digitally signed bid seal (Hash) as stated in the tender time schedule (Key Dates) of the Tender. Bidders should take note of any corrigendum being issued on the web portal on a regular basis. They should view and note down the tender Hash and ensure that it matches with their previous noted Hash before confirming the rates.

11. Generation of Super Hash:

After the time of submission of Bid Seal (Hash) by the bidders has lapsed, the bid round will be closed and a digitally signed tender Super Hash will be generated by authorized Haryana PHED official. This is equivalent to sealing the tender box.

12. Submission (Re-encryption) of actual online bids:

Bidders have to submit their encrypted bids online and upload the relevant documents for which they generated the hash at the stage of hash generation and submission after the generation of Super Hash within the date and time as stated in the Notice Inviting Tenders (Key Dates). The electronic bids of only those contactors who have submitted their bid seals (Hashes) within the stipulated time, as per the tender time schedule (Key Dates), will be accepted by the System. A bidder who does not submit his bid seal (Hash) within the stipulated time will not be allowed to submit his bid after the permitted time as per key dates.

13. Key Dates:

13.1 The bidders are strictly advised to follow dates and time as indicated in the Notice Inviting Tender. The date and time will be binding on all the bidders. The bidders are required to complete the stage within the stipulated time as per the schedule to continue their participation in the tender. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and time of the stage as defined in the Notice Inviting Tender. The bidder should check the status of a particular stage by following the below mentioned procedure:-

- a. Click on “Main” after login into the portal.
- b. Select “Tender Search” and click on “Go”
- c. Next screen will appear on the screen and click on “Search” button to view the list of various tenders.
- d. Select the tender whose status is to be viewed by clicking on the tender no.

- e. Click on “Action page” button. The status of all the stages i.e. whether “Pending” or “Completed” can be viewed.

The bidder should ensure that the status of a particular stage should be shown as “Completed” before the expiry date and time of that particular stage and he should possess a copy of receipt of completion of each stage to be performed from his end. It will be the sole responsibility of the bidder if the status of a particular stage is “Pending” till the expiry date and time of that stage and he is not able to proceed further in the e-tendering process.

Other Information:

1. The intending bidders shall fill the lumpsum rate / item rate / Percentage rate in the online templates of the online tender. The Price Bid has to be submitted mandatory online. In case the bidder does not submit the rates of Non-schedule items, intentionally or unintentionally, then the rates of such items will be considered as Free of Cost. If the bidder does not agree to execute such N.S. Items for which he has not quoted rates, free of cost, then his EMD will be forfeited.
2. The photocopy of the receipt of transaction made for payment of Earnest Money Deposit should be put ‘ED’ sealed envelopes and these sealed envelope and delivered to this office before the date and time mentioned in the Tender Notice alongwith documents listed below:
 - i. A list of all documents accompanying the sealed envelope containing the tender documents.
 - ii. Duly accepted power of Attorney in original along with its two certified copies in the name of bidder or authorized representative to act on behalf of the agency.
3. Tenderer must strictly abide by the stipulations set forth in notice inviting tender & while tendering for the work, the bidder shall adopt only the two envelope system.
4. The ‘CI’ envelope – Price Bid envelope has to be submitted mandatory online and shall not be accepted physically under any circumstances. In case any bidder does not comply with procedure given above, it will be presumed that he is not interested in the work and the work shall not be let out to him. Further he may be de-listed without further notice to him for failing to abide by the strictly approved terms of notice inviting tender for this work.
5. The tenders which are not accompanied by the earnest money or proof of earnest money or do not strictly follow the technical requirement, are liable to be rejected summarily.
6. Tenders / quotations which are dependent upon the quotations of another bidder shall be summarily rejected.

Note: - Bidders participating in e-tendering shall check his/her validity of Digital Signature Certificate before bidding in the specific work floated online at e-tendering portal of Public Health Engineering Department, Haryana on the website <http://haryanaphed.etenders.in>. Also, the bidder will be held liable solely, in case, while bidding in particular stage - Date & Time expired as per the key dates available on the tender document. Key dates are subject to change in case of any amendment in schedule due to any reason stated by concerned Executive Engineer of the Department.

Eligibility criteria for bidding by contractors/agencies for PHED works: -

2- Eligibility Criteria for Specialized Works

The following works being executed in PHED have been categorized as Special Works because of specialized/ highly technical job, for tendering purposes:-

(iv) Installation of tubewell with Reverse Rotary Rig, DTH Rig and Percussion Rig.

2.3 Installation of Tubewells, as covered under 2 (iv) above

2.3.1. Upto DNIT amount of Rs. 10 lacs (to be increased at compounding rate of 10% per year w.e.f. 2010-11).

Open to all agencies / contractors enlisted with the Public Health Engineering Department Haryana for installation of tubewells upto an amount of Rs. 10 lacs.

2.3.2. For DNIT cost above Rs. 10 lacs to any amount (to be increased at compounding rate of 10% per year w.e.f. 2010-11).

Open to all agencies enlisted with Department/ Board/Corporation of Central Govt., any State Government, fulfilling the following criteria :-

- (i) Average Annual financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the DNIT cost.
- (ii) Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following :-
 - (a) Three similar completed works costing not less than the amount equal to 40% of the DNIT cost.

or
 - (b) Two similar completed works costing not less than the amount equal to 50% of the DNIT cost.

or
 - (c) One similar completed work costing not less than the amount equal to 80% of the DNIT cost.

Name of work:- Providing and installing 1 No. deep tubewell in village Morkhi Tehsil Safidon Distt. Jind."Providing & installing 1 No. T/well of size 10"X8" dia upto 244 meters depth below ground level by Reverse Rotary Rig according to ISI specification No.2800-1991 (Part-I) and IS 2800-1979 (Part-II) as amended up to date, Supplying & fixing of 1 No. Submersible pumping set on tubewell and electric control panel, C.I. Specials for connecting of Tubewell Construction of 1 No. Pump Chamber, Laying of rising main and all other works contingent thereto."

App. Cost Rs. 12.85 Lacs

1. Scope of work.

The scope of work under this tender is as under :-

A) Tubewell :-

Providing and installing 1 No. tubewells at following locations/Villages:-

Sr. No.	Description	Location Tubewell	No.	Size	Appx. Depth of Tubwell
1	Tubewell	Morkhi	1	10"X8" dia	244 M
2	Tubewell chamber	Morkhi	1	10'X12'	-
3	Boundary Wall	Morkhi	1	58 Mtr.	-
4	Submersible pump set	Morkhi	1	600 LPM/70Mtr.	-
5	Rising main	Morkhi	-	6"i/d=122 Mtr.	-

The Tubewell to be installed with hydraulic rotary drilling/reverse circulation method shall include supplying and fixing ERW housing pipe, Blind pipe, LCG cage type V – wire wound screen/MS slotted pipe, development of tubewells with compressor & pump and all other ancillary items required for complete job. The size of various housing pipes, LCG screen and required discharge from the tubewell has been mentioned hereinafter.

B) Pump chamber and Boundary Wall :-

Construction of 1 No. pump chambers for the tubewells as mentioned above and construction of boundary wall with iron gate etc. The size and specifications of the pump chamber, boundary wall has been mentioned hereinafter as per the attached Drawings. The electric fitting required for tube lights, fans, power plugs & flood lights etc is also included.

C) Pumping machinery and electrical equipment/control panel.

Providing and fixing clear water Submersible pump sets, Submersible cable for pump sets, G.I. column pipes, M.S. clamps electric control panel for pump sets Sluice valves Non return valves, C.I.D/F pipes required for delivery within the pump chamber up to 1.5 Mtr from outer wall of pump chamber. Electric control panel mounted on box type floor mounted angle frame with required capacity of fully automatic Air break starter/oil Immersed starter, main switch with HRC fuse, voltmeter, Amp meter capacitors, Indicating lamps, single phase preventor, Timer switch wiring from UHBVN supply to Electrical control panel board.

D) Pipe line :-

Excavation of earth work, laying jointing cutting testing of AC/CI/DI pipe line from pump chamber to existing distribution system/ boosting station. The cost of C.I specials required to lay the pipe line and also to made the connection with the existing system are included in the scope of work. The pipes at **Reserve stock** Jind would be supplied by Deptt.

Free of cost. However, the loading/unloading of pipe up to site of work from Reserve Stock and watch and word of same will be responsibility of the contractor.

E) Electro magnetic dia phragm dozing system for disinfection :-

Supply and erection of wall mounting type solenoid driven motor less electro magnetic diaphragm dozing/metering pump working on single phase with electric control suitable for minimum dozing capacity 0 to 5 liter per hour at 8 bar back pressure with one No 300 liter capacity HDPE storage tank for each tube well suitable to use sodium Hypochloride for use as disinfectant.

f) Commissioning of complete installations :-

The Machinery & Tubewell after installation said work shall be commissioned to the entire satisfaction of Engineer in charge. The machinery with complete scope of work shall be kept on test run for a period of 3 months from the commissioning for which payment will be made as per accepted terms & conditions of payment. In case electric connections which are to be got released by Public Health Engineering Deptt. Are not released within 15 days from the date of completion, then contractor will be required to get the tubewell/ Machinery & pipe line tested with the help of D.G. set at least for continuous 15 days. The cost to arrange D.G. set would be borne by the contractor but Diesel, actually consumed, will be supplied by Deptt. to contractor, free of cost cost of all other consumables except Diesel will be met by contractor.

All the manpower, consumables required to operate, maintain & repair except Electric charges, during the test run period will be borne by the contractor. The staff employed shall be such that at least one person is available at tubewell for all the 24 hrs/day during test running period. Each tubewell shall be operated **at least 24 hrs/day** or as directed by Engineer – in – charge during test run period.

Sodium hypochloride shall be used for disinfection of water being supplied from tubewell. The quantity used shall be such as ensure a dose of 2ppm at the tubewell at all the operators/working hours of tubewell.

The contractor will maintain the area within boundary wall in a neat & clean manner position & will also maintain it during test running period.

2. Specifications

- i) All the work shall be carried out as per PWD specification and as per drawing attached.
- ii) All item of work shall be executed as per Specifications mentioned in schedule (ii) and make of items to be supplied shall be as per Schedule No (iii)
- i) Any item of work, required for execution of work, for which specification and makes have not been mentioned in schedule (II) Or III shall be mentioned by the firm/contractor in his tender otherwise the same will be as per decision of Engineer – in – charge.

3. Drawings/Technical information while Tendering :-

The contractor shall supply all technical details and design requirements of various items of works covered in the scope of work.

DNIT

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Amt. to Rs. 12.85 Lacs									
A) Scheduel Items									
Sr. No	Item No.	Description	Qty.	Unit	Rate	Amou nt	C. P.	P. Amt.	Total Amt.
		Sub Head No. 1	Pump Chamber 10' x 12' (1 No.)						
1	6.7	Earth work in excavation in foundations, trenches Of under ground structures, sullage drains, etc. and All other similar works in ordinary soil including dressing of bottom and sides, to correct levels and templates, cutting of tress and bushes, dewatering of rain water, diversion of traffic, fixing and maintenance of caution boards, and night singnals, crossing over trenches for access to houses, watching, stacking of excavation and subsequent filling, where required around masonry, in 15 cm layers, with compaction and disposal of surplus soil as directed within a lead of 30 M for depth upto 2 M below natural ground level. (For Public Health works only).	8.00	% cum	932.00	75	370%	278	353
2	10.39	Cement Concrete 1:4:8 with Stone aggregate 40 mm nominal size in foundation and plinth.	3.00	Cum	403.10	1209	450%	5441	6650
3	11.3	First Class brick work laid in cement sand mortar 1:5 in foundation and plinth.	8.00	Cum	407.60	3261	600%	19566	22827
4	10.114	Damp proof course 40mm thick cement concrete 1:2:4 using stone agg.20mm nominal size with 2 coats of bitumen 20/30 penetration at 1.65 kg per sqm laid hot sanded.	4.00	Sqm	35.05	140	450%	630	770
5	11.8	First Class brick work laid in cement sand mortar 1:5 in first storey upto 4 mtrs above plinth level.	17.00	Cum	428.60	7286	600%	43716	51002

6	10.82	Cement concrete 1:2:4 with stone aggregate 20mm nominal size for reinforced concrete work in slabs with inclination not exceeding 25 degree with horizontal excluding steel reinforcement but including centering and shutte-ring laid in position complete	2.00	Cum	997.90	1996	450%	8982	10978
7	18.1	Steel work fixed independently without connecting plates including cutting hoisting and fixing in position in :-a) R.S. Joist	0.90	Qtl.	1011.45	910	500%	4550	5460
8	10.41	Cement Concrete 1:2:4 with stone aggregate 20mm nominal size in foundation and plinth.	0.50	Cum	615.60	308	450%	1386	1694
9	18.22	Fe-500 EQR TMT Steel Bars for RCC work, where not included in the complete rate of RCC including Bending, binding and placing in position complete.	2.50	Qtl.	917.05	2293	500%	11465	13758
10	10.89	Cement concrete 1:2:4 with stone aggregate 20mm nominal size for reinforced concrete work in fascias parapets, and other thin vertical sections	0.50	Cum	1622.05	811	450%	3650	4461
11	13.13	Tile terracing consisting of tiles 22.86 cm x11.43 cm x 3.81 cm laid over 87.50 mm mud filling on a layer of 25 mm mud plaster and another layer of coat of bitumen laid not at 1.65 Kg. per Sqm or top of RCC slab including grouting with cement sand morta	15.00	Sqm	52.95	794	600%	4764	5558
12	13.89	Providing and fixing PVC Rain water pipe 6 Kg. Pressure of ISI mark in cement mortar during masonry work. (a) 100 mm dia PVC pipe 6 Kg. Pressure. (b) 150 mm dia PVC pipe 6 Kg. Pressure.	4.00	Mtr.	182.00	728	20%	146	874
13	13.90	Providing and fixing PVC Bend ISI mark (a) 100 mm dia PVC Bend	2	Each	97.40	195	20%	39	234
14	13.50	Top Khurraa 0.6mm x 0.6mm for rain water pipe in 25mm thich cement conc. 1:8:16 over 50mm thick cement	1	Each	12.30	12	240%	29	41

		concrete 1:8:16.							
15	13.57	Bottom khurraa on ground 1.2m x 0.6m consisting of brick on edge laid in cement mortar 1:3 over 75mm cement concrete 1:8:16 including 12mm thick cement plaster 1:3.	1	Each	64.30	64	240%	154	218
16	14.1	Base course of floors consisting of 100mm thick C.C.1:8:16 and 100mm sand or stone filling.	12.00	Sqm	36.95	443	400%	1772	2215
17	14.17	40 mm thick grey polished flooring cement concrete 1 : 2 : 4 topping finished with 3 mm thick neat coat of cement rubbed and polished.	12.00	Sqm	53.10	637	400%	2548	3185
18	14.18	18 mm thick grey polished skirting or dado consisting of bottom layer of 15 mm thick cement sand plaster 1 : 3 and finished with 3 mm topping of thick neat cement rubbed and polished including rounding off junction with floors.	2.00	Sqm	46.30	93	400%	372	465
19	18.34	Pressed steel sheet frames consisting of 2mm thick steel sheet of the specified section, including iron lugs (hold fasts) , iron hinges , conforming to PWD specifications , including bolts for fixing stops, locknotch, provision for receiving tower bolts and finished with one coat of ready - mixed paint red lead non-setting primer, of approved quality, fixed in position including the cost of cement concrete 1:3:6, for filling in the frame, and cement concrete 1:3:6 for lugs complete:-	20.00	Mtr.	71.55	1431	500%	7155	8586
20	17.30	Commercial hard wood such as hollock, champ, chikrassy and chaplash, etc. (non-coniferous) timber other than tear confirming to I.S. specification No. 1003 kiln seasoned), shutters with vertical styles and rails, as specified in the statement No. 1 (attached in the end of this	5.00	Sqm	295.05	1475	300%	4425	5900

		chapter), with two Nos. plywood panels of the specified thickness Mentioned below including the cost of iron Hinges, screws, chocks/cleats, stops, etc. completed fixed in position excluding the cost of tower bolts and handles but including the labour for fixing the same-								
21	14.79	Providing & fixing glass strips, 4mm thick in floors.								
		a) 40mm wide	20.00	Mtr.	3.50	70	400%	280	350	
22	15.6	12mm cement plaster thick 1:5	40.00	Sqm	11.60	464	500%	2320	2784	
23	15.52	10mm cement plaster thick 1:4	15.00	Sqm	12.65	190	500%	950	1140	
24	15.60	Cement pointing 1:2 deep variety on brick and tile work	20.00	Sqm	9.90	198	500%	990	1188	
25	16.48	White washing - three coats	35.00	Sqm	1.25	44	230%	101	145	
26	16.61	Finishing walls with exterior decorative cement based paints such as snowcem, robbiacem etc. on new work, two coats to give an even shade.	50.00	Sqm	7.25	363	230%	835	1198	
27	16.2	Applying pink primer or aluminium priming coat on wood work including preparation of surface, knotting and stopping etc.	5.00	Sqm	3.75	19	230%	44	63	
28	16.3	Painting two coats excluding priming coat with synthetic enamel paint in all shades on new wood work or metallic or plastered or concrete surfaces to give an even shade.	5.00	Sqm	9.40	47	230%	108	155	
29	18.38	Providing and fixing fan hooks 80 cm long, of required shape and size. (a) 16 mm dia	1.00	Nos.	13.40	13	500%	65	78	
						Total			152330	
		Sub Head No. 2 (Boundary Wall (188')								
1	6.6	Earth wotk in excavation in foundation, trenches,etc in all kinds of soils, not exceeding 2 meter. depth including dressing of bottom and sides	15.00	% cum	1108.10	166	425%	706	872	

		of trenches, stacking the excavated soil, clear from the edge of excavation and subsequent filling around masonry, in 15 cm layers with compaction, including disposal of all surplus soil, as directed within a lead of 30 meters.							
2	10.39	Cement Concrete 1:4:8 with stone aggregate 40mm nominal size in foundation and plinth.	4.00	Cum	403.10	1612	450%	7254	8866
3	10.115	Damp proof course 25 mm thick of cement concrete 1:2:4 using stone aggregate 20 mm nominal size with 2 coats of bitumen 20/30 penetration at 1.65 kg. Per sqm	15.00	Sqm	26.40	396	450%	1782	2178
4	11.1	First class brick work laid in cement sand mortar 1:7 in foundation and plinth.	11.00	Cum	382.15	4204	600%	25224	29428
5	11.2	First Class brick work laid in cement sand mortar 1:6 in foundation and plinth.	12.00	Cum	393.45	4721	600%	28326	33047
6	15.11	15 m thick cement plaster 1:5 on the rough side of single or half brick wall.	90	Sqm	11.60	1044	500%	5220	6264
7	15.60	Cement pointing 1:2 deep variety on brick and tile work	75	Sqm	9.90	743	500%	3715	4458
8	16.48	(White Washing) Three Coats	90	Sqm	1.25	113	230%	260	373
9	16.61	Finishing walls with exterior decorative cement based paints such as snowcem, robbiacem etc. on new work, two coats to give an even shade.	75	Sqm	7.25	544	230%	1251	1795
10	18.12	Wrought iron and mild steel ladders, grills, grating frames, window guards, iron doors, openable or fixed stair case of parapet or any other type of railing, gates and tree guards etc. including cost of screws and welding rods or bolts and nuts complete fixed in position.	2	Qtl.	1040.35	2081	500%	10405	12486
						Total			99763
		Sub Head No. 3	(Rising main)						
		A) HSR item							

1	6.8	Excavation of pipeline running under pressure in trenches pits in open areas where disposal of surplus earth is done alongwith the alignment and restoration of unmettled.							
		a) without timbering and shoring upto 1.5 Mtr. depth.	110	% Cum	1030.00	1133	370%	4192	5325
2	28.56	Providing & fixing cast Iron detachable Joints class - 15 marked with IS 8794 use with AC/PVC /CI pipes complete with 2 Nos. rubber rings marked with IS 5382 & IS: 10292 and appropriate number of nut and bolts marked with IS : 1363 including carriage loading, unloading etc complete in all respect.							
		150 mm i/d CID joint	10	Each	360.00	3600	10%	360	3960
3	28.10	Providing and fixing Cast Iron Double flanged Sluice Valves PN-1.6 Marked with IS:14846 including nuts & bolts marked with IS:1363. Rubber sheet marked with IS 638 etc. carriage loading unloading, stacking handling, Re-handling etc. complete in all respect to the satisfaction of Engineer-in-charge.(Makes, AARKO, VENUS, LEADER, SI, PANJA, UPADHAY)							
		c) 150mm i/d	1	Each	5709.00	5709	10%	571	6280
4	28.7	Stringing out AC and specials castings along trenches and laying the same in trenches to correct, alignment and gradients including cartage from Divisional stores or nearest railway station to site of works and return of pieces to pipes to stores :-							
		d) 150mm i/d pipeline laid complete	122	10 Mtr.	16.90	206	300%	619	824
5	28.9	Cutting AC pipes and specials and chipping or filing the surface to a uniform finish.							
		d) 150mm i/d pipeline	3	Per cut	2.65	8	300%	24	32

Name of Work: - Providing and installing 1 No. deep tubewell in village Morkhi Tehsil Safidon Distt. Jind."Providing & installing 1 No. T/well of size 10"X8" dia upto 244 meters depth below ground level by Reverse Rotary Rig according to ISI specification No.2800-1991 (Part-I) and IS 2800-1979 (Part-II) as amended up to date, Supplying & fixing of 1 No. Submersible pumping set on tubewell and electric control panel, C.I. Specials for connecting of Tubewell Construction of 1 No. Pump Chamber, Laying of rising main and all other works contingent thereto."

Amt. to Rs. 12.85 Lacs									
A) Scheduel Items									
Sr. No	Item No.	Description	Qty.	Unit	Rate	Amou nt	C. P.	P. Amt.	Total Amt.
Sub Head No. 5			(A) HSR Items (Pumping Machinery)						
1	28.52	Supplying G.I. pipes class B marked with IS:1239 In 3.05 m length their threading and welding with flanges (Heavy duty) on both sides jointing with nuts and bolts marked with IS 1363, rubber gaskets marked with IS:638 Jointing with pumping machinery and lowering into tubewells and testing including carriage loading, unloading etc. complete in all respect to the satisfaction of Engineer - in - Charges.							
		100 mm i/d	20	Each	2146.00	42920	10%	4292	47212
2	31.22 (i)	Earthing with G I. earth pipe 4.5 m long and 40 mm dia with masonry enclosures on the top etc. as required.	1	Each	378.00	378	350%	1323	1701
	(ii)	Extra for using salt and char coal/coke for pipe earth electrode as required.	1	Each	125.00	125	350%	438	563
3	31.59	Supplying & jointing three core flat cables of finolex Polycab, Ecao & Bunton with bare bunched copper conductor insulated and sheathed with PVC for submersible pump Motors with voltage grade 1100 volts marked with IS:694 1990 including cost of jointing materials as well as carriage loading, unloading etc. complete in all respect.							
		Capacity of Motor :11.00 KW to 13.00 KW size of cable 4.00 sqm (Copper)	130	Mtrs	100.00	13000	0%	0	13000
4	28.10	Providing and fixing Cast Iron Double flanged Sluice Valves PN-1.6 Marked with IS:14846 including nuts & bolts marked with IS:1963. Rubber sheet marked with IS 638 etc. carriage loading unloading, stacking handling, Re-handling etc. complete in all respect to the satisfaction of Engineer-in-charge.							

		(b) 100 mm i/d	1	Each	3698.00	3698	10%	370	4068
5	28.10 (A)	Providing and fixing Cast Iron Double flanged Swing Check type Reflux (Non retron) Valve PN-1.6 Marked with IS:5312 including nuts & bolts marked with IS:638. etc. carriage loading unloading, stacking handling, Re-handling etc. complete in all respect							
		(b) 100 mm i/d	1	Each	3362.00	3362	10%	336	3698
					Total				70242

Name of Work: -	Providing and installing 1 No. deep tubewell in village Morkhi Tehsil Safidon Distt. Jind."Providing & installing 1 No. T/well of size 10"X8" dia upto 244 meters depth below ground level by Reverse Rotary Rig according to ISI specification No.2800-1991 (Part-I) and IS 2800-1979 (Part-II) as amended up to date, Supplying & fixing of 1 No. Submersible pumping set on tubewell and electric control panel, C.I. Specials for connecting of Tubewell Construction of 1 No. Pump Chamber, Laying of rising main and all other works contingent thereto."					
						Amt. to Rs. 12.85 Lacs

FINAL ABSTRACT OF COST

			HSR	NS
1	Sub Head No.1	Pump Chamber	Rs. 152330	
2	Sub Head No.2	Boundary wall	Rs. 99763	
2	Sub Head No.3	Connecting pipe	Rs. 17009	
		Distribution system B) NS	Rs.	4900
3	Sub Head No.3	Drilling of Tubewell	Rs.	851050
4	Sub Head No.4	Pumping Machinery	Rs. 70242	
				85000
			Rs. 339344	940950
		Grand Total	Rs. 1280294	
			Say Rs. 12.85 Lacs	

**Executive Engineer,
Public Health Engg. Divi.
Jind**

Name of Work: -		Providing and installing 1 No. deep tubewell in village Morkhi Tehsil Safidon Distt. Jind."Providing & installing 1 No. T/well of size 10"X8" dia upto 244 meters depth below ground level by Reverse Rotary Rig according to ISI specification No.2800-1991 (Part-I) and IS 2800-1979 (Part-II) as amended up to date, Supplying & fixing of 1 No. Submersible pumping set on tubewell and electric control panel, C.I. Specials for connecting of Tubewell Construction of 1 No. Pump Chamber, Laying of rising main and all other works contingent thereto."				
SCHEDULE OF N.S. ITEMS						
Sr. No.	Item No.	Description	Qty	Unit	Rates to be quoted by contractor	
		(A) Boring of tubewell			In figure	In words
1		Drilling of 609.60 mm dia bore by hydraulic rotary drilling (reverse circulation method)/Percussion rig, according to ISI specification No. 2800-1991 (Part-I) as amended upto date and modified to extent of the specification attached with this schedule of items of work in all kinds of soils and boulders upto 125mm dia except rocky strata including the cost of all consumable stores, fuel, oil, soil stabilizing material and transportation of rig and other accessories to the site of proposed bore and back (including cost of lowering of all size of casing pipe while boring and extracting the same against earth frictions etc.) complete to the satisfaction of the Engineer-in-Charge. But payment will be made as per actual lowering.				
		1 to 244 meters bore hole (1 X 244)	244	P/Mtr.		
2		Supplying and lowering 273.10mm outer dia ERW steel pipes as per IS 4270/1992 as amended upto date, duly ISI marked for housing pipe in 4 to 7 meters random length with 88.90mm of threaded ends (8 threads to an inch or 25.40mm) manufactured out of 8.00mm thick M.S. plates with required number of M.S. socket 177.80mm with inside thread to match the pipe threads and made out of M.S. plate in to borehole in vertical position including cost of all scaffolding, derricks, Jim, poles, tools and plants, ropes, gays M.S. clamp embedded in foundation etc. complete in all respects to the satisfaction of the Engineer-in-charge of the work including cost of all cutting, threading of pipe welding where required and all sockets. The pipes shall be painted with anti corrosive paint and covered tightly with polythene.				
		1 X 60 meter	60	P/Mtr.		

3	Supplying and lowering 219.10mm outer dia ERW steel pipes as per IS 4270/1992 as amended upto date, duly ISI marked for housing pipe in 4 to 7 meters random length with 88.90mm of threaded ends (8 threads to an inch or 25.40mm) manufactured out of 6.40mm thick M.S. plates with required number of M.S. socket 177.80 mm with inside thread to match the pipe threads and made out of M.S. plate in to borehole in vertical position including cost of all scaffolding, derricks, Jim, poles, tools and plants, ropes, guys M.S. clamp embedded in foundation etc. complete in all respects to the satisfaction of the Engineer-in-charge of the work including cost of all cutting, threading of pipe, welding where required and all sockets. The pipes shall be painted with anti corrosive paint and covered tightly with polythene.				
	1 X 160 Meters	160	P/Mtr.		
4	Labour rate for lowering 200mm i/d ISI marked stainless steel cage, as amended up to date (material to be supplied by the department).				
	1 X 20 Meters	20	P/Mtr.		
5	Supplying, fixing and lowering reducing socket as per IS:226/1975 as amended upto date 273.10mm outer dia, into 219.10mm outer dia with 8 threads per inch or 25.40mm, to be made out of M.S. plate with internal threads to be suitable for jointing 273.10mm outer dia pipe and 219.10mm outer dia ERW pipe as per items 2 and 3 above.				
	1 X 1 No.	1	Each		
6	Providing and fixing in position suitable bail plug hook of 219.10mm as per IS 226/1975 as amended upto date, including the cost of M.S. screwed sockets etc. complete in all respects to the entire satisfaction of the Engineer-in-charge of the work.				
	1 X 1 No.	1	Each		
7	Providing clay seal of thickness 4.00 m or above consisting of balls of local clay of bentonite mud, to be placed in the annular space around the assembly. The clay seal should be provided at a level of minimum 25.00 m above the top most screens, depending on the logging result.				
	1 X 1 Job	1	P/Job		
8	Supplying and packing graded gravel of size as per ISI 4097/1988, as amended upto date and specification attached with this schedule of item of work. The gravel should be free from dust, dirt or vegetable matters. Packing to be done from the housing pipe to the bottom of liner all around in the bore and will be placed after liner and housing pipes have been lowered and suitably clamped. Thickness and size of the gravel packing will be as directed by the Engineer-in-charge strictly as per relevant ISI.				
	1 X 45 Cum	45	P/Cum		
9	Supplying and fixing well threaded M.S. cap for 273.10mm outer dia M.S. pipe as per ISI 226/1975 as amended upto date to the satisfaction of the Engineer-in-charge.				

		1 X 1 No.	1	Each		
10		Supplying as per IS: 226/1975 as amended upto date deodar wooden box made of 20mm thick wood size 60cm x 30 cm x 75cm with lid and locking arrangement etc. for preserving the strata samples received from the bore as and when desired by the Engineer-in-Charge.				
		1 X 1 No.	1	Each		
11		Supplying and fixing 273.10 M.S. clamp as per IS: 226/1975 as amended upto date for supporting the housing pipe supported on two girders not less than 100mm x 150mm, weight not less than 17.00 kg/m, cross section area not less than 21.67 sq. cm, flange thickness 7.00 mm, web thickness 5.40 mm, 2.00 m long (each), embedded in suitable foundation as approved by the Engineer-in-Charge.				
		1 X 1 No.	1	Each		
12		Development of T/well according to clause 9.3 of IS: 2800-1991 (Part-I) as amended upto date and specifications attached and as directed by the Engineer-in-Charge of the work including the cost of all consumable stores, fuel, oil, compressors, pumps and machinery etc. as required for this work.				
		A) When developed by compressor of 600 CFM, 250 PSI and suitable rating of 20 hours				
		1 X 15 Hours	15	P/hour		
(B) Pumping machinery						
1		Supplying, erection testing and commissioning of submersible pumping sets as per BIS SPECIFICATION No. 8034 - 1989 (as amended up to date for pumps) and IS 9283 – 1979 (as amended up to date for motor) the pump motor sets should be capable of pumping clear fresh cold water having characteristics as specified in Clause – 4 of IS 8034 – 1989 and clause 4.1 of IS 9283 – 1979.				
		(i) 600LPM /70 M Head – for T/Well = 1 No.	1	Each		
2		Supplying erection, testing and commissioning of Wall mounted electrical panel board, fabricated from 16 SWG CRCA sheet duly stouted with suitable angle iron frame work and completely powder coated of approximate size 1350x750 mm and 400 mm deep including cost of 5 m long GSL 8 gauge, GI pipe 40 mm dia (medium 240 mm long and having following items a) Main switch 63 Amp. 1 No. (L & T Siemens, ABB) b) Volt meter 100x100 mm range 0 to 500 Volt 1 No. (AE/KAPPAL/L&T) c) Amp. meter 100x100 range 0 to 100 Volt 1 No. (AE/KAPPAL/L&T) d) CT 100/3 Nos (AE/KAPPAL/L&T) e) VSS&ASS 1 No. each of approved make f) SPP 1 No. of approved make g) Motor starter, star delta 1 No. (L&T Simens, AAB) h) Capacity KVAR as per site requirement i) Including Lamp One set	1	Each		

3	Providing and installation of Aventura make solenoid driven Dosing Pump with level controller, Power Supply 220 V. / 50 Hz, Max. input power 40 watt, protection IP 65, Flow adjustment 0 to 100%, Flow rate 0-5 LPH, Backpressure 8 Kg/cm ² , Pump Head, Connectors, Diaphragm, PTTE Ball Valves PYREX Injector, Foot filter assembly, Frequency 400 Strokes / Minutes with 300 Ltr. HDPE Tank and stabilizer complete in all respect.	1	Each		
4	Supply, erection, testing and commissioning of LT, CT Energy Meter AC Class 0.5 Ratio 15 with LT, CT Ratio ___/ 5 VA 25 Class 20.5 as per UHBVNL specification complete in all respect including meter box as per specification for UHBVNL	1	Each		
5	Supply and fixing following CI/D/F specials including cost of jointing materials laying jointing in position as per specification given in schedule No.II.				
	A) Detail of pipe and specials a) CI, D/F bends Reducers tees etc.	100	P/Kg		
(C) Distribution system					
1	Prov & fixing of various sizes DI specials as per ISI specification suitable for DI pipes.	70	P/kg		

Schedule – II

GENERAL CONDITIONS OF CONTRACT

1 Definition

The term "work" means the complete scope of work covered in this DNIT as per the specification mentioned hereinafter which is being let out on contract. The term Superintending Engineer means the Superintending Engineer PWD Water Supply & Sanitation Circle Jind and the terms "Engineer – in – Charge" means the Executive Engineer Water Supply & Sanitation Division Jind of the Haryana PWD Water Supply & Sanitation Department under whose jurisdiction the work will be carried out from time to time. The term "Contractor" means the person or firm whose tender for the work is accepted and the term 'Contract' means the contract covered by the contract agreement to be entered into by the said contractor for carrying out and completion of the said work with the Engineer – in – Charge.

2. Consideration for contract and extent of works:-

- a)** The contract price payable to the contractor in respect of various items of work shall be the consideration for all and every description of work done executed and performed in and about and incidental to the work described or mentioned in this schedule and in the drawings or be intended so to be whether the same shall be incidental or necessary to the ultimate completion or only for the temporary purposes of the said work or be required for carrying out of such precautions as the Engineer – in – Charge may require for the protection of the public workmen and the work and also existing building etc. or as set out in the conditions of the contract. It also includes other incidental item or work materials and things required to make the work satisfactory in all respects and complying with the contractor as incorporated hereinafter.
- b)** Commissioning of work will be responsibility of the contractor.
All the installations/machinery will be tested for trouble free running minimum for a period of 3 months to the satisfaction of Engineer – in – charge with the staff arranged by contractor at his own risk and cost in case electric connection is not provided by HVPN, Generating set of the required capacity will be arranged by the contractor at his own cost 15 day. The Deptt. Will not be liable to any type of claim for commissioning of installations what so ever it may be.
- c)** The Contractor shall be fully responsible for making good the imperfection of any item of work executed under this agreement as per clause 17 of the contract agreement. The Contractor shall repair necessary items of work during maintenance period.
- d)** All the installations & Civil works after completion of test run period will be handed over to Engineer – in – charge in good working condition.
- e)** All the works after completion and maintenance period will be handed over to Engineer – in – Charge in good working condition.

3. a Terms & conditions of payments

Payment will be made as per actual work executed at site at the accepted rates.

b) Release of security

10% Security including earnest money will be deducted from each running bill of the contractor.

The security so deducted shall be released after the complete work executed under this NIT is handed over in Engineer – in – charge after completion of test run period or 3 months after commissioning of work which ever is later.

4. Possession of the site

The Engineer – in – Charge shall as soon as practicable, after the acceptance of the tender or the execution of the contract agreement as the case may be give possession of the site to the contractor for use of the site for the work covered by his contract so as to enable him to commence and continue the execution of the work included in his contract but the non – delivery or use of such site or sites or any part there of shall not effect the use of such contract or the specification and it shall not entitle the contractor to any increased allowance in respect of money or otherwise. Time for the completion of the work may be extended in proportion to the delay involved on the application by the contractor but this will not entitle him to any extra payment what so ever it may be.

5. Reinstatement and contractor to satisfy himself on all points:-

All land property, fencing likely to be disturbed or damaged during the execution of the contract work, shall be made good by the contractor at his own expense to the satisfaction of the authorities and owners concerned.

The contractor shall be deemed to have satisfied himself as to the dimensions. Levels character and nature of all the works buildings roads safe bearing capacity spring level and other things with regard to any connection they may have with the works of the contract and shall be deemed to have obtained his own information on all matters which could in any way influence his tender.

6.Storage of Material

All materials, supplies, machinery or equipment which may be exposed to the weather shall be suitably protected to the satisfaction of the Engineer – in – charge.

7.Rejected of Material :-

Any material including that required for civil works or articles fittings or plant delivered to the site of the site of work by or under the order of the contractor which the Engineer – in – charge shall find to be unsuitable or of a specification or description inferior in his opinion on required for the purpose of work shall not be used there on but shall be removed by the contractor at his own cost and charges, from the site of work, within 24 hours of notice to that effect in writing by the Engineer – in – charge or his representative.

8.Local Taxes

All toll octroi, terminal taxes sale tax VAT excise duty import duty or any other Municipal taxes shall be paid by the contractor on all tools & plants and materials imported or taken delivery by him including all goods and material delivered to him free on rail and those transported by him to the site of work from outside and he shall not be entitled to reimbursement for any payments made on account of such octroi or terminal tax charges. This applies to materials issued from stores of the Engineer – in – Charge as well.

If any fresh tax of any kind is levied at any stage or any existing tax is subsequently enhanced after the date of the contractors tender the same shall be paid by the contractor and no extra allowances shall be given to him by reason of such fresh or enhanced taxes octroi terminal tax or other having been levied.

9 Import License and Foreign Exchange

Import license and foreign exchange, if required will have to be arranged by the successful tenderer himself and this is solely his responsibility.

10 Services and Notices on the contractor

Any notice order required or instruction which the Engineer – in – Charge may wish or require to give in relation to works shall be deemed to be dully served on the contractor if recorded in the order book kept on the work, or if it is delivered personally to the contractor or any of his agent or sent by post to his office and notice of such office and any change of contractor to the Engineer– in – Charge in writing and got recorded in the agreement.

11 Work executed outside working hours:-

If the contractor executes any work outside ordinary working hours during the absence of the Engineer – in – Charge or his authorized representative and with out having previously given him sufficient notice in writing that such work was about to be executed he will be required to dismantle and reconstruct any work so executed if ordered to do so by the Engineer – in – Charge in writing under his hand no payment shall be payable for the dismantled.

12 Engineer – in – Charge, his Assistants or third party nominated by Engineer to have access to work and store:-

The Engineer – in – Charge with his Assistant Engineer Junior Engineer, Inspection work Mistries, Munshies Inspectors and all other persons authorized by him shall at all times have full access to the works and the contractor's workshop and factories stores brick fields godowns and all other places where materials are, collected or stored for the work and shall have full power to send workmen upon the work to execute any other works not included in the contract and for those operations the contractor shall afford every reasonable facility during the working hours provided that such operation shall be carriage on in such manner as not to impede the progress of the work included in the contract but the department shall not be held responsible for any damage which may happen to be occasioned by any such other works.

13. Pumping and Dewatering :-

The contractor shall at his own cost and charges at all times during the period of contract, provide and maintain in good working order and repair, and shall operate by day and night adequate number of pumping plants and equipment with all accessories of suitable capacity and design to full satisfaction of the Engineer – in – charge and shall keep the sub soil water level in trenches and other excavation lowered to a sufficient extent at all times and shall provide and construct all drains and channels required to enable the work to be completed in a proper and sound manner to the satisfaction of the Engineer – in – charge. The provision for maintenance repair and operation of all pumping arrangements and all other works for keeping down sub soil water level through de-watering and draining water from the work and for the disposal of such water in a manner to be approved by the Engineer – in – charge shall be deemed to be temporary works incidental to the contraction work. The full cost there of be included in the price of the contract and no other payment shall be made to the contractor in respect of any work he may carry out or any expenditure may incur in compliance with the term and conditions of this clause.

14. Interference with or damage to other works:-

The contractor shall not cause any interference with the work of any other contractor engaged for the construction at site of work and shall take all due precautions to prevent his work people from causing the damage to the work of other contractor while in course of execution of the work covered in the scope of work or otherwise.

15 Location:-

The location where the work is to be executed is own on the plan attached with the DNIT.

16. Authority From Manufacturer :-

In case the pumps, motor pipes, sluice valve, non return valve of make required as per N.I.T. are not manufactured by the tenderer then authority letter from the manufacturer in the name of tenderer authorizing to quoted for their product with committed delivery period and quantity offered should be attached with the tender.

17. Specification :-

- i) Tubewell will mean the satisfactory completion of :-
 - a) Drilling of bore holes, which include drilling in all kinds of strata including hard rock such ballast or granite etc.
 - b) Installation of casting complete with slotted and Bland pipe
 - c) Development with the aim of stabilizing the gravel pack and of producing the best possible discharge from the aquifers available at an average depression head of 6.00 meters. The well shall be developed according to clause 9.3 of ISI specification No. 2800 -1991 part-I as amended up to date. The final discharge at working depression obtained at the well should be free from sand during the operating test run with a maximum tolerance of twenty parts of sand in one million parts of water by volume after 20 minutes of starting the pump and 50 PPM at any time at a depression of 6.00 meters or a minimum discharge of gallons per hour(..... gallons per hour) which ever is obtained earlier.

II Drilling procedure :-

The contractor will employ hydraulic rotary drilling method which shall be understood to include reverse circulation rotary type of drilling and prior concurrence of the Engineer – in – charge shall be obtained , if any method other than reverse circulation is to be used.

III) The Engineer – in – charge may direct the contraction writing to do drilling to a depth as found suitable to obtain the required discharge. In all cases, the Government representative will remain at site to select the final depth of the well and the aquifer to be used. He will also pin-point the site on which drilling is to be done. The contractor shall drill the hole up to a depth which will provide maximum good water bearing formation or as directed by the Engineer – in – charge.

IV) Irrespective of the depth drilled, the payment or drilling shall be restricted to the lowering of Assembly only.

V) PIPE :-

All pipes shall be free from harmful defects and of good commercial finish and free from loose scale and rust. These should be of standard size and as per IS 4270-1992 as amended up to date. The pipes should be coated inside and outside with a bibulous solution or any other protective anti corrosion coating. The pipe size will be as below as per IS 8110 – 2000 as amended up to date.

Sr No.	Outer dia	Thickness
1	323.90mm	8 mm for blank pipe 8.38 mm for slotted pipe
2	273.10mm	8 mm for blank pipe

		7.80 mm for slotted pipe
3	219.10mm	6.40 mm for blank pipe 7.04 mm for slotted pipe

VI) Slotted pipe will be 323.90/219.10 mm outer dia as fully specified in item No. _____ of the attached schedule of item of work. The design of slots shall be as per ISI specification No. 2800-1991 (part – I) as amended up to date. The size of slots and percentage of opening will be as per 8110-2000 as amended up to date and to the requirement of the Engineer – in – charge. Low carbon galvanized steel pipe (I.C.G.) cage type – V would screen conforming to IS 8110 -2000 IS 4270 – 1992 with composition of material as per ISI 1012 of OD 221mm equivalent thickness 6.62/ ring thickness 8 mm slot opening 0.75 mm open area 25% as per item No. 3 to the requirement of Engineer – in – charge.

VII) The 219.10 mm outer dia pipe will be attached to 323.90mm/273.00 mm outer dia housing pipe by a reducer. All joints will be screwed and socketed and welded to the satisfaction of the Engineer – in – charge.

VIII) Housing Joints :-

The 219.10 mm outer dia pipe will be attached to 323.90 mm/273.00 mm outer dia housing pipe by a reducer. All joints will be screwed and socketed and welded to the satisfaction of the Engineer – in – charge.

ix) Verticality :-

The bore hole and the tubewell would be vertical true to line. The verticality will be tested according to the method detailed in IS 2800 - 1979 (part –I) as amended up to date. The housing pipe should be set vertical in such a way that at any stage the same shall not be out of vertical plumb more than 4 centimeter per 25 meters. The deviation shall be in one direction and in one place only. The deviation of the tubewell shall be determined according to the method described in 4.4.1 of IS 2800 – 1979 (part I) with up to date amendments. The crooked well shall not be accepted.

The verticality test shall be carried out strictly in the presence of Sub Divisional Engineer incharge of the work he shall record a certificate regarding verticality of tubewell clearly specifying that the housing pipe is in plumb and within the tolerance limit. Verticality test result of the tube well will be recorded as per appendix as given in IS 2800 – 1979 (part –I) as amended up to date.

x) The size of gravel to be used in a particular tube well will be as decided by the Engineer – in – charge, packing will be done uniform ally around the housing piep to the bottom of liner in the bore as directed by the Engineer – in – charge.

- | | | |
|----|----------------|---|
| a) | 3 mm to 6 mm | 20% less than 3mm
70% 3mm to 6 mm
10% greater than 6 mm |
| b) | 3 mm to 6 mm | 70% 3mm to 6 mm
30% greater than 3 mm |
| c) | 1.5 mm to 3 mm | 20% less than 1.5 mm
70% 1.5 mm to 3 mm
10% greater than 3 mm |
| d) | 1.5 mm to 3 mm | 70% 1.5 mm to 3 mm |

30% greater than 1.5 mm

The Engineer – in – charge shall personally verify the gravel and certificate will be recorded that the gravel used is of good quality free from dirt, dust or any extraneous material and is as per the size and specification given in the DNIT.

xi) Development of the Tubewells :-

The Well shall be developed according to the procedure given in clause No. 9.3 of IS 2800 – 1991 (part I) as amended up to date by any acceptable method at the discretion of the Engineer – in – charge so as to obtain maximum sand free yield. The method of development will be as under :-

Initially, the tubewell be developed by air compressor by placing the air line to the bottom and top of each aquifer in turn starting from bottom and the compressor be worked in this position for 0 to 10 hours for each aquifer. After that the air line should be lowered so that the submergence ratio is between 65% to 75% and compressor should be worked in this position till the discharge increases. No further compressor be used though it may still be giving sand.

During this process, back washing will also be done at intervals of one or two hours but will not be allowed for more than 5 minutes at a time. The compressor should be capable of developing a pressure, which should be commensurate with the depth of the borehole and will be worked out as directed by the Engineer – in – charge.

The development will be carried out till :-

- e) The well ceases to absorb further gravel.
- f) The depression ceases to improve.
- g) The discharge ceases to improve.
- h) The water is reasonable sand is not more than 20 parts in one million parts of water by volume after 20 minutes of starting the pump. The price for development will be paid as per item of the attached schedule of item of works. The electric power required will be provided by contractor at tubewell site at his own cost. The electric charges consumed will be arranged by the contractor and the watering devices will also arranged by the contractor out of his own resources.

The development of tubewell shall be carried out in the presence of an official of the department of the rank not less than J.E. or any other nominee of the Engineer – in – charge. However, during the final stage of development, the Sub Divisional Engineer concerned shall be present at site and presently verify the successful completion of development, including the number of hours during which the development was done by the compressor. In order to optimize the development process, the same shall be done during day time only.

XII) Acceptance Test :-

Productivity test of tubewell will be done by the contractor at his own expenses with the pump used for the development immediately after the completion of development as detailed in clause 9.4 and 12.1 of IS 2800 – 1991 (part – I) as amended up to date for a maximum period of 8 hours.

3. Acceptance test shall be verified by the Engineer – in – charge after fully satisfying himself about the drilling of bore, development and the verticality of the tube well as per procedure given up to date.

4. All payment shall be released after the completion of acceptance test to the satisfaction of the Engineer – in – charge.

xii) Testing of water quality for physical and chemical standard :-

After completion of development and productivity test of tubewell the quality of water for physical at his own expense from an approved standard laboratory. The water shall be got tested in respect of physical and chemical parameters as contained in the performa for a report on physical and chemical analysis of water enclosed in the DNIT.

Note :-

1. All the arrangements for the transportation of boring and lowering equipments to the site of work and its operation viz katcha track water electricity etc. if so required shall be made by the contractor at his own cost.

2. The contractor shall provide geological data of the well according to the method described in clause 12.2 and 12.2.1 of ISI specification No. IS 2800 – 1991 (Part – I) as amended up to date and prepare strata chart giving the details of different strata as received from the bore according to the instruction of the Engineer – in – charge of the work and nothing extra for the same will be payable. He shall locate strainer as per strainer location to be approved by the Engineer – in – charge

3. Drilling log book shall be kept at the site of the tubewell for filling of data described in clause 12.2 and 12.2.1 of ISI specification IS 2800 – 1991 (part – I) as amended up to date and nothing extra for the same will be payable.

4. All gold silver, oil and other materials or any relics, antiques and other similar things which may be found in or upon the site shall be the property of the Public Health Engineering Department, Haryana and the contractor shall deliver the same to such persons as the department may from time to time appoint to receive the same.

5. The work shall be carried out by the contractor strictly and in accordance with attached contract specification and ISI specification No. IS 2800 – 1991 (part – I) and IS 2800 – 1979 (part – II) as amended up to date.

6. Material such as gravel, boulders or any other material like gradient etc. which may come up during excavation of trenches/sumps etc. will be the property of Public Health Engineering Department Haryana and if any misappropriation there upon is made by the firm /contractor the recovery of Rs. 200.00 (Rs. Two Hundred) per cum will be made from the bill of the contractor/firm.

7. The site of the tubewell can be changed at later stage to some other site as deemed fit, if required by the Engineer – in – charge with the prior approval of the concerned Superintending Engineer Public Health Engineering Circle Jind nothing extra will be payable to the contractor for the change of site.

8. Water connection, if available at site of tubewell will be given to the contractor and ½% (half percent) charges of the gross amount of work done including cost of material shall be deducted from his bill, otherwise the contractor will made his own arrangement himself for the availability of water and no condition in this respect will be entertained.

9. No claim will be entertained from the contractor in take in the description of units or rates occurs or any of the items taken in this schedule. In case of any mistake, the same

will be rectifiable at any stage as per ISI specifications, by the Engineer – in – charge alongwith the amendments of the same received from time to time.

10. Site of tubewell will be checked for water availability by contractor by resistivity survey and rate for the same may be quoted in the schedule of rates.

11. To carry out at start of conditions of contract the successful tenderer will have to sign an affidavit that he has no relation and connection with the firm/contractor black – listed by Haryana Government Government of India from time to time.

12. The inspection of ERW steel pipe LCG/MS screen and gravel to ensure that the material confirms to required specification as per DNIT will be carried out by the Engineer – in – charge or his authorized representative himself and will also issue the inspection note there of before it is lowering and installation .

13. The payment for depth of drilling for Tubewell be will restricted to the length of ERW/MS piep & LCG screens / MS screens. Extra drilling shall not be payable to the contractor which is required to be done for take care of caving etc. The contractor shall quote the rate accordingly.

14. Drilling of tubewell will be taken in hand only if the resistively survey indicates the availability of good quality and sufficient quantity of water based on the resistively survey carried out by the firm/contractor. In case the resistivity survey indicates the availability of sufficient quantity and good quality of water but after drilling of tubewell, sufficient quantity and good quality of water is not available as per requirement of this DNIT, no payment shall eb made to the firm who will be responsible for the same. This clause is applicable only if resistivity survey is got done from the contractor.

18. RESISTIVITY INVESTIGATION :-

Though a resistivity investigation has been got done by the department and a repost in this regard has been attached with the DNIT, but contractual agency may check the same at his own cost no cost shall be reimbursed in this regard.

19.SPECIFICATION OF CLEAR WATER SUBMERSIBEL PUMPING SET :-

The pump will be ISI marked according to ISI 8034 – 1989 (With up to date amendment). The design of the impeller must be of bronze/Turbine type enclosed dynamically balance having seal rings on their hubs ensuring deviation and hunting free performance. Pump casting shall be capable to with stand hydraulic pressure equal to twice shall be guided by bearing provided in each bowl and have suitable suction case with strainer.

Suitable coupling arrangement shall be provided and non-return valve shall be provided on the pump discharge case.

The tenderer must furnish complete information on Annexure-A regarding pumping machinery and will submit as below :-

1. Make of the pump with model number.
2. Make of motors
3. Guaranteed over all efficiency of complete pumping set including pump efficiency at duty point and the neighboring head and motor efficiency at full load $\frac{3}{4}$ load and $\frac{1}{2}$ load. The discharge efficiency and hours power at – 25% and + 10% of working head be stated in the tender at duty point.

1) Thrust Bearing :-

The thrust bearing shall be of adequate size to withstand weight of all rotating parts as well as imposed hydraulic pressure.

2) Impellers :-

The impeller should be made out of high quality wear resistant bronze and is enclosed type perfectly balanced dynamically.

3) Shaft :-

The pump shaft should be made out of superior grade stainless duly ground and polished to close tolerance.

4) Stage Bowls :-

The stage bowls should be made of close-grained grey iron castings and treated with epoxy paint for longer life.

5) Suction Chamber :-

The pump suction chamber should be provided with a perforated strainer to prevent the entry in to the impellers of any suspended material in water.

6) Motor core :-

The Motor body should be made of stainless steel tube treated with epoxy coating.

7) Solid Core :-

The motor laminations should be supported with solid end rings on both ends to prevent any mechanical damage.

8) Rotor :-

The Solid rotor should be dynamically balanced and treated with epoxy paints.

9) Winding :-

The motor winding should be a non edging water proof dense PVC insulation which should also be resisted to chemical effects having an extremely high percussion strength.

10) Non Return Valves :-

The non return valve should be fully stream lined with minimum friction for each pumping set, flanged type and as per ISI specifications.

11) Bearing :-

The Motor and pump shafts should be supported in water lubricated leaded bronze plain bearing bushes.

12) Reflex valves and Sluice Valves (Heavy duty ISI marked) :-

These shall be heavy duty flanged type with Gun metal sheets and of reputed make ISI marked and shall be provided on the delivery side for each of the pumping set. Sluice Valve should be as per IS 780 and non return valve as per IS – 5312.

19. Specification of electric panel board :-

Providing and fixing of box type panel board at site made of 14 gauge M.S. sheet supported on angle iron frame with angle iron stand made of 50x50x6 mm comprising of star delta fully automatic air break starter 440 volts.3 phase 1 No. main switch with HRC fuse type 440 V. 1 No. Voltmeter 0 -500 V. 1 No. Amp meter of Havells of equally good make of adequate range, one No Voltage selector switch, one NO single phase preventer and one NO capacity of suitable range 1 No. earth leakage detector 3 Nos. indicating lamps all fitter box duly painted wall/floor mounting for motor of suitable capacity including cost of cable etc.

i) Detail of Accessories of Panel Board :-

1) Starter of Suitable capacity :-

This shall conform to IS 1822 – 1967 category AC and shall be suitable for motor supplied. The starter shall be fully automatic star delta air break type.

2) Voltage Drops :-

In motor circuit the conductor shall be so chosen that the voltage at the terminals of motor when running under full load conditions is not less than 90% of the voltage at the main bus bar.

3) Volt Meter :-

Each pumping set shall be providing with a voltmeter with 3 way and on/off selector switch as per IS 1248.

4) Amp meter :-

Each pumping set shall be provided with amp-meter to suitable range with 3 way and off selector switch as per IS 1248.

5) Main Switches :-

Incoming feeder, comprising of TPN switch fuse DNIT with HRC fuse of specification make & rating .

6) Indicating Lamps :-

One set indicators for each pump of red, yellow blue phase indicating lamps with plano type switches and fuse for the incoming supplies for giving indication of respective incoming line feeder .

7) Voltage Selector Switches :-

1 No. VSS of reputed make shall be provided.

8) Single phase preventor :-

The motor should trip even if one out of three phases goes off.

9) Overflowing of OHSR, prevention device :-

The starter should trip when the OHSR is filled up so that no water over flows (if applicable).

10) Submersible cable :-

Only Finolex make submersible cable 50 meter double length joint free PVC flexible sheathed flexible 3 cores flat with copper conductors for continuous use under water and air conforming to and duly marked IS 694/1977 (as amended up to date) for rated out put of motor required for pumps as per Annexure – A should be fixed to the discharge casing through guard provided on the pump cases. The size of the cable shall be as under :-

Rates out put of motors conductor.	Min size of cable copper conductor.
Up to 10 KW	= 2.5 mm ²
Above 10 KW to 14 KW	= 4 mm ²
Above 14 KW to 22 KW	= 6 mm ²

11. Earthing :-

All the electrical equipment such as LT panel etc. shall be provided with double loop earthing with thimble connection. All lighting equipment shall be provided with single loop earthing. All connection shall be by means of soldered thimbles of approved quality. The earthing shall be done in accordance with para 7 of IS 732 – 1968 and IS 3043 – 1996 (Code in

practice in earthing) all connections of the earthing system shall be visible for periodical inspection and testing.

It is absolutely essential that the entire earthing system should be designed with regard to likely earth fault and current based on the rating of equipments installed. All wiring and earthing shall be as per I.E. 1956 rules and shall be got approved from Electrical inspector Hary.

- b) Earthing with G.I. earth pipe 4.5 mm long and 40 mm dia with masonry enclosures on the top charcoal or coke and salt for pipe earth alongwith earth connections from earth electrode with 4 mm dia G.I. wire in 15mm dia G.I. pipe from earth electrode as required.

12 Capacitor :-

The Capacitors of suitable capacity

Voltage	: 400/440 Volt AC
Frequency	: 50 Hz
No. of fuses	: 3
Insulation level	: 3000 volt AC
Equipped with internal	: Provided in the form of suitably rate copper wire
Fuse tinned	:
Externally	: Provided with discharge resistors.

20 Erection of pumping machinery :-

i) Safeguarding & protection.

All machinery, equipment, pipes, specials accessories name plates, gauges etc. supplied by the contractors shall be safeguarded by him until completely erected, tested and handed over to and taken over by the deptt. All openings shall be protected to prevalently of foreign matter, by blinds/plugs. The machinery shall be carefully handed over case of loss or damage to any machinery or to any part ther of the contractor shall bear the responsibility and loss.

The machinery shall be protected by the contractor against wathre conditions and other chances of deterioration if required by the Engineer – in – charge these shall be covered with tarpaulins and with tin or G.I. sheets.

The components, parts etc shall be thoroughly cleaned laps assembly and assembled as per drawing and instruction or as per instruction by the Engineer – in – charge. The contractor shall be responsible for checking levels and orientation plan of all foundation diameter length and disposition of anchor bolts in accordance with above instruction well in advance of taking up the actual erection of machinery. In case of any variation in levels etc, the contractor shall do the necessary rectification at his own cost.

After completion of pre-erection works to the satisfaction of the Engineer – in – Charge, the contractor shall commence the erection of machinery of foundation.

ii) General:-

The contractor shall supply the manufacturers recommendations and instruction for installation and operation so as to ensure proper erection of machinery and its operation. These instruction and directions of the manufacturers shall be studied and checked up at site before final grouting is taken in hand.

The Contractor shall provide all tools and gauges for erection and alignment. The contractor for the purposes of erection shall employ, at his own cost, suitable lifting sacks, cranes and skilled men to the satisfaction of the Engineer – in – charge. The contractor shall himself provide huts sheds or godown for storage of his materials and labour etc.

The contractor shall be responsible for arranging and executing the work of centering, scaffolding staffing planting timbering strengthening shoring pumping fencing watching and lighting at night as well as in day.

The Contractor shall give all necessary personal superintendence during the execution of the work and as long there after the Engineer – in – Charge may consider necessary until the expiration of the Guarantee period started separate sheet attached herein.

After erection and alignment in accordance with the drawings, specification and instructions, a report shall be submitted to the Engineer – in – charge who will check and accord approval before taking up grouting of bolts and final dressing of foundations base Grouting shall be as per drawings specification and instructions of the Engineer – in – charge and shall form part of erection work.

Final alignment, as specified by the manufacturer, shall be carried out after piping connections are made. Tolerances specified by the manufacturer shall be added to ensure that no stresses are induced on the pumps by piping. The contractor shall again check the alignment by disconnecting the piping or in the working condition or in both conditions.

The drilling of holes in the base plate for fixing motors fixing of couplings on shafts etc and dowelling including provision of dowel pins or similar arrangement for retaining the alignment shall be carried out by the contractor as part of the erection work.

The contractor shall fix up pressure gauge lubrications grease cup and all other accessories as part of the unit. All machinery before erection shall be cleaned even, if opening of some of the parts is required, to bring it in its original condition, No. extra payment for such work shall be made.

21. Other items :-

i) Assembly/column pipes for lowering pump set in tubewell.

These shall be ISI marked medium class G.I. column pipes conforming to IS – 1239 (Pt.1) in length of 3 meter each duly welded with heavy quality MS flanged and both ends to make flanged joints for lowering submersible pump set in the tubewells including cost of flanges nuts bolts and rubber insertion completed. The flange shall be provided with a groove for passing and securing submersible cable.

ii) Chlorine Dozing Systems :-

Supply & erection of chlorine Dozing system the includes the supply erection commissioning & testing of chlorine dozing pump and one No. 300 liter capacity ISI marked HDPE storage tank of sintex or other reputed and approved make.

Chlorine Dozing system shall comprise of Wall mounting type solenoid driven motor – less electromagnetic diaphragm dozing/metering pump of reputed brand like fontus, Toshkon, Jesco Bhask or other equivalent and approved make/brand working on single phase 220/240 V 50 Hz electric supply with standard electronic controls suitable for minimum dozes capacity 0 to 5 LPH of sodium Hypochlorite solution at 8 bar back pressure with adjustable stroke length from 0 to 100% having EPDM diaphragm with PTFE coating on the side in contact with the

medium complete with PP pump head and connectors on/off switch flow rate adjustment mechanism, foot valve/strainer assembly back pressure injection valve assembly, clear flexible suction discharge tubing size 6mm x 4 mtr each and bleed valve discharge tubing tank or shelf mounting brackets and other necessary accessories complete.

iii) C.I. Double Flanged pipes :-

These shall be horizontally cast iron double flanged pipes Class – B conforming to IS 7181 – 1986 as amended up to date and bearing ISI certification marks in maximum length upto 2.75 meter each or shorter lengths/pieces as per site requirements. Supply and erection of the same shall include cost of labour and material required for fabrication for double flanged smaller piece lengths and jointing the delivery lines with flanged joints, inclusive of cost and labour for other for other material like nut bolts rubber insertion etc as per site requirements.

IV) C.I. Specials :-

The D/F and other C.i. Specials will be supplied by the contractor and fixed/erected at site as per requirements. The C.I. specials shall conform to IS 1538- 1993(part – I to 24) as amended up to date suitable for centrifugal cast (spun) pressure pipe conforming to IS 1536.

V) Non return Valve and sluice Valve :-

The Sluice Valve and non return valve of the require sizes shall be supplied and erected by the contractor. Which shall be flanged type of PN 1.6 type and duly ISI marked.

VI) Pressure gauge :-

Pressure gauges with siphon cock as per ISI 3624 having dial gauge of 150mm dia will be provided with the pump set and suitably fixed at site.

VII) Painting Schedule:-

All parts of the electrical equipments and pumping machinery, base plate accessories, piping and other iron of steel work not finished shall be filled and painted with three coats of approved paint which shall be applied after erection.

VIII) Performance :-

The Material supplied & fixed by the contractor shall be subject to no tolerance and the result shall be obtained during the official tests on the plant. If less satisfactory result then those guaranteed are obtained the Engineer – in – Charge reserves the right to reject the same.

ix) Manual Instructions :-

Six copies of comprehensive manuals for the use by the Engineer – in – charge before and during the erection and subsequent operation and maintenance of the plant shall be furnished after the approval of the drawings.

x) Guarantee :-

The tenderer shall submit with the tender guarantee certificate as given in Schedule VIII.

Additional Conditions of Contract – I

1. The work will be carried out strictly in accordance with the PWD book of specification edition 1990 as amended from time to time which forms a part an parcel of this contract agreement.
2. In this contact schedule of rates only essential portion of description of item has been written but will deem to cover the entire items as fully described in Haryana PWD

Schedule of rates 1988 as amended from time to time till date of receipt abstract of tenders.

- 3.** The Engineer – in – Charge shall be entitled to order work against any item of work shown in this contract schedule of rates hereinafter called the schedule to any extent and with out any limitation where –ever as may required in his opinion for the purpose of work, irrespective of the fact that the quantities are omitted all together in the schedule or are shown more or less than the work ordered to be carried – out.
- 4.** The rate for any item of work not provided in the Haryana PWD Schedule of rates 1988 but executed at site will be decided by the competent authority and the decision will be binding upon the contractor.
- 5.** All the items in this contract schedule of rates are subject to foot notes/ notes given in this Haryana PWD Schedule of rates 1988 with amendment regarding these items.
- 6.** Approximate quantities are given in the contract schedule of rates and may vary at the time of execution of work. The payment will however be made for the actual work done by the contractor No. extra claims whatsoever will be admissible to the contract on account of variation alteration or deletion of any item over the quantities depicted in this contract schedule of rates.
- 7.** All amendments issued in the Haryana PWD Schedule of rates 1988 till the date of receipt of the tender of the tender will be applicable on the contract schedule of rates.
- 8.** The contractor will have to make his own arrangement of bricks and all other materials required for successful execution, completion and operation and maintenance of the work.
- 9.** Any other item not included in this contract schedule of rates and got done at site of work will be paid according to relevant item of Haryana PWD schedule of rates @ rates accepted in the allotment letter and approval issued by the competent authority against this contract.
- 10.** No. claim will be entertained from the contractor in case any omission in description of rates and DNIT which might have occurred in any of these items taken in schedule while comparing this schedule or on account of typing/ comparison or over writing in case of any error. the same shall rectifiable at any stage as per Haryana PWD Schedule of rates 1988 alongwith the amendments on the same received from time to time.
- 11.** The premium should be quoted above or below the contract schedule of ratesd and no condition should be given. In case any condition is tendered this will be considered as Null and void and only the premium or discount quoted by the tenderer shall be accepted in case any tenderer refuses to accept this his earnest money will be forfeited.
- 12.** No. tendered premium shall be payable on N.S. items The Contractor will quoted his rate for each NS item.
- 13.** The contractor will dispose off the excavated surplus soil at his own cost to a place as directed by the Engineer – in – Charge but shall by all means clear the site from the extra earth No. earth lead lift wet earth loading, unloading and carriage will be paid to the contractor who will have no claim on the same at any time later. Further the

contractor will quote his rate taking into account the effect of the surplus earth which will be disposed off by him at his own cost.

- 14.** All the reinforcement shall be Fe-415 grade/ for steel confirming to relevant BIS and of TATA, RATHI, TISCO, IISCO and shall be procured by the contractor at his own cost.
- 15.** The rates included in the contract cover the cost of filling of the water retaining structure testing for water tightness to the full satisfaction of the Engineer – in – Charge and emptying the same if desired.
- 16.** Minimum 25mm clear cover be provided on the reinforcement on the inner side of the water retaining structure. The contractor shall give structurally safe and water proof structure.
- 17.** Contractor shall be fully responsible for structural safety in all respect of the structures existing and under construction as per scope of work of the DNIT.

CEMENT

- 18** The cement will be arranged by the Contractor/Society/Agency/Firm at his own level. The cement shall be ordinary Portland -43 grade or Puzzolana Portland Cement duly ISI marked & confirming to ISI – 8112 with latest amendment. The cement manufactured by Mini Cement Plant shall not be used.
- 19** The cement shall be purchase from authorized Distribution of Manufacturer or Authorized Dealer.
- 20** The cement arranged by the Contractor/Agency will be brought at site and shall be kept in the Store maintained at site provided with dual locking system i.e. one key of lock with representative of the Deptt. and 2nd key of lock with authorized representative of agency.
- 21** The contractor/Agency will inform the Executive Engineer/Sub Divisional Engineer for the quantity of the cement brought at site will bill/challan in the name of the agency before using the same and Engineer-in-charge or his authorized representative may check the actual receipt of cement at site.
- 22** The Engineer-in-Charge or his authorized representative may, if need be also send the cement for testing to any Govt. Lab/reputed Lab. The samples of the cement will be collected as per BIS specifications in the presence of the Contractor/Agency or his authorized representatives. In case the cement is found as per ISI specifications then the cost of testing will be borne by the Deptt., but in case the cement sample fails to meet the BIS requirements, then appropriate action as per Contract Agreement will be taken. The cost on the testing cement alongwith any loss caused to Govt. shall also be recovered from the Contractor/Agency and no claim in this respect will be entertained.
- 23** The stock of cement at site shall not be more than one month consumption and only sufficient quantities shall be kept to ensure continuity of the work.
- 24** The cement consumption register showing date of cement brought at site by the Contractor/Agency and its day-to-day utilization will be maintained. The said

register shall be open to inspection for representative of the Engineer-in-Charge during their visit at site. The consumption and receipt of cement in the Contractor/Agency and representative of Engineer-in-Charge. The said register will be issued by office of concerned Sub Divisional Engineer under his dated signature for each agreement separately. The register will also contain the columns for work executed against the cement issued.

- 25.** Quality check register will be maintained at site and sampling of work executed every month shall be recorded in the same.
- 26.** Construction of pump chamber, boundary wall and installation machinery shall be taken up only after ensuring satisfactory installation of tubewell to the satisfaction of Engineer – in – charge. Any Civil work/Machinery work carried out without satisfactory installation of tubewell as above shall be the responsibility of contractor and nothing will be paid on this account.

20 Water

All water to be used on the work shall be clear fresh water to be obtained from a source to be approved by the Engineer-in-Charge. It shall be entirely free from brackish salts, alkaline, acid, mineral impurities and confirm to clause 4.3 of IS-456-2000 and shall be stored and carried in clear tank and vessels.

The contractor shall provide at his own expenses at all time arrangement for supply of water for all purpose to the full satisfaction of the Engineer-in-Charge and shall pay all charges of Govt. in case of the supply of water by Govt.

NOTES

1. Any other item not included in this contract schedule rates and got done at site or works will be said according to Haryana PWD Schedule of rate 1988 subject to the premium of discount, tenders by the contractor.
2. The work will be carried out strictly in accordance with the PWD book of specification 1990 edition, which will form a part and parcel of this contract schedule of items.
3. In the Contract Schedule of rates only essential portion of description of item has been written, but it will be deemed to cover the entire item as fully described in Haryana PWD Schedule of Rates. 1988.
4. Approximate quantities are given in the Contract Schedule of Rates and may vary at the time of execution of work. The payment will however be made for the actual work done by the contractor.
5. The Engineer-in-Charge shall be entitled to order work against any item of work shown in this contract schedule of rates hereinafter called the schedule to any extent and without any limitation where-ever as may be required in his opinion for the purpose of work irrespective of the fact that the quantities are omitted all together in the schedule are shown more or less than the work ordered to be carried out
6. All amendments issued on the Haryana PWD Schedule of Rates 1988 up to the date of opening of the tender will be applicable on the Contract. Schedule of rates.
7. The rates should be quoted by below or above the ceiling rate and no condition should be given. In case of any condition in tender this will be considered as Null and void
8. The item which are not provided in the Haryana PWD schedule of rates and the contract schedule of rates but executed at site will be paid at the rates decided by the Engineer – in – Charge. His decision will be binding upon the contractor.
9. All the items in this contract schedule of rates are subject to foot notes given in the schedule or rates are subject to foot in notes given in the schedule of rates 1988.
10. No. Claim will be entertained from the contractor in case of any mistake in description of rates or unit occur on any case within composing this schedule on account of typing or comparison over writing. If there to be any mistake the same shall be rectifiable at any stage as per PWD schedule of rates 1988 by the Engineer – in – charge alongwith the amendments of same received from time to time as applicable on its date of opening of tender.
11. 1% labour cess shall be deducted from the bills of contractor/ agency as covered under the contract labour(Regulation & Abolition) Act, 1970 and implementation of building and other construction workers Welfare Cess Act 1998 amended suitably by State Government from time to time which will be deposited with Secretary, Haryana Building and other construction workers Welfare Board through demand draft payable at Chandigarh.
12. The contractor/agencies shall fill up the component-wise rates in figures and words for Non-Schedule items in the space given on page 6 under the heading (B) Non-Schedule items. The tender of the contractor/ agency who does not fill up the component-wise rates shall be outrightly rejected as an irresponsible tender and earnest money of concerned money of concerned contractor/agency shall be forfeited for not observing the required procedure.

ADDITIONAL TECHNICAL CONITIONS

1. Test Certificate.

A test certificate form the manufactures shall be handed over to the department before installation of the equipment specifying that the equipment confirm to relevant ISS/PWD specification.

2. Wiring Diagram

After completion of the work complete drawing showing connections to the various equipment is to be prepared by the tenderer and to be submitted to the deptt. alongwith final bill of the work.

3. Connections

Inter connections from the busbar chamber to the different main switches/Air circuit breakers should be through solid capper bars of the required capacity duly insulated for which no extra payment will be made.

4. The rates quoted should be for at site of work including cost of installation, freight, octroi taxed and other charges. Nothing extra over and above rates will be admissible.

5. Superfluous conditions and conditional tender will be rejected.

6. Telegraphic tenders and tenders without earnest money in shape of deposit at call will not be accepted.

7. The machinery will be installed as per standard PWD Specifications and to the entire satisfaction of the Engineer – in – Charge.

8. Contractor will also be responsible for getting inspected and passed and approved the whole electrical system from the Chief Electrical Inspector or as the case may be. He will made necessary payments of free for this purpose to that office. The Department however will tender necessary assistance to the contractor. All testing and charges of various electrical equipments required by UHBVN/DHBVN will be borne by the contractor.

9. The quantity of electrical equipments and pumping sets can be increased/decreased by the Deptt.

10. The tender submitted by the firms shall be valid for 90 days (3 months).

11. In case any mistake is found in the DNIT the same shall be rectifiable even after the opening of the tender and execution of contact agreement as per requirement and site conditions.

ANNEXUTE 'A'

(INFORMATION TO BE GIVEN BY TENDERER DULY CERTIFIED AND SIGNED)

- Discharge = LPM , Head = Meter
1. Make of pump
 2. Model of the pump
 3. Name of manufacturer
 4. Efficiency of pump only at duty point
 5. Overall efficiency of set at duty point
 6. Shut off Head (Meters)
 7. Discharge at (-) 25% Head
 8. Efficiency at (-) 25% Head
 9. Discharge at (-) 10% Head
 10. Efficiency at (+) 10% Head
 11. No of stages
 12. Max. overall diameter including cable guard in mm of pumping set
 13. Input at duty point (KW)
 14. Input at (-) 25% Head (KW)
 15. Input at (+) 10 % Head (KW)
 16. Suitability of set at + 6%(-) 15% Volts yes/No
 17. Suitability of set at + 3% Variation Yes /No
 - in frequency
 18. Guarantee as per DNIT
 19. Performance curves (All three characteristics) to be attached Y/No.
 20. Wt of motor pump set (Kg.)
 21. Minimum bore well size (mm) required
 22. ISI License No. & date and validity
 23. Make of cable – only Finolex made
 24. Size of cable (mm²) in square mm
 25. Rate per set with accessories yes /No
 26. All accessories as per DNIT
 27. For
 28. ST/Excise duty
 29. All technical details as per DNIT yes /No

ANNEXURE – ‘B’

SCHEDULE NO. III

LIST OF APPROVED MAKES

1. Submersible pump
 - f) Amrut
 - g) Jyoti
 - h) B.S.
 - i) KSB
 - j) Calama (h) Sabar(e) Kirloskar (m) Texmo (n) Hindustan.
2. Starters :-
 - d) L & T
 - e) Siemens
 - f) BCH (g) Bentex
3. Non – Return Valve
 - a) ISI marked
4. Sluice Valve
 - a) ISI marked
5. Main Switch
 - e) L & T
 - f) Siemens
 - g) Crompton Greaves
 - h) Hawells (e) Bentex
6. Capacitors
 - f) Crompton Greaves
 - g) Asian
 - h) Javie
 - i) L & T
 - j) Siemens
7. LCG Screen.
 - C) Johnson
 - d) Super
8. G.I. pipes
 - d) Tata
 - e) Jindal
9. Voltmeter & Amp Meter
 - d) AE
 - e) L & T
 - f) MEI (g) Bentex
10. Submersible Cable
 - b) Finolex
11. Copper wire of Plaze/Havels make for use in penal Board
12. ISI marked Cable from HVPN supply to penal Board
13. HDPE Tank – make SINTEX
14. DOZER Make FONTUS, TOSHKON JESCO, BHASK

SCHEDULE NO . IV
CONTRACT DRAWING ACCOMPANYING

List of drawing and curves to be submitted by the contractor with the tender for electrical equipments and pumping machinery.

General arrangement of the electrical equipments and pumping machinery and other equipment offered.

Witness _____

Contractor _____

Dated _____

Dated _____

SCHEDULE NO . V

List of drawings in duplicate to be submitted by the contractor to the Engineer – in – charge for approval during the course of construction of work. Completed and final to the scale, foundation plans.

Completed and to the scale, other detailed dimensioned and sectional working drawings to panel board and line diagrams of LT cables and PVC copper wiring and pumping machinery with suction and delivery pipe and line diagrams. Any other working drawing required by Engineer – in – charge from time to time.

COMPLETION PLANS :-

Three bound sets of above drawings together with printed instructions, leaflets, characteristics curves and operations Hand Books of th various equipment installed at the work.

Witness _____

Contractor _____

Dated _____

Dated _____

SCHEDULE NO . VI

The following is the list of drawing attached with the DNIT.

Layout plan showing location of tubewells at Morkhi.

Line Diagram of pipes and specials.

SCHEDULE NO . VII

GUARANTEE :-

I, we hereby guarantee that the electric equipment pumping machinery switch gear, distribution board electric cable etc or any other apparatus supplied are according to the latest ISI, Specifications whichever applicable on the date of opening of tender and according to specification attached to the tender, wherever ISI specifications do not exist. The performance is guaranteed for the entire work for a period of one year after the date of final acceptance of the work by the Engineer – in – charge. The guarantee also covers for the same one year, efficient, reasonably free from noise and satisfactory working of the machinery and equipment. If found not to comply with the guarantee. I/We shall at our own cost and expenses form replace or do whatever is necessary to remedy the fault as required by the Engineer – in – charge . I/We shall during the same period of one year repair promptly at our cost and expenses, all breaks – downs or failures which may ocarina the opinion of the Engineer – in – charge, due to faulty material and workshop.

Witness_____

Contractor _____

Dated _____

Dated_____

Name of Work: -	Providing and installing 1 No. deep tubewell in village Morkhi Tehsil Safidon Distt. Jind."Providing & installing 1 No. T/well of size 10"X8" dia upto 244 meters depth below ground level by Reverse Rotary Rig according to ISI specification No.2800-1991 (Part-I) and IS 2800-1979 (Part-II) as amended up to date, Supplying & fixing of 1 No. Submersible pumping set on tubewell and electric control panel, C.I. Specials for connecting of Tubewell Construction of 1 No. Pump Chamber, Laying of rising main and all other works contingent thereto."					
						Amt. to Rs. 12.85 Lacs

FINAL ABSTRACT OF COST

			HSR	NS
1	Sub Head No.1	Pump Chamber	Rs. 152330	
2	Sub Head No.2	Boundary wall	Rs. 99763	
2	Sub Head No.3	Connecting pipe	Rs. 17009	
		Distribution system B) NS	Rs.	4900
3	Sub Head No.3	Drilling of Tubewell	Rs.	851050
4	Sub Head No.4	Pumping Machinery	Rs. 70242	
				85000
			Rs. 339344	940950
		Grand Total	Rs. 1280294	
			Say Rs. 12.85 Lacs	