



TENDER DOCUMENT

NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION (NHRDF)

Bagwani Bhawan, 47, Pankha Road Institutional Area,
Janakpuri, New Delhi – 110058

Phones: 011-28524150, 28522211, 45136697,28525129

E: mail: delhi@nhrdf.com visit us at www.nhrdf.org or www.kvkdelhi.org

**NAME OF WORK :- PROPOSED CONSTRUCTION OF WORKING
SHED AT NATIONAL HORTICULTURAL
RESEARCH AND DEVELOPMENT
FOUNDATION, SINNAR, DISTT.-NASHIK.**

PART - I (TECHNICAL BID)

E.M.D : Amount equal to 1% of the tendered value

Last date for receipt of tender : 31/03/2023 upto 2 PM

Date of opening of sealed tenders: 31/03/2023 at 2:30 PM

Cost of tender documents : Rs. 2,000/- (Non-refundable)

Address for submitting Tender documents : As indicated above

**NAME OF WORK : CONSTRUCTION OF WORKING SHED AT NATIONAL
HORTICULTURAL RESEARCH AND DEVELOPMENT
FOUNDATION, SINNAR, DISTT.-NASHIK**

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DISCLAIMER

1. Detailed Time Table for various activities to be performed in tendering process by the Tenderers for quoting their offer is given in this Tender Document under "Tender Schedule". The Tenderers should carefully note down the cut-off dates for carrying out each tendering process / activity.
2. Every effort is being made to keep the Website up to date and running smoothly 24 x 7 by the NHRDF. However, NHRDF takes no responsibility, and will not be liable for, the website being temporarily unavailable due to any technical issue at any point of time.
3. In such an event NHRDF will not be liable or responsible for any damages or expenses arising from any difficulty, error, imperfection or inaccuracy with this Website. It includes all associated services or due to such unavailability of the Website or any part thereof or any contents or any associated services.
4. Tenderers must follow the schedule of tendering process and get their activities of tendering processes done well in advance so as to avoid any inconvenience due to unforeseen technical problem, if any.
5. NHRDF will not be responsible for any incomplete activity in the tendering process by the tenderers due to technical error/ failure of website and it cannot be challenged by way of appeal, arbitration and in the Court of Law.



NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION

Bagwani Bhawan, 47, Pankha Road Institutional Area, Janakpuri,
New Delhi – 110 058

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Email: delhi@nhrdf.com visit us at www.nhrdf.org

Ref: NHRDF/HO/Tender/Working Shed-Sinnar/2022-23/ 5870

Dated: 17/03/2022

TENDER NOTICE

NHRDF invites sealed tenders from reputed and experienced contractors registered under appropriate class for construction of working shed at its Regional Research Station at Kundewadi, Taluka-Sinnar, Distt.-Nashik (Maharashtra).

The detailed terms & conditions of tender documents can be downloaded from NHRDF & KVK websites www.nhrdf.org & www.kvkdelhi.org. The bidders may download the tender document from the above stated website by making payment of non-refundable tender fee of Rs.2000/- by DD and submit the duly filled in sealed tender documents complete in all respect at the above mentioned address on or before 31/03/2023 at 2 PM. Tenders will be opened on the same day in the presence of the tenderers at 2:30 PM. The Director, NHRDF reserves the right to accept or reject any or all tenders without assigning any reason.

DIRECTOR

DETAILS OF WORK

Name of Work: - PROPOSED CONSTRUCTION OF WORKING SHED AT NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION, SINNAR, DISTT.-NASHIK

Estimated cost put to tender : Rs.96,68,630 /-

Earnest Money (1%) : Rs.96,686/-

The PRESCRIBED AMOUNT OF EMD SHALL BE PAID BY THE TENDERERS THROUGH DD DRAWN IN FAVOUR OF NHRDF PAYABLE AT NEW DELHI

Total Security Deposit 5 % (Five Percent)

1. Amount of EMD @ 1% of the estimated value of the tender to be deposited alongwith tender : **Rs.96,686/-***
2. Additional amount to be deposited towards Security deposit @ (1.5%) of the total value of the contract at the time of signing of the contract if allotted :
3. The balance 2.5% of the contracted value will be deducted from each running bill

Note: * In case the contracted value is higher than the estimated value of the tender, the contractor will be under an obligation to deposit the 1% of the difference amount.

NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION
BAGWANI BHAWAN, 47, JANAKPURI INSTITUTIONAL AREA, JANAKPURI,
NEW DELHI -110058, Website: www.nhrdf.org, www.kvkdelhi.org,
Email : delhi@nhrdf.com

INVITATION FOR SUBMITTING SEALED TENDERS AGAINST TENDER NOTICE NO. 5870 FOR YEAR 2022-23

1. Sealed **Item Rate Tenders** are invited by the **National Horticultural Research and Development Foundation** for the following work from capable, experienced, qualified and eligible civil contractor registered in Class IV & Above category with PWD of Maharashtra State. The name of work, estimated cost, earnest money, security deposit, time limit for completion etc. are as under

| Sr. No | Name of Work | Estimated Cost | Earnest Money @1% of estimated cost | Class of Contractor | Time limit in Calendar Months |
|--------|--|----------------|-------------------------------------|--|-------------------------------|
| 1 | Construction of Working shed at NHRDF Sinnar, District Nasik (Maharashtra) | Rs:96,68,630 | Rs.96,686/- | Class IV & Above Registered with PWD Maharashtra | 70 days (Seventy Days) |

Tender document containing conditions of contract, specifications and contract drawings can be downloaded from the websites of NHRDF/KVK. The cost of tender document is Rs. 2000/- (Rupees Two Thousand Only) which will be paid in form of Demand Draft in favour of NHRDF payable at New Delhi. The fees of tender document will be non-refundable.

Further information regarding the work can be obtained from the Office of the National Horticultural Research and Development Foundation, Sinnar, Distt.-Nashik

Bids will be opened as per tender schedule, in the presence of such intending tenderer or his/their authorized representatives who may be present at the time opening

Contractors may raise queries/points, if any, regarding the work on email-delhi@nhrdf.com or in the office of the Director, NHRDF, New Delhi

2 **Physical Submission:**

The bidder shall submit the Hard Copy in "Sealed Envelope" of Technical & Financial Bids on or before last date and time of submission of tender.

- a. The offer shall remain open for acceptance for minimum period of 70 days from the date of opening of Envelope No. 2 (Financial Bid) and thereafter until it is withdrawn by the contractor by notice in writing duly addressed to the authority.
- b. The tenderer if firm or company shall in their forwarding letter mention names of all the partners of the firm or company (as the case may be) and the name of the partner who holds the power of attorney in any, authorizing him to conduct transaction on behalf of the firm or company.
- c. The right is reserved to revise or amend the contract documents prior to the date notified for the receipt of the tenders or extended date. Such deviations, amendments or extensions, if any, shall be communicated in the form of corrigendum by letter or / and by notice in News paper as may be considered suitable
- d. The tenderer shall enter his **Item rates** in Financial Bid/BOQ in words and figures " In case there is difference between written in figures and words, the lower offer will be taken as final.
- e. No pages should be removed from, added in or replaced in the tender documents.
- f. Right is reserved to reject any or all tenders without assigning any reasons thereof.
- g. Tenders which do not fulfill any or all conditions or are incomplete in any respect are liable for summery rejection.
- h. The tenderer may, in forwarding letter, mention any points he may wish to make clear but right is reserved to reject the same in the whole of the tenders if the same become conditional tender thereby.

3. GENERAL

- a) **Time limit:** The work is to be completed within time limit as specified in the Notice **inviting** tender which shall be reckoned from the date of written order of commencing the work and shall be inclusive of monsoon period.
- b) **Tender Rate :** No alteration in the form of tender and the schedule of tender and no additions in the scope or special stipulation will be permitted. Rates quoted for the tender shall be taken as applicable to all leads and lifts.
- c) **Tender Units:** No change in the units mentioned in BOQ/Financial Bid shall be allowed. In the case of difference between rates written in figures and words, the correct rate will be the one, which is lower of the two.
- d) The Income Tax @ 2% or percentage in force from time to time or at the rate as intimated by the competent Income Tax authority shall be deducted from bill amount whether measured bill, advance payment or secured advance.

4. EARNEST MONEY:

Earnest money of Rs.96,686/- (**Rs. Ninety Six Thousand Six Hundred Eighty Six Only**) shall be paid through Demand Draft. The said amount of earnest money shall not carry any interest whatsoever.

- a. Tender of those who do not deposit earnest money in the above acceptable forms shall be summarily rejected. Earnest money in any other form of cash or cheque will not be accepted.
- b. The amount of earnest money will be refunded to the unsuccessful tenderer on deciding about the acceptance or otherwise of the tender or on expiry of the validity period whichever is earlier
- c. In case of the successful tenderer, it will be refunded on his paying the initial security deposit and completing the tender documents or will be transferred towards a part of security deposit to be paid after awarding of the work. If successful tenderer does not pay the security deposit in the prescribed time limit and complete the agreement bond, his earnest money deposit will be forfeited to the NHRDF
- d. Earnest money of the un-successful tenderer will be refunded on their application only after an intimation of rejection of their tender is sent to them or on the expiry of the validity period whichever is earlier.

5. Address for submission of Tender Document by Post/Courier or by Hand :

To,
The Director,
NATIONAL HORTICULTURAL RESEARCH AND
DEVELOPMENT FOUNDATION (NHRDF)
Bagwani Bhawan, 47, Pankha Road Institutional Area,
Janakpuri,
New Delhi – 110058

Pre-requisites to participate in the Tenders processed by Director, NHRDF

1. **ENVELOPE NO. 1: (TECHNICAL BID WITH DOCUMENTS)**

The bidder must download the bidding documents from NHRDF & KVK website (www.nhrdf.org or www.kvkdelhi.org) .

The first envelope clearly marked as "Envelope No.1" shall contain the following documents:

- 1.1 hard copy of forwarding letter
- 1.2 hard copy of Valid Contractor Registration to NHRDF.
- 1.3 Earnest money of the value of **Rs.96,686/- (Rs. Ninety Six Thousand Six Hundred Eighty Six Only)** Shall be paid by demand draft in favour of NHRDF payable at New Delhi.
- 1.4 Details of Income Tax Circle or ward of the district in which the tenderer is assessed to Income Tax , Tenderer PAN No. and complete postal address with Pin Code and telephone Numbers. Scanned copy of original Income Tax Return for the immediate previous three financial years.
- 1.5 Scanned Copy of Valid Professional Tax Registration Certificate in the form of PTR and PTE Under Sub-Section (1) of Section (5) of Maharashtra State Tax of Profession, Trade, Callings, Employment Act.1975 Rule 3(2) with Lates Clearance Certificate To for employees including Technical personal from the Professional Tax office of the Concerned District of Maharashtra
- 1.6 **Details of work of similar type carried out by the contractor. During Last Five Years (In Form No. IV).** Work should be executed during last **Five Years**.
- 1.7 Scanned from original copy of valid GST registration certificate from Goods and Service Tax Act.
- 1.8 Scanned copy of original Registered Partnership Deed, Memorandum of Articles of Association, if the tenderer is a Partnership Firm, Joint Stock Company and Power of Attorney and Firm Registration Certificate if any.
- 1.9 Scanned copy of Affidavit in respect of genuineness of document contained in the envelop No.1 in the prescribed proforma provided with tender set on **Rs. 500/- Stamp paper** for each work.
- 1.10. Audited Balance sheet of last Five Years Certified by Chartered Accountant.
- 1.11. Declaration of the Contractor (Should be submitted on **Rs. 500/- Stamp Paper**)
(As per form VII)
- 1.12 It is Mandatory for Bidders to obtain **site visit report** from Concern competent authority of **NHRDF** Office before submission of Bid.(As per Proforma VIII)
- 1.13 Form I to VIII as per proforma attached

2. QUALIFICATION CRITERIA

2.1 Qualification will be based on Bidder's meeting all the following minimum pass/fall criteria regarding the Bidder's general and particular experience, personnel and equipment capabilities, and financial position, as demonstrated by the Bidder's responses in the forms attached to the Bid. Subcontractor's experience and resources shall not be taken into account in determining the applicant's compliance with the qualifying criteria.

2.2 General Experience -

The Applicant shall meet the following minimum qualifying criteria:

A. ***1. Maximum of the annual financial turnover in, last 7 (Seven) years (in all Classes of civil engineering construction work only) worked out shall not be less than Rs. 130 lakhs., In support of this, scanned copy certificate by the Chartered Accountant showing sources of receipt should be produced.***

2. Minimum Cost of Similar types of works completed during last Seven Years should be

i) Similar Type of 3 Contract Costing at Least **Rs. 39.00 Lakhs** each

OR

ii) Similar Type of 2 Contract Costing at Least **Rs. 48.83 Lakhs** each

OR

iii) Similar Type of 1 Contract Costing at Least **Rs. 78.13 Lakhs.**

2.3 Minimum Quantity of items executed in any one year during last seven years.

| No. | Item of Work | Minimum Quantity Required | Unit |
|-----|---|---------------------------|-------------|
| 1 | Reinforced Cement Concrete M-20 & above | 100.00 | Cubic Meter |
| 2 | HYSD/TMT Steel | 19.00 | Metric Ton |
| 3 | Fabrication of Structural Steel | 30.00 | Metric Ton |

2.4 List of Plant & Equipment to be Deployed on Contract Work (Information to be given in proforma III & IIIA)

| Sr. No | Equipment type and characteristics | Minimum number required. | Capacity | Owned/ Hired |
|--------|---|--------------------------|-------------|--------------|
| 1 | Reversible type tilting Concrete Mixer with weigh batching facility | 1 No. | - | Owned |
| 2 | Sand Screening cum Washing unit electronic or diesel operated | 1 No. | 4/6 Cum/hr. | Owned/ Hired |
| 3 | Mobile Tower Crane | 1 No. | - | Owned |
| 4 | Truck/ Tipper/ Tractor | 1 No. | - | Owned |
| 5 | Water Tanker | 1 No. | | Owned |
| 6 | Steel centering plates Aero or equivalent make with steel props | 500 Sq.m | | Owned |
| 7 | Mechanical Hoist | 1 No. | | Owned |

2.5 Disqualification

The Contractor are subject to be disqualified if they have :-

- made misleading or false representation in the forms, statements submitted; and/or attachments submitted in proof of the qualification requirements; and
/ or
- Records of poor performance such as abandoning the work, not properly record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- Participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the Employer.

3. ENVELOPE NO. 2: Financial Bid:

- 1) The second envelope "Envelope No.2" shall contain only the main tender including the Common Set of Conditions / Deviation issued by NHRDF, if any. A tender submitted without this would be considered as invalid.

The Tenderer should quote his offer duly signed in terms of **Item Rate** of at the appropriate place of tender documents to be submitted only in Envelope No.2 He should not quote his offer any where directly or indirectly in Envelope No. 1. The contractor shall quote for the work as per details given in the main tender and also based on the detailed set of conditions issued / Additional stipulations made by the NHRDF as informed to him by a letter from Technical person, NHRDF.

3.1 SUBMISSION OF TENDER:

Refer to Section 'Guidelines to Bidders

3.2 OPENING OF TENDERS :

On the date specified in the tender schedule, following procedure will be adopted for opening of the tender :

A. ENVELOPE NO.1: Documents

First of all **Envelope No. 1** of the tender will be opened to verify its contents as per requirements. If the various documents contained in this envelope do not meet the requirements of the NHRDF, a note will be recorded accordingly by the tender opening authority and the said tenderer **Envelope No.2** (Financial Bid) will not be considered for further action, but the same will be recorded.

The Decision of the tender Opening Authority in this regard will be final and binding on the contractor.

B. ENVELOPE NO.2: Financial Bid

This envelope shall be opened after opening of Envelope No.1 only if contents of Envelope No.1 are found to be acceptable to the NHRDF and/or fulfill the Qualifying Criteria.

4. EARNEST MONEY

The amount will be refunded to the unsuccessful tenderer on deciding about the acceptance or otherwise of the tender. In case of successful tenderer, it will be retained.

5. SECURITY DEPOSIT.

Total Security Deposit 5 % (Five Percent)

1. Amount of EMD @ 1% of the estimated value of the tender to be deposited alongwith tender : **Rs.96,686/-***
2. Additional amount to be deposited towards Security deposit @ (1.5%) of the total value of the contract at the time of signing of the contract
3. The balance 2.5% of the contracted value will be deducted from each running bill

All compensation or other sums payable by the Contractor under the terms of this contract or any other contract or on any account may be deducted from his SecurityDeposit or from any sums which may be due to him or may become due to him by NHRDF on any account and in the event of the security being reduced by reason of any such above noted deductions, the Contractor shall within 10 days of receipt of notice of demand from the Technical person, NHRDF make good the deficit.

There shall be no liability on the NHRDF to pay any interest on the Security Deposited by or recovered from the Contractor.

The Security Deposit shall be refunded after completion of defect liability period prescribed for this contract in accordance with the provisions in Clause 1 and 20 of the conditions of contract.

5.1 Additional Performance Security for Below offers -(As Per GR. Dated 27.09.2018 and 26.11.2018).

In case lowest successful bidder's offer found more than 10.00 % below the estimated cost put to tender, in that case, the tenderer shall have to pay Additional Performance Security deposit drawn in favour of the Director, **NHRDF (in form of DD/FDR/B.G.)** with in 8 (eight) days only [**time limit of 8 days will not be relaxed**] from the date of opening of Financial bid i.e 2nd envelope as specified below;

- 1) If Tenderer's offer is up to 10% below the estimated cost put to tender, then the Additional Performance Security deposit shall be 1% of the estimated cost put to tender.
- 2) If Tenderer's offer is up to 15 percent below the estimated cost put to tender, Tenderer shall submit 1% plus the percentage by which tender offer is more than 10% below of amount put to tender. (e.g. if tenderer offered 14% below he have to submit (14% - 10%) + 1 % i.e. total 5% of estimated cost put to tender) or minimum Rs. 1000/- whichever is higher.
- 3) If Tenderer's offer is more than 15 percent below the estimated cost put to tender, Tenderer shall have to submit Additional Performance Security Deposit as specified below

| | | |
|--------------------|--|------------|
| A. | for offer upto 10% below the estimated cost put to tender | 1 % |
| B. | for offer upto 15% below the estimated cost put to tender (15% - 10% = 5%) | 5 % |
| C. | more than 15% below tenderer have to submit (e.g. if tenderer offered 19% below tenderer have to submit (19 - 15% = 4% X 2 = 8%) | 8 % |
| Total (A + B + C) | | 14% |

- 4) If the amount of Performance Security Deposit as required above (under A + B + C) is not submitted by the bidder then his offer will be treated as "Non Responsive" and will not be considered.
- 5) The **D.D./F.D.R/B.G.** should bear the MICR and IFSC Code Number of the issuing bank.
- 6) The **Hard Copy** of **D.D./F.D.R/B.G.** shall be submitted in the office of the Director, **NHRDF** within **8 (Eight) Days** from the date of opening of Envelope No. 1 and 2.
- 7) If it is found that the **D.D./F.D.R./B.G.** as above submitted by the bidder is False / Forged then the Earnest Money submitted by such bidder shall be Forfeited and his

registration as a contractor of **NHRDF will be suspended & he will be entered in the Black List.**

- 8) The Additional Performance Security shall be returned immediately upon satisfactory completion of work, the certificate of which shall be issued by the Director, **NHRDF** before releasing the additional security.
- 9) The above referred NHRDF Resolution is the part of this tender.

6. DOWNLOADING OF TENDER DOCUMENT

Information regarding contract as well as blank tender forms can be downloaded from website upon providing the details of the payment of cost as detailed in the N.I.T.

7. The tenders who do not fulfill the condition of the notification and the general rules and directions for the guidance of contractor in the agreement form or are incomplete in any respect are likely to be rejected without assigning any reason therefore.

8. **a)** The Tenderers shall be presumed to have carefully examined the drawings, conditions and specifications of the work and have fully acquainted themselves with all details of the site, the conditions of rock and its joints, pattern, river, weather characteristics, labor conditions and in general with all the necessary information and data pertaining to the work, prior to tendering for the work.

b) The data whatsoever supplied by the NHRDF along with the tender documents are meant to serve only as guide for the tenderers while tendering and the NHRDF accepts no responsibility whatsoever either for the accuracy of data or for their comprehensiveness.

9. The quarries for extraction of metal, murum etc. provided in the sanctioned estimate are as per survey conducted by the NHRDF. The Contractor should however examine these quarries and see whether full quantity of materials required for execution of the work strictly as per specification are available in these source before quoting the rates. In case the materials are not available due to reasons whatsoever, the contractor will have to bring the materials from any other source with no extra cost to NHRDF. The rates quoted, should therefore be for all leads and lifts from wherever the materials are brought at site of work and inclusive of royalty to be paid to the Revenue.

10. POWER OF ATTORNEY:

If the tenderers are a firm or company, they should in their forwarding letter mentioning the name of all the partners together with name of person who holds the power of attorney authorizing him to conduct all transactions on behalf of the body, along with the tender.

11. The contractor or the firms tendering for the work shall inform the NHRDF if they appoint their authorized agent on the work.

- 12.** Any dues arising out of contract will be recovered from the contractor as arrears of land revenue if not paid amicably; moreover, recovery of NHRDF dues from the contractors will be affected from the payment due to the contractor from any other NHRDF works under execution with them.
- 13.** All pages of tender documents, specifications corrections slip etc. Shall be initialed by the tenderers. The tenderers should bear full signature of the tenderers or his authorized power of attorney holder in the case of firm.
- 14.** The Income Tax at 2.00 % including surcharge or percentage in force from time to time or at the rate as intimated by the competent Income Tax authority shall be deducted from bill amount whether measured bill, advance payment or secured advance.
- 15.** The successful tenderers will be required to produce, to the satisfaction of the specified concerned authority a valid concurrent license issued in his favor under the provisions of the Contract Labor (Regulation and Abolition) Act 1970 for starting the work. On failure to do so, the acceptance of the tender shall be liable to be withdrawn and also liable for forfeiture of the earnest money.
- 16.** The tenderers shall submit the list of apprentices engaged by the Contractor under Apprentice Act.

17. VALIDITY PERIOD

The offer shall remain open for acceptance for minimum period of **70 days** from the Date of opening of Envelope No.2 (Financial Bid) and thereafter until it is withdrawn by the contractor by notice in writing duly addressed to the authority opening the tender and sent by Registered Post Acknowledgment due.

- 18.** After completion of the tendering process, the successful bidder will have to submit the hard copy of downloaded tender document and drawings duly signed on each page by the contractor or his authorized signatory. The tender should bear full signature of the tenderers, or his authorized power of attorney holder in case of Firm.

19. ROYALTY CHARGES

As per instructions issued by Revenue and Forest Department the contractor has to pay royalty charges directly to Revenue Department and original challan issued will be submitted to NHRDF while framing the estimates, royalty charges for the items of supply of materials like rubble, metal, Crushed metal, soft murum / hard murum, sand and soil shall be considered in the rate analysis of **respective items @ 212.01 per Cubic Meter (Rs. 600.00 Per brass)** or actual and shall be recovered. The contractor has to pay these charges directly to Revenue Department and original Challan, permission documents shall be produced to Director, NHRDF. If contractor fails to produce these original documents the royalty charges shall be recovered from contractor's bill.

20. Joint Venture Is not allowed.

Contractor is liable and fully responsible for action under Indian Penal Code for submission of Any false/ fraudulent paper / information submitted in Envelope No. 1.

Contractor is liable and fully responsible for action under Indian Penal Code if during contract period and defect liability period, any false information, false bill of purchases supporting proof of purchase, proof of testing submitted by his staff, subletting company. Contractor is liable for action under Indian Penal Code.

Contractor is liable and fully responsible for action under Indian Penal Code if any paper found false/ fraudulent during contract period and even after the completion of contract (finalization of Final bill)

FORM- I

**STATEMENT OF LIST OF WORKS IN HAND AND WORKS TENDERED FOR AS
ON LAST DATE OF SUBMISSION OF THIS TENDER**

**NAME OF CONTRACTOR:-
(I)WORKS IN HAND**

| Sr. No | Name of work | Agreementt No. | Tender ed Amountt | Date of Comme ncement | Stipulated date of Completion n | Value of work already done | Value of Balance work to be executed during next months | Probable date of completi on | Rema rks |
|--------|--------------|----------------|-------------------|-----------------------|---------------------------------|----------------------------|---|------------------------------|----------|
| | | | | | | | | | |

(II) WORKS TENDERED FOR

| Sr. No | Name of work | Name & Address Of Client | Tendere d Amount | Time limit | Probable datewhen decision Is expected | Other relevant details, if any, |
|--------|--------------|--------------------------|--------------------|------------|--|---------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | SAMPLE FORM | | | |

Note :-This is only a standard form. Details are to be furnished in this format in the form of type written statements which shall be **Scanned** and enclosed in Envelope No.1 duly singed. The documentary proof of work in handed shall also be **Scanned** and submitted with this statement duly attested by Gazetted officer. Work done certificate shall be signed by the Authority not below the rank of Executive Engineer.

FORM-II

**STATEMENT SHOWING THE DETAILS OF OWNED PLANTS AND MACHINERY
IMMEDIATELY AVAILABLE WITH TENDERER FOR THIS WORK.**

NAME OF CONTRACTOR:-

| Sr. No | Name of Equipment | No of unit | Kind of Make | Capacity | Age and condition | Present Location | Remark |
|--------|-------------------|------------|--------------------|----------|-------------------|------------------|--------|
| | | | Sample form | | | | |

Note :- This is only a standard form. Details are to be furnished in this format in the form of type written statements which shall be **Scanned** and enclosed in Envelope No.1 duly signed.

The documentary proof of **Own** machinery shall be **Scanned** and submitted with this statement duly attested by Gazetted officer

FORM NO. II (A)

Statement showing the details of Hired machineries to be used for this work.

Name of Contractor:-

| Sr. No | Name of Equipment | No of unit | Kind & Make | Capacity | Age and condition | Present Location | Remark |
|--------|-------------------|------------|-------------|----------|-------------------|------------------|--------|
| | | | Sample form | | | | |

Note : -

1. The Documentary proof i.e. Agreement of Hire on original stamp paper of Rs.100/- Between Contractor & Owner of Machinery is Compulsory and shall be scanned and submitted with this statement in the standard form. i.e. **Form-**
2. Documentary proof of owner of machinery is compulsory and shall be scanned & Submitted with this statement.

FORM-III

STATEMENT OF SHOWING THE DETAILS OF WORKS OF SIMILAR TYPE&MAGNITUDE CARRIED OUT BY THE CONTRACTOR DURING LAST SEVEN YEARS (2015-16, 2016-17, 2017-18, 2018-19, 2019-20, 2020-21 and 2021-2022).

NAME OF CONTRACTOR:-

| Sr.No | Name of work | Name & address of the organization for whom the work was done. | Place & Country | Agreement No. and Date | Date of commencement | Tendered Cont. | Total Cost. Of Work Done | Actual date of completion | Remarks (Principal features inbrief) |
|-------|--------------|--|-----------------|------------------------|----------------------|----------------|--------------------------|---------------------------|--------------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | | | | SAMPLE FORM | | | | | |

Note :- This is only a standard form. Details are to be furnished in this format in the form of type written statements which shall be **Scanned** and enclosed in Envelope No.1 duly signed. The Documentary proof of Similar type and magnitude attested by Gazetted Officer shall be **Scanned** and submitted with this statement. **Work Done Certificate shall be signed by the Authority not below the rank of Executive Engineer.**

FORM- IV

STATEMENT SHOWING DETAILS OF TECHNICAL PERSONNEL AVAILABLE WITH CONTRACTOR WHICH CAN BE SPARED EXCLUSIVELY FOR THIS WORK

NAME OF CONTRACTOR :-

| Sr. No | Name of Person | Designation | Qualification | Whether working in field or in office | Professional Experience | Remark |
|--------|----------------|-------------|---------------|---------------------------------------|-------------------------|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | | SAMPLE FORM | | |

Note :- This is only a standard form. Details are to be furnished in this format in the form of type written statements which shall be Scanned and enclosed in Envelope No.1 duly signed. The Documentary proof of **Qualification of technical person** shall be Scanned and attached with this statement. Similarly **consent letters of technical personal** shall be scanned and attached with this statement.

Signature of Contractor

FORM-V

**STATEMENT OF SHOWING THE WORK DONE IN ALL CLASSES OF CIVIL
ENGINEERING CONSTRUCTION WORKS DURING LAST FIVE YEARS**

NAME OF CONTRACTOR:-

| Sr .N o | Name of work | Amount putto tender/ tendered cost. | Agreement No | Date of Comm e ncemen t of work | Amount of work done during each of last seven years. | | | | | | | Total amount of work still remaining to be executed in next 180 days | Remarks |
|---------------|-----------------|---|-----------------|--|---|-------------|-------------|-------------|-------------|-------------|-------------|--|---------|
| | | | | | 2015 -16 | 2016 -17 | 2017- 18 | 2018- 19 | 2019 -20 | 2020 -21 | 2021 -22 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| SAMPLE FORM | | | | | | | | | | | | | |

Certificate issuing authority Outward No. and date of

Note :- This is only a standard form. Details are to be furnished in this format in the form of type written statements which shall be Scanned and Enclosed in Envelope No.1 duly signed. The Documentary proof of work done certificate attested by Gazetted Officer shall be Scanned and attached with this statement. Work done certificate shall be signed by the Authority not below the rank of Executive Engineer.

Proforma (VI)

DECLARATION OF THE CONTRACTOR

(On Rs. 500/- Stamp Paper)

**Name of Work - PROPOSED CONSTRUCTION OF WORKING SHED AT
NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT
FOUNDATION, SINNAR, DISTT.-NASHIK.**

I/We hereby declare that I/We have made myself/ourselves thoroughly conversant with the sub-soil conditions, the local conditions regarding all materials (such as stone, murum, sand, etc.) and labour on which I/We have based my/our rates for this work.

The specifications, conditions, bore results and lead of materials on this work have been carefully studied and understood by me/us before submitting this tender.

I/We undertake to use only the best materials approved by the Director, NHRDF or his duly authorized assistant, before starting the work and to abide by his decision.

I/We hereby further declare that my/our tender is unconditional in every manner of whatsoever in nature.

I/We hereby undertake to pay the labourers engaged on the work as per minimum wages Act, 1948 applicable to the zone concerned.

Proforma (VII)
(Site Visit Report)
AUTHORITY LETTER

This is to certify that Shri.....
is authorized representative of M/s
He has been authorized to visit the site, important locations of Projects and ascertain the availability and sufficiency of material. He is also authorized to complete the site visit for quotation of the tender.....
His photo identity is enclosed with this letter.

Signature of Shri is
certified as below :

Name and Signature
(Authorized Representative of Bidder)
Date : / /2023
Time :

Name and & Signature of Bidder
with Seal

Site Visit done on Dt.

(Name and Signature)

(National Horticultural Research and Development Foundation)

AFFIDAVIT

(On Rs. 500/- Stamp Paper)
(Separate for Each)

**NAME OF WORK – CONSTRUCTION OF WORKING SHED AT NHRDF,
SINNAR, DISTRICT -NASHIK, MAHARASHTRA**

I..... age ...
Address..... (Authorized signatory to sign the contract), hereby submit, vide this affidavit in truth, that I am the owner of the contracting firm..... / authorized signatory and I am submitting the documents in envelope No.1 for the purpose of scrutiny of the contract. I hereby agree to the conditions mentioned below :

1. That I have submitted on line Tender for the work (Name of Work)
2. That I have carefully gone through, read, thoroughly studied and understood all terms and conditions, specification included in the tender document (Tender Form, Detail Tender Notice, Conditions and Specifications common set of Deviations drawings etc.) I hereby accept all these conditions. I agree to abide by the terms and condition in the tender document and agree to execute the work as per terms and conditions, specifications laid down in the tender document.
3. That I have furnished EMD (Earnest Money Deposit) from the Bank Account in the name of my firm only.
4. I do hereby state on oath that the documents uploaded by in Envelope No. 1 of this tender are true, correct and bonafide. There are no errors and omissions in the uploaded documents.
5. I do hereby the state on oath that the value of work in hand (Value of B) is accurate on the date of submission of this tender. If in the future it is found wrong or misleading. I am liable for action under Indian Penal Code, if any papers are found false/ fraudulent during contract period and even after the completion of contract.
6. I am liable for action under Indian Penal Code for submission of any false/ fraudulent paper / information submitted in Envelope No. 1.
7. The undersigned hereby authorize(s) and request(s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the NHRDF to verify this statement or regarding my (our) competence and general reputation.

8. The undersigned understand and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the NHRDF Project implementing agency.
9. I am neither associated, nor has been associated, directly or indirectly, with the Consultant or any other entity that has prepared the design, specification and other documents for the project or being proposed as Project Manager for the Contract.
10. I am liable for action under Indian Penal Code if during contract period and defect liability period, any false information, false bill of purchases supporting proof of purchase, proof of testing submitting by my staff, subletting company or by myself. I will be liable for action under Indian Penal Code.
11. I am liable for action under Indian Penal Code if any paper are found false/ fraudulent during contract period and even after the completion of contract (Finalisation of Final Bill)
12. I / We hereby solemnly agree that, I/ We have willingly entered into the contract with NHRDF for the work of..... (Name of Work) for the said work, I/ We am / are buying the required quantity of asphalt having stipulated specifications from the refinery of IOC / HP / BP. I / We am / are also aware of the fact that after receiving the said quantity of asphalt from the refinery, it is mandatory upon me to deposit the original copy / copies of challan of asphalt in the office of Director in charge of the work or his authorized officer. I / we also agree that if I fail to produce sufficient documentary evidence i.e. original copy / copies of challan for the purchase of asphalt. I will be totally held responsible for this non compliance and in such a case I will be responsible for any actions which the NHRDF may deem fit to impose on me / us or legal proceedings as per prevailing law. Hence this Affidavit.

Place :

Date :

Signature of Contractor
(Signed by an Authorized Officer of the Firm)

[The Bond of the above Affidavit should be submitted on a Rs. 500/- Non Judicial Stamp Paper and it shall be notarized.]

GUARANTEE BOND FOR WATERPROOFING WORK

(On Stamp Paper Worthy Rs-500/-)

Name of work :- CONSTRUCTION OF WORKING SHED AT NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION, SINNAR, DISTT.-NASHIK.

Name of Agency :-

Agreement No. :-

The contractor hereby declares that the water proofing work carried out under contract shall be of the best quality and workman particulars contained / mentioned in the clause hereof and the contractor hereby guarantee that the said work would continue to conform to the description and quality aforesaid for a period of **Seven Years** from the date of handing over the said work to the NHRDF and notwithstanding the fact that the NHRDF may have inspected and or approved the said work be discovered not to conform to the description and quality aforesaid or have deteriorated (and the decision of the Technical person, NHRDF in that behalf will be final and conclusive) the NHRDF will be entitled to reject the said work or such portion thereof as may be discovered not to conform to the said description and quality.

On such rejection, the work will be at the contractor's risk and all the provisions herein contained relating to rejection of the work etc. shall apply. The contractor shall, if so called upon have to make good the work etc. or such portion thereof, as is rejected by the Technical person, NHRDF, otherwise the contractor shall pay to the NHRDF, such damages, as may arise be the reason of the breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the NHRDF on that behalf under this contract or otherwise. 25 % amount of executed amount of water proofing (in addition to his bond) will be recovered from running / final bill as a retention money this amount will be refunded to contractor after completion of defect liability period of ten years prescribed for water proofing items.

Date :

Place :

Contractor

GUARANTEE BOND FOR ANTI TERMITE TREATMENT

(On Stamp Paper Worth Rs-100/-)

Name of work : CONSTRUCTION OF WORKING SHED AT NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION, SINNAR DISTT.-NASHIK.

Name of Agency :-

Agreement No. :-

The contractor hereby declares that the Anti Termite Treatment carried out under this contract shall be of the best quantity and workmanship and shall be strictly in accordance with the specifications and particulars contained / mentioned in the clause hereof and the contractor hereby guarantees that said work would continue to conform to the description and quality aforesaid for a period of **One years** from the date of handing NHRDF may have inspected and or approved the said work, if during the aforesaid period of Ten years, the said work be discovered not to decision conform to the description and quality aforesaid or have deteriorated (and the decision of Technical person, NHRDF in the behalf will be final and inclusive) the NHRDF will be entitled to reject the said work or such portion thereof as may be discovered not conform to the said description and quality. On such rejection, the rejection of work etc. shall apply. The contractor shall, if so called upon have to make good the work etc. or such portion thereof, as is rejected by the Technical person, NHRDF otherwise the contractor shall pay to the NHRDF, such damages, as may arise by the reason of the breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the NHRDF on the behalf under this contact or otherwise.

Date :

Place :

Contractor

Scope Of Work & Site Condition

Name Of Work : **CONSTRUCTION OF WORKING SHED AT NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION, SINNAR, DISTT.-NASHIK.**

Location : **NHRDF, Sinnar**

Necessary material and labourers required for the work are generally available locally in normal condition. Annual rainfall is 3000 mm

General Provisions for buildings

- 1 Foundation : Open foundation resting on hard strata which is available within 1.50 meters depth.
 - 2 Structure : R.C.C. M-25 framed structure
 - 3 Roof : structural steel & colour coated Zinalume
 - 4 External Wall : BBM masonry walls 23 centimeters thick
 - 5 Internal Works : BBM masonry walls 23 centimeters thick
 - 6 Plaster Works : Sand-faced plaster external faces of the structure and cement plaster with neeru finish in internal faces of the structure.
 - 7 Painting Works : two coats of exterior weather shield paint
 - 8 Flooring Works : concrete flooring 50mm thick
- Meeting of Contractor and Competent Authority of NHRDF shall be arranged at following stages to decide execution of further work to be executed and study of drawings and tender provisions.
 1. Foundation Stage for RCC details & finalization of plinth level
 2. After completion of R.C.C. frame structure before starting of masonry work.
 3. Before starting of finishing items for selection of materials.
 - After Initial discussion with contractor, Mock up / Sample rooms and toilet block shall be constructed with all water supply / sanitary fittings including doors and windows with fixtures and fastenings. The mock up / sample room shall be inspected. Necessary improvements shall be discussed and finalized in a joint meeting. Thereafter other rooms shall be constructed as per finalized provisions in the sample / mock up rooms.
 - Various items shall be mentioned on architectural plan of each floor and dimensions of various items shall be mentioned. Each such floor plan shall be signed by field officers and site in charge of the contractor. Such plans shall be submitted with R.A. bill to facilitate checking in division office.

ITEM RATE TENDER AND CONTRACT FOR WORKS

Owner : (National Horticultural Research and Development Foundation)

GENERAL RULES AND DIRECTIONS FOR THE GUIDANCE OF CONTRACTORS

1. All works proposed to be executed by contract shall be notified in a form of invitation to tender notice.

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

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

- 2.

The contractor shall pay as per tendering schedule of earnest money. Earnest money shall be paid by Demand Draft only.

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

If, after submitting the tender, the contractor withdraws his offer, or modifies the same, or if after the acceptance of his tender the contractor fails or neglects to furnish the balance of security deposit without prejudice to any other rights and powers of the NHRDF, hereunder, or in law, NHRDF shall be entitled to forfeit the full amount of the earnest money deposited by him.

In the event of his tender not being accepted, the amount of earnest money deposited by the contractor, shall unless it is prior thereto forfeited under the provisions of sub-clause (iii) above, be refunded to him on his passing receipt thereof.

3. Receipts for payments made on account of any work, when executed by a firm, shall also be signed by all the partners except where the contractors are described in their tender as firm, in which case the receipts shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts for the firm.
4. Any person who submits a tender shall fill up the usual printed form stating at what rates specified in boq (Memorandum showing items of work to be carried out) he is willing to undertake the work. Tenders which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort will be liable to rejection. No printed form of tender shall include a tender for more than one work, but if Contractor who wish to tender for two or more works shall submit a separate tender for each. Tender shall have the name and the number of work to which they refer written outside the envelope.
5. The officer competent to dispose off the tender shall have the right of rejecting all or any of the tenders without assigning any reason.
6. No receipt for any payment alleged to have been made by a contractor in regard to any matter relating to this tender or the contract shall be valid and binding on NHRDF unless it is signed by the NHRDF.
7. All work shall be measured net by standard measure and according to the rules and customs adopted by the NHRDF and without reference to any local custom.
8. Under no circumstances shall any contractor be entitled to claim enhanced rates for any items in this contract.
9. Every registered contractor should produce along with his certificate of Registration as approved contractor in the appropriate class and renewal of such registration with date of expiry. (Copies to be attested by a Gazetted Officer)
10. All corrections and additions or pasted slips should be initialed.
11. The measurements of work will be taken according to the usual methods in use in the NHRDF and no proposals to adopt alternative methods will be accepted. The Director's decision as to what is " the method in use in the NHRDF" will be final.
12. The tendering contractor shall furnish a declaration along with the tender showing all works for which he has already entered into contract and the value of the work that remains to be executed in each case on the date of submitting the tender (with certificate from the head of the office concerned).
13. Every tenderer shall scan and furnish along with the tender, information regarding the Income tax circle or ward of the district in which he is assessed to income tax the reference to the number of the assessment year
14. The contractor will have to construct working shed for storing controlled and valuable materials

brought by him at work site at contractor's cost. The material will be taken for use in the presence of the person of NHRDF. No material will be allowed to be removed from the site of work.

15. Successful tenderer will have to produce to the satisfaction of the accepting authority a valid and current license issued in his favour under the provision of Contract Labour (Regulation and Abolition) Act 1970 before starting work, failing which acceptance of the tender will be liable for withdrawal and earnest money will be forfeited to NHRDF.
16. The contractor shall comply with the provision of the Apprentices Act 1961. and the rules and orders issued there under from time to time. If he fails to do so, his failure will be breach of contract and the Technical person, NHRDF, may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the Act.

| MEMORANDUM | |
|---|--|
| <i>(a) If several sub-works are included they should be detailed in separate list</i> | <p>1. (a) General Description</p> <p>PROPOSED CONSTRUCTION OF WORKING SHED AT NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION, RRS SINNAR, DISTT.-NASHIK.</p> |
| (b) Estimated cost: | Rs.96,68,630.00 |
| <i>(C) The amount of earnest money as referred on page no.6 of tender</i> | <p>Total Security Deposit 5% (Five percent)</p> <ol style="list-style-type: none"> 1. Amount of EMD @1% of estimated value of the tender to be deposited alongwith tender 2. Additional amount to be deposited towards security deposit @1.5% of total value of the contract at the time of signing of the contract 3. The balance 2.5% of contracted value will be deducted from each running bill |
| <i>d) This Item Rate Tender where no security deposit is taken will vary from 5 to 10% according to the requirements of the Case Where security deposit is taken see note to Clause 1 of conditions of contract.</i> | <p>Percentage @ of 2.5 % to be deducted from bills so as to make up the total amount required as security deposit by the time, half the work, as measured by the cost is done.</p> |
| <i>(e) Give schedule where necessary showing dates by which the various items are to be completed.</i> | <p>(e) Time allowed for the work from date of written order to commence 70 days (including Monsoon season).</p> |

2. I/We agree that this offer shall remain open for acceptance for a minimum period of **70 days (Seventy Days)** from the date fixed for opening the "same" means envelope No.2 and thereafter until it is withdrawn by me/us by notice in writing duly addressed to the authority opening the tenders and sent by registered post A.D. or otherwise delivered at the office of such authority "Treasury Challan No. and date of or Term Deposit Receipt for a period of one year receipt No date..... in respect of the sum of **Rs.96,686/- (Rs. Ninety Six Thousand Six Hundred Eighty Six Only** Representing the earnest money is herewith forwarded. The amount of earnest money shall not bear interest and shall be liable to be forfeited to the NHRDF should I/We fail to:
 - a. abide by the stipulation to keep the offer open for the period mentioned above or
 - b. Sign and complete the contract documents as required by the competent authority of NHRDF and furnish the security deposit as specified in item (d) of the memorandum contained in paragraph (i) above within the limit laid down in clause (I) of annexed General conditions of contract. The amount of earnest money may be adjusted towards the security deposit or refunded to me / us if so desired by me/us in writing, unless the same or any part thereof has been forfeited as aforesaid.
3. Should this tender be accepted I/We hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed hereto so far as applicable and in default thereof to forfeit and pay to NHRDF the sums of money mentioned in the said conditions.

CONDITIONS OF CONTRACT

| | |
|-------------------------|---|
| Security deposit | <p>Clause 1: The person / persons whose tender may be accepted (hereafter called the contractor, which expression shall unless excluded by or repugnant to the context include his, heirs, executors, administrators, and assigns) shall (A) within 10 days (which may be extended by the Director/ Technical person, NHRDF /or the Technical person, NHRDF concerned up to one month/two months/three months respectively if the Director/ Technical person, NHRDF thinks fit to do so) of the receipt by him of the notification of the acceptance of his tender deposit with the Director in cash or NHRDF securities endorsed to the Director (if deposited for more than 12 months) of sum sufficient which will make up the full security deposit specified in the tender or (B) Permit NHRDF at the time of making any payment to him for work done under the contract to deduct such sum as will amount to * One percent, of all moneys so payable such deductions to be held by NHRDF by way of security deposit, provided always that in the event of the contractor depositing a lump sum by way of security deposit as contemplated at (A) above then and in such case if the sum so deposited shall not amount to * One percent, of the total estimated cost of the work it shall be lawful for NHRDF at the time of making any payment to the contractor for work done under the contract to make up the full amount of, * One percent, by deducting a sufficient sum from every such payment as last aforesaid until the full amount of the security deposit is made up. All compensation or other sums of money payable by the contractor to NHRDF under the terms of his contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due or may become due by NHRDF to the contractor under any other contract or transaction of any nature on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid, the contractor shall, within 10 days there after make good in cash or NHRDF securities endorsed as aforesaid any sum or sums which may have been deducted from or raised by sale of his security deposit or any part thereof. The security deposit referred to when paid in cash may, at the cost of the depositor, be converted into the interest bearing securities provided that the depositor has expressly desired this in writing. If the amount of the security deposit to be paid in a lump sum within the period specified at (A) above is not paid, the tender/contract already accepted shall be considered as Cancelled and legal steps taken against the contractor for recovery of the amounts. The amount of the security deposit lodged by a contractor shall be refunded along with the payment of the final bill, if the date up to which the contractor has agreed to maintain the work in good order is over. If such date is not over, only 50 percent amounts of security deposit shall be refunded along with the payment of the final bill. The amount of the security deposit retained by the NHRDF shall be released after expiry of period up to which the contractor has agreed to maintain the work in good order is over. In the event of the contractor failing or neglecting to complete rectification work within the period up to which the contractor has agreed to maintain the work in good order, then, subject to provisions of clauses 17 and 20 hereof the amount of security deposit retained by NHRDF shall be adjusted towards the excess cost incurred by the NHRDF on rectification work.</p> |
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| <p>Compensation for delay / Penalty clause</p> | <p>Clause-2: This time is the assurance of contract. The liquidated damage will be @Rs.1,000/- per day subject to maximum of 5% of contract value.</p> |
| <p>Action when whole of security deposit is forfeited</p> | <p>Clause - 3 : In any case in which under any clause or clauses of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (whether paid in one sum or deducted by installments,) or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Technical person, NHRDF, on behalf of the NHRDF shall have power to adopt of the following courses, as he may deem best suited to the interest of NHRDF ;</p> <p>(a) To rescind the contract (for which rescission notice in writing to the contractor under the hand of Director shall be conclusive evidence) and in that case the Security deposit of the contractor shall stand forfeited and be absolutely at the disposal of NHRDF.</p> <p>(b) To carry out the work or any part of the work in NHRDF debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work charged establishment employed for getting unexecuted part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Director as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.</p> <p>(c) To order that the work of the contractor be measured up and to take such part thereof as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Director, NHRDF as to all the cost of the work and other expenses incurred as aforesaid for or in getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.</p> <p>In case the contract shall be rescinded under clause (a) above the contractor shall not be entitled to recover or be paid, any sum for any work therefor actually performed by him under this contract unless and until the Director shall have certified in writing the performance of the such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in clause or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such</p> |

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| | <p>work credited to the contractor the amount of excess shall be deducted from any money due to the contractor, by NHRDF under the contract or otherwise, howsoever or from his security deposit or the sale proceeds thereof provided, however that the contractor shall have no claim against NHRDF even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clause (a),(b) or (c) is adopted by the Director, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into engagements, or made any advances on account of or with a view of the execution of the work or the performance of the contract.</p> |
| <p>Action when the progress of any particular portion of the work is unsatisfactory</p> | <p>Clause 4 : If the progress of any particular portion of the work is unsatisfactory the Director shall notwithstanding that the general progress of the work is in accordance with the conditions mentioned in clause 2, be entitled to take action under clause 3 (b) after giving the contractor 10 days notice in writing. The contractor will have no claim for compensation, for any loss sustained by him owing to such action</p> |
| <p>Contractor remains liable to pay Compensation if action not taken under clauses 3 and 4</p> | <p>Clause -5: In any case in which any of the powers conferred upon the Director by clauses 3 and 4 hereof shall have become exercisable and the same shall not have been exercised the non- exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor for which under any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Director taking action under sub-clause (a) or (c) of clause-3, he may, Power to take If he so desires, take possession of all or any tool and plant, possession of or require materials and stores in or upon the works or the site thereof or removal of or sell belonging to the contractor, or procured by him and intended to be contractor's plant used for the execution of the work or any part thereof, paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates to be certified by Director whose certificate thereof shall be final. In the alternative, the Director may, after giving notice in writing to the contractor or his clerk of the work, foreman or other authorized agent require him to remove such tools and plant, materials or stores from the premises within a time to be specified in such notice, and in the event of the contractor failing to comply with any such requisition, the Director may remove them at the contractor's expense or sale them by auction or private sale on account of the contractor and at his risk in all respects, and the certificate of the Director as to the expense of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.</p> |
| <p>Extension of time</p> | <p>Clause - 6 : If the contractor shall desire an extension of the time for completion of work on the ground of his having been unavoidably hindered in its execution or on any other ground he shall apply in writing to the Director before the expiration of the period stipulated in the tender or before the expiration of 30 days from the date on which he was hindered as aforesaid or on which the cause for asking for extension occurred, whichever is earlier ever and the Director, may, with prior approval of the authority competent to accept the tender if in his opinion, there are reasonable ground for granting an extension, grant such extension as he thinks necessary or proper. The decision of the Director in this matter shall be final.</p> |

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| <p>Final certificate</p> | <p>Clause - 7: On the completion of the work the contractor shall be furnished work with a certificate by the Technical person of NHRDF) of such completion; but no such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall have been executed, all scaffolding, surplus materials and rubbish, and shall have cleaned off, the dirt from all wood work, doors windows, wall, floors or other parts of any building in or upon which the work has been executed, or of which he may have had possession for the purpose of executing the work, nor until the work shall have been measured by the Technical person, NHRDF or where the measurements have been taken by his subordinates until they have received the approval of the Technical person, NHRDF, the said measurements being binding and conclusive against contractor. If the contractor shall fail to comply with the requirements of this clause as to the removal of scaffolding, surplus materials and rubbish and cleaning off dirt on or before the date fixed for the completion of the work the Technical person, NHRDF may at the expense of the contractor, remove such scaffolding, surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt's as aforesaid and the contractor shall forthwith pay the amount of all expenses so incurred, but shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.</p> |
| <p>Bill to be on printed forms</p> | <p>Clause-8 : The contractor shall submit all bills on the printed forms to be had on application at the office of the NHRDF. The charges to be made in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender at the rates hereinafter provided for such work.</p> |
| <p>Work to be executed in accordance with specifications, Drawings, Orders, etc.</p> | <p>Clause-9 : The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner, and both as regards materials and every other respect in strict accordance with specifications. The contractor shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the NHRDF and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on site of the work during office hours. The contractor will be entitled to receive three sets of contract drawing and working drawings as well as one certified copy of the accepted tender along with the work order free of cost. Further copies of the contract drawings and working drawings if required by him, shall be supplied at the rate of Rs.300/- per set of contract Drawings and Rs.150/- per working drawings except where other wise specified</p> |
| <p>Alterations in specifications and designs not to invalidate contracts</p> | <p>Clause-10 : The NHRDF shall have power to make any alterations in or additions to the original specifications, drawings, designs, and instructions that may appear to him to be necessary or advisable during the progress of the work, and the contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the NHRDF and such alteration shall not invalidate the contract, and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respects on which he agreed to do the main work, and at the same rates as are specified in the tender for the main work. And if the additional and altered work includes any class of work for which no rate is Specified in this contract, then such class of work shall be carried out at the rates entered in the</p> |

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| <p>Rates for works not entered in estimate or schedule of rate of the districts.</p> | <p>Schedule of Rates of the Division or at the rates mutually agreed upon between the NHRDF and the contractor, whichever, are lower. If the additional or altered work for which no rate is entered in the schedule of Rates of the Division, is ordered to be carried out before the rates are agreed upon then contractor shall within seven days of the date of receipt by him of the order to carry out the work, inform the Technical person, NHRDF of the rate which it is his intention to charge for such class of work, and if the Technical person, NHRDF does not agree to this rate he shall by notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable provided always that if the contractor shall commence work or incur any expenditure in regard there to before the rates shall have been determined as lastly herein-before mentioned, then in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to date of the determination of the rates as aforesaid according to such rate or rates as shall be fixed by the Technical Person, NHRDF. In the event of a dispute, the decision of the competent authority of NHRDF, of the Circle will be final.</p> <p>Where, however, the work is to be executed according to the designs, drawings & specifications recommended by contractor and accepted by the competent authority the alterations above referred to shall be within the scope of such designs, drawings and specifications appended to the tender.</p> |
| <p>No claim to any payment or compensation for alteration in or restriction of work</p> | <p>Clause-11 (1): If at any time after the execution of the contract documents, the competent authority of NHRDF shall for any reason what-so-ever (other than default on the part of the contractor for which the NHRDF is entitled to rescind the contract) desires that the whole or any part of the work specified in the tender should be suspended for any period or that the whole or part of the work should not be carried out at all he shall give to the contractor a notice in writing of such desire and upon the receipt of such notice the contractor shall forthwith suspend or stop the work wholly or in part as required, after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury to the work already done or endanger the safety thereof provided that the decision of the competent authority of NHRDF as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the contractor. The contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.</p> <p>(2) Where the total suspension of work ordered as aforesaid continued for a continuous period exceeding 70 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 day's prior notice in writing to the competent authority of NHRDF, within 30 days of the expiry of the said period of 70 days, of such intention and requiring the competent authority of NHRDF, to record the final measurements of the work already done and to pay the final bill. Upon given such notice, the contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted work under his contract. On receipt of such notice the competent authority of NHRDF shall proceed to complete the measurement and make such payment as may be finally due to the contractor within</p> |

a period of 70 days from the receipt of such notice in respect of the work already done by the contractor .Such payment shall not in any manner prejudice the right of the contractor to any further compensation under the remaining provisions of this clause.

(3) Where the competent authority of NHRDF requires the contractor to suspend the work for a period in excess of 30 days at any time or 70 days in the aggregate, the contractor shall be entitled to apply to the competent authority of NHRDF within 30 days of the resumption of work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained idle on the site or on the account of his having had to pay the salary or wages of labour engaged by him during the said period of suspension provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect of any suspension whatsoever occasioned by unsatisfactory work or any other default on his part. The decision of the competent authority of NHRDF in this regard shall be final and conclusive against the contractor

(4) In the event of :-

- i) Any total stoppage of work on notice from the competent authority of NHRDF under sub clause (1), in that behalf,
- ii) Withdrawal by the contractor from the contractual obligation to complete the remaining unexecuted work under sub clause (2) on account of continued suspension of work for a period exceeding 70 days.

OR

iii) Curtailment in the quantity of item or items originally tendered on account of any alteration, omission or substitutions in the specifications, drawings, designs, or instructions under clause 14 where such curtailment exceeds 25% in quantity and the value of the quantity curtailed beyond 25% at the rates for the item specified in the tender is more than Rs. 5000/-

It shall be open to the contractor within 70 days from the service of

- (i) The notice of stoppage of work or
- (ii) The notice of withdrawal from the contractual obligations under the contract on account of the continued suspension of work or
- (iii) Notice under clause 14 resulting in such curtailment to produce to the competent authority of NHRDF satisfactory documentary evidence that he had purchased or agreed to purchase material for use in the contracted work, before receipt by him of the notice of stoppage, suspension or curtailment and require the NHRDF to take over on payment such material at the rates determined by the competent authority of NHRDF, provided however, such rates shall in no case exceed the rates at which the same were acquired by the contractor. The NHRDF shall thereafter take over the material so offered, provided the quantities offered, are not in excess of the requirements of the unexecuted work as specified in the accepted tender and are of quality and specifications approved by the competent authority of NHRDF.

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| Time limit for unforeseen claims. | Clause -12: Under no circumstances whatsoever shall the contractor be entitled to any compensation from NHRDF on any account unless the contractor shall have submitted a claim in writing to the competent authority of NHRDF within one month of the cause of such claim occurring. |
| Action and compensation payable in case of bad work | Clause -13: If any time before the security deposit or any part thereof is refunded to the contractor it shall appear to the competent authority of NHRDF - in-charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for, or are otherwise not in accordance with contract, it shall be lawful for the Technical Person to intimate this fact in writing to the contractor and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or if so required, shall remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost, and in the event of his failing to do so within a period to be specified by the competent authority of NHRDF -in- charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate of 1% on the amount of the estimate for every day not exceeding 10 days during which the failure so continues and in the case of any such failure the Technical Person may rectify or remove, and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor. Should the Technical Person consider that any such inferior work or materials as described above may be accepted or made use of it shall be within his discretion to accept the same at such reduced rates as he may fix therefor. |
| Works to be open to inspection | Clause-14: All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the competent authority of NHRDF -in- charge and his subordinates and the contractor shall at all time during the usual working hours, and at all other times at which reasonable notice of the intention of the Technical Person or his subordinate to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions or have |
| Contractor or responsible agent to be present | Responsible agent duly authorized in writing, present for that purpose. Orders given to the contractor's duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself |
| Notice to be given before work is covered up. | Clause 15: The contractor shall give not less than five days notice in writing to the Technical Person or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurements any work in order that the same may be measured and correct dimensions thereof taken before the same is so covered up or placed beyond the reach of measurement, and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Technical Person or his subordinate in charge of the work, and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained the same shall be uncovered at the contractor's expense and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed |

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| <p>Contractor liable for Damage done and for imperfections/ Defect liability period</p> | <p>Clause 16:If during the period of “ 1 (One Years) after date of completion of the work or after the date of commissioning the work whichever is earlier in the opinion of the Director, the said work is defective in any manner whatsoever, the contractor shall forthwith on receipt of notice in that behalf from the Director, duly commence execution and completely carry out at his cost in every respect all the work that may be necessary for rectifying and setting right the defects specified therein including dismantling and reconstruction of unsafe portion strictly in accordance with and in the manner prescribed and under the supervision of the Authority, NHRDF In the event of the contractor failing or neglecting to commence execution of the said rectification work within the period prescribed therefor in the said notice, and/or to complete the same as aforesaid as required by the said notice, the Director get the same executed and carried out departmentally or by any other agency at the risk on account and at the cost of the contractor. The contractor shall forth with on demand pay to the NHRDF the amount of such costs, charges and expenses sustained or incurred by the NHRDF of which the certificate of the Director shall be final and binding on the contractor. Such cost, charges and expenses shall be deemed to be arrears of land revenue and in the event of the contractor failing or neglecting to pay the same on demand as aforesaid without prejudice to any other rights and remedies of the NHRDF, the same may be recovered from the contractor as arrears of land revenue. The NHRDF shall also be entitled to deduct the same from any amount which may then be payable or which may thereafter become payable by the NHRDF to the contractor either in respect of the said work or any other work whatsoever, or from the amount of the security deposit retained by NHRDF</p> |
| <p>Contractor to supply plant, ladders, scaffolding etc</p> | <p>Clause -17: The contractor shall supply at his own cost all material (except such special materials, if any, as may in accordance with the contract, be supplied from the NHRDF's stores), plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding and temporary works which may required for the proper execution of the work, whether in the original, altered or substituted form, and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with the requirements of the competent authority of NHRDF -in- charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with the carriage therefor to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or the materials. Failing which the same may be provided by the Technical Person at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof.'</p> |
| <p>And is liable for damage arising from non-provision of light, fencing etc.</p> | <p>The contractor shall provide all necessary fencing and lights required to protect the public from accident, and shall also be bound to bear the expenses of defense of every suit, action or other legal proceedings that may be brought by any person for injury sustained owing to neglect of the above precautions, and to pay any damages and costs which may be awarded in any such suit action or proceedings to any such person, or which may with consent of the contractor be paid for compromising any claim by any such person</p> |
| | <p>Clause-18(A): The contractor shall provide suitable scaffolds and working platforms,</p> |

gangways and stairways and shall comply with the following regulations in connection there with:

- (a) Suitable scaffolds shall be provided for workmen for all works that cannot be safely done from a ladder or by other means.
- (b) A scaffold shall not be constructed, taken down, or substantially altered except:-
 - (i) Under the supervision of a competent and responsible person; and
 - (ii) as far as possible by competent workers possessing adequate experience in this kind of work.
- (c) All scaffold and appliances connected therewith and all ladders shall :-
 - (i) be of sound material,
 - (ii) be of adequate strength having regard to the loads and strains to which they will be subjected and
 - (iii) be maintained in proper condition.
- (d) Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use.
- (e) Scaffolds shall not be over-loaded and so far as practicable the load shall be evenly distributed.
- (f) Before installing lifting gear on scaffolds special precautions shall be taken to ensure the strength and stability of the scaffolds.
- (g) Scaffolds shall be periodically inspected by a competent person.
- (h) Before allowing a scaffold to be used by his workmen the contractor shall, whether the scaffold has been erected by his workmen or not, take steps to ensure that it complies fully with the regulation here-in-specified.
- (i) Working platforms, gangways and stairways shall :- (i) be so constructed that no part thereof can sag unduly or unequally. (ii) be so constructed and maintained, having regard to the prevailing conditions as to reduce as far as practicable risks of persons tripping or slipping, and (iii) be kept free from any unnecessary obstruction
- (j) In the case of working platform, gangways, working places and stairways at a height exceeding 3.00 Meters (to be specified)
 - (i) Every working platform and every gangway shall be closely boarded unless other adequate measures are taken to ensure safety.
 - (ii) Every working platform and gangway, shall have adequate width and
 - (iii) Every working platform, gangway, working place and stairway shall be suitably fenced
- (k) Every opening in the floor of a building or in a working platform shall except for

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| | <p>the time and to the extent required to allow the excess of persons or the transport or shifting of material be provided with suitable means to prevent the fall of persons or material</p> <p>(l) When persons are employed on roof where there is a danger of falling from a height exceeding 3.00 Mts. suitable precautions shall be taken to prevent the fall of persons or material</p> <p>(m) Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffolds or other working places.</p> <p>(n) Safe means of access shall be provided to all working platforms and other working places</p> |
| | <p>Clause-18(B) :The contractor shall comply with the following regulations as regards the Hoisting Appliances to be used by him.:</p> <p>(a) Hoisting machines and tackle, including their attachments, anchorages and supports shall-</p> <p>(i) be of good mechanical construction, sound material and adequate strength and free from patent defect and</p> <p>(ii) be kept in good repair and in good working order.</p> <p>Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect</p> <p>(c) Hoisting machines and tackle shall be examined and adequately tested after erection on the site and before use and be re- examined in position at intervals to be prescribed by the NHRDF.</p> <p>(d) Every chain ring, hook shackle swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.</p> <p>(e) Every crane driver or hoisting appliance operator shall be properly qualified.</p> <p>(f) No person who is below the age of 21 years shall be in control of any hoisting machine, including any scaffolding which, or gives signals to the operator.</p> <p>(g) In the case of every hoisting machine and of every chain, ring, hook, shackle, swivel pulley block used in hoisting or lowering or as means of suspension, the safe working load shall be ascertained by adequate means.</p> <p>(h) Every hoisting machine and all gear referred to in the preceding regulation shall be plainly marked with the safe working load</p> <p>(i) In the case of a hoisting machine having a variable safe working load each safe working load and the conditions under which it is applicable shall be clearly indicated.</p> <p>(j) No part of any hoisting machine or of any gear referred to in regulation (h) above shall be loaded beyond the safe working load</p> |

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| | <p>except for the purpose of testing.</p> <p>(k) Motors, gearing transmissions, electric wiring and other dangerous part or hoisting appliances shall be provided with efficient safeguards.</p> <p>(l) Hoisting appliances shall be provided with such means as will reduce to a minimum the risk of the accidental descent of the load.</p> <p>(m) Adequate precautions shall be taken to reduce to a minimum the risk of any part of a suspended load becoming accidentally displaced.</p> |
| Measure for prevention of fire | <p>Clause-19 : The contractor shall not set fire to any standing jungle, trees brushwood or grass without a written permit from the Authority, NHRDF When such permit is given, and also in all cases when destroying cut or dug up trees brushwood, grass etc. by fire; the contractor shall take necessary measure to prevent such fire spreading to or otherwise damaging surrounding property.</p> <p>The contractor shall make his own arrangements for drinking water for the labour employed by him</p> |
| Liability of contractor for any damage done in or outside work area | <p>Clause-20: Compensation for all damages done intentionally or unintentionally by contractor's labour whether in or beyond the limits of NHRDF property including any damage caused by the spreading of fire mentioned in clause 22 shall be estimated by the Technical Person or such other officer as he may appoint and the estimates of the Technical Person subject to the decision of the competent authority of NHRDF on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand, failing which, the same will be recovered from the contractor as damages in the manner prescribed in clause 1 or deducted by the Technical Person from any sums that may be due or become due from NHRDF to the contractor under this contract or otherwise.</p> <p>The contractor shall bear the expenses of defending any action or other legal proceedings that may be brought by any persons for injury sustained by him owing to neglect of precautions to prevent the spread of fire and he shall pay any damages and cost that maybe awarded by the court in consequence.</p> |
| Direction and control of the competent authority of NHRDF | <p>Clause-21: All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the competent authority of NHRDF of the circle, for the time being, who shall be entitled to direct at what point or point sand in what manner they are to be commenced, and from time to time carried on</p> |
| Definition of work | <p>Clause -22:-The expression "works" or "work" where used in these conditions, shall unless there be something in the subject or context repugnant to such construction be construed to mean the work or works contracted to be executed under or in virtue of the contract, whether temporary or permanent and whether original, altered, substituted or additional</p> |
| whether applied to net or gross amount of bill Quarry fees and Royalties. | <p>Clause-23: All quarry fees, royalties, octroi dues and ground rent, for stacking materials, if any, should be paid by the contractor.</p> |
| Compensation | <p>Clause - 24: The contractor shall be responsible for and shall pay compensation to his</p> |

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| <p>under the workmen's compensation act.</p> | <p>workmen payable under the Workman's Compensation Act 1923 (VIII th of 1923) (hereinafter called the said act) for injuries caused to the workmen. If such compensation is payable/paid by the NHRDF as principal under subsection (1) of section 12 of the said Act on behalf of the contractor it shall be recoverable by NHRDF from the contractor under subsection (2) of the said section. Such compensation shall be recovered in the manner laid down in clause 1 above.</p> |
| | <p>Clause - 25 (A): The contractor shall be responsible for and shall pay the expenses of providing medical aid to any workmen who may suffer a bodily injury as a result of an accident. If such expenses are incurred by NHRDF the same shall be recoverable from the contractor forthwith and be deducted without prejudice to any other remedy of NHRDF from any amount due or that may become due to the contractor.</p> |
| | <p>Clause - 25 (B):The contractor shall provide all necessary personnel safety equipment and first aid apparatus available for the use of the persons employed on the site, and shall maintain the same in condition suitable for immediate use at any time and shall comply with the following regulations in connection therewith:-</p> <ul style="list-style-type: none"> (a) The workers shall be required to use the equipment so provided by the contractor and the contractor shall take adequate steps to ensure proper use of the equipment by those concerned. (b) When work is carried on in proximity to any place where there is a risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger. (c) Adequate provision shall be made for prompt first-aid treatment of all injuries likely to be sustained during the course of the work |
| | <p>Clause - 25 (C) :The contractor shall duly comply with the provisions of "The Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said rules and on his failure or neglect to do so, he shall be subject to all the liabilities and penalties provided by the said act and said rules.</p> |
| <p>Claim for compensation for delay in starting work.</p> | <p>Clause - 26: No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or in the case of clearance works on account of any delay in according to sanction of estimates.</p> |
| <p>Claim for Compensation for delay in execution of work</p> | <p>Clause - 27: No compensation shall be allowed for any delay in the execution of the work on account of water standing in borrow pits or compartments. The rates are inclusive of hard or cracked soil excavation in mud, subsoil water or water standing in borrow pits and no claim for an extra rate shall be entertained, unless otherwise expressly specified</p> |
| <p>Minimum age of persons employed, the employment of donkeys and/or other animals and the</p> | <p>Clause - 28 : (i) No contractor shall employ any person who under the age of 18 years.</p> <ul style="list-style-type: none"> (ii) No contractor shall employ donkeys or other animals with breaching of string or thin rope. The breaching must be at least 7.50 cms. wide and should be of tape (Newar) (iii) No animal suffering from sores; lameness or emaciation or which is immature |

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| <p>payment of fair wages.</p> | <p>shall be employed on the work.</p> <p>(iv) The Technical Person or his agent is authorized to remove from the work any person or animal found working which does not satisfy these conditions and no responsibility shall be accepted by NHRDF for any delay caused in the completion of the work by such removal.</p> <p>(v) The contractor shall pay fair and reasonable wages to the workmen employed by him in the contract undertaken by him. In the event of any dispute arising between the contractor and his workmen on the grounds that the wages paid are not fair and reasonable, the dispute shall be referred without delay to the Director who shall decide the same. The decision of the Director, shall be conclusive and binding on the contractor but such decision shall not in any way affect the conditions in the contract regarding the payment to be made by NHRDF at the sanctioned tender rates.</p> <p>(vi) Contractor shall provide drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.</p> <p>(vii) Contractor to take precaution against accidents which take place on account of labour using loose garments while working near machinery</p> |
| <p>Acceptance of conditions compulsory before tendering for work</p> | <p>Clause - 29 : Any contractor who does not accept these conditions shall not be allowed to tender for works</p> |
| | <p>Clause - 30 : -</p> <p>a) The Bidder shall quote his rate considering the provision counted under GST Act- 2017.</p> <p>b) Provisional amount of GST 2% i.e. CGST 1% + SGST 1% will be deducted at source (T.D.S.) under section 51 of Maharashtra Goods and Services Act- 2017</p> <p>c) The Bidder shall quote his rate excluding GST.</p> <p>d) GST shall be paid on the amount of bill of the work done as per prevailing guidelines rate of GST during the period of work done as applicable.</p> <p>e) Rate quoted by the contractor shall be deemed to be inclusive of the labour welfare cess and other taxes (other than GST) that the contractor have to pay for the performance of this contract. The employer will perform such duties in regards to deduction of such taxes at source as per applicable law.</p> |
| | <p>Clause- 31 : The contractor shall duly comply with all the provisions of the Contract Labour (Regulation and Abolition) Act 1970, (37 of 1970) and the Maharashtra Contract Labour (Regulation and Abolition) Rules, 1971 as amended from time to time and all other relevant statutes and statutory provision concerning payment of wages particularly to work men employed by the contractor and working on the site of the work. In particular the contractor shall pay wages to each worker employed by him on the site of the work at the rates prescribed under the Maharashtra Contract Labour (Regulation And Abolition) Rules 1971. If the contractor fails or neglects to pay wages at the said rates or makes short payment and the NHRDF makes such payment of wages in full or part there of less paid by the contractor, as the case may</p> |

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| | <p>be, the amount so paid by the NHRDF to suchworks shall be deemed to be an arrears of land revenue andNHRDF shall be entitled or deduct the same from the amount payable by the Govt. to the contractor here under or from anyother amounts payable to him by the NHRDF.</p> |
| | <p>Clause No-32- Condition relating to insurance of contract work.</p> <p>The Contractor shall take out Insurance Policy / Policies (viz. Contractor's All Risks Insurance Policy, Erection All Risks Insurance Policy etc. as directed by the Directorate of Insurance)so as to vide adequate insurance cover for execution of the awarded contract work for total contract value and complete contract period COMPULSORILY from the "Directorate of Insurance, Maharashtra State, Mumbai" only. Its postal address for correspondence is " 264, MHADA , First Floor, Opposite Kalanagar, Bandra (East), Mumbai 400 051. " (Telephone No. 022 -26590403 / 26590690 and Fax No. is 022- 26592461 /26590403).</p> <p>Similarly all workmen's appointed to complete the contract work are required to insure under workmen's compensation Insurance Policy. Insurance Policy/ Policies taken out from any other company will not be accepted. If any contractor has not taken out the Insurance Policy from the Directorate of Insurance, Maharashtra State Mumbai or have effected insurance with any Insurance Company, the same will not be accepted and one percent (1%) of the tender amount or such amount of premium calculated by the NHRDF Insurance Fund will be recovered directly from the amount payable to the Contractor for the executed contract work and paid to the Directorate of Insurance Fund, Maharashtra State, Mumbai. The Director of Insurance reserves the right to distribute the risks of insurance among the other insurers.</p> |

**1. ADDITIONAL CONDITIONS FOR MATERIALS (CEMENT, MILD STEEL,
TMT / HYSD BARS, STRUCTURAL STEEL ETC.)
BROUGHT BY CONTRACTOR)**

1. All the materials such as Cement, steel, Bricks, Metal, Sand, etc. shall be brought by the Contractor at his own cost. The material shall be brought at the site of work well in advance by the Contractor. The gate pass of the Metal, Sand, Invoice of Cement, steel etc. shall be examined by the authorized representative of the competent authority of NHRDF.
2. The contractor shall maintain the record of these materials (cement, steel, granite, marble, tiles etc.) in the prescribed proforma and registers as directed by competent authority of NHRDF - in-charge. The sample of prescribed proforma is attached at the end (Page No to). These registers shall be signed by both, the contractors and representative of the Technical Person, NHRDF. These registers shall be made available for inspection, verification for the NHRDF as and when required. These registers shall be in the custody of NHRDF, and shall be maintained by the Department.
3. The Contractor shall submit periodically as well as on completion of work, an account of all materials used by him on the work. In addition, a separate register shall be maintained on site for recording daily item wise asphalt, cement consumption and also item wise consumption of other materials. This shall be signed daily by Contractor or his representative and representative of competent authority of NHRDF - in-charge.
4. All the materials as Cement, steel, Bricks, Metal, Sand, etc. shall be brought by the Contractor at his own cost. The materials from any other source in lieu of the approved Institutions shall be allowed except under written permission from the competent authority of NHRDF. In such case, Certificate for its quality shall be produced by the Contractor and samples of materials shall be tested from any NHRDF Laboratory by the Contractor at his cost and the test results be supplied to the NHRDF. The materials not conforming to the required standard shall be removed at once from the site of work by the Contractor at his own cost. All the materials such as Asphalt, Cement etc. required for use in the work shall be confirming to the concerned I.S. / M.O.R.T.& H. specifications. The Contractor shall get necessary tests carried out to the frequency specified for each material in the specification and submit the test results to the Technical Person of NHRDF or his authorised representative. These materials shall be used on work by the Contractor, only if the test thereof are found satisfactory to the results competent authority of NHRDF - in-charge or his authorised representative. For the purpose of daily testing of material, such metal, sand, rubble, etc. , the Contractor shall make his own arrangements to install a well equipped Laboratory at the site of work at his own cost. The Contractor shall employ qualified personnel at the site of work at his own cost. The responsibility of carrying out tests to the frequency specified for each material shall rest with the Contractor. The extract of register shall be submitted to the Director with each bill. Copy of register for the entire period shall be submitted along with the final bill.

5. The Contractor shall construct at his own cost working shed/ working sheds as per direction of the Technical Person ,NHRDF of the work for storing the materials and provide double locking arrangements. The Store working shed such constructed shall be removed on completion of work. The Contractor shall take all necessary steps to guard the materials brought by him.
6. The Contractor shall make his own arrangement for the safe custody of the materials brought by him on site of work.
7. The charges for conveying of materials from the place of purchase by the Contractor to the site of work and the actual spot on work site shall be entirely borne by the Contractor. No claims on this account shall be entertained.
8. Separate registers shall be maintained by the Contractor on the site for recording detailed item wise Cement and Steel consumption on the work. These registers shall be signed by Contractor or his authorised representative and got signed from the representative competent authority of NHRDF -in- charge.
9. The material required only for this work shall be kept in the godown at site. No material shall be shifted outside of the godown except for the work for which this arrangement is entered, without prior approval of the Technical Person ,NHRDF.
10. The Contractor shall produce sufficient documentary evidence i.e. bill for the purchase, octroi receipts etc. for the purchase of material brought on the work site at once if so requested by the NHRDF.
11. All these material i.e. cement, steel etc. shall be protected from any damages , rains etc. by the contractor at his own cost.
12. The Contractor will have to erect temporary working shed of approved specifications storing of above materials at work site at contractors cost having double lock arrangements (By Double lock - it is meant that godown shall always be locked by two locks, one lock being owned & operated by Contractor & other by competent authority of NHRDF -in charge of his authorised representative & the door shall be openable only after both locks are opened.)
13. If required, the weightment of cement bags/ steel etc. brought by the Contractor shall be carried out by the contractor at his own cost.
14. The contractor shall not use cement and other material for the item to be executed outside the scope of his contract except for such ancillary small item as are connected and absolutely necessary for execution of this work as may be decided by the Technical Person ,NHRDF.
15. The NHRDF shall not be responsible for the loss in cement, steel, etc. during transit to work site. The cement brought by the contractor at the work site store shall mean 50 Kg. equivalent to 0.0347 Cubic Meter per bag by weight. The rate quoted should correspond to this method of reckoning. In case of ordinary/controlled concrete, if cement is found short, the shortage/shortages will be made good by the contractor at his cost.
16. ANNEXURE FOR R.C.C. PIPE PROCUREMENT: The R.C.C. pipes required for the work

shall be procured from the MISSIDC only. The payment towards providing and fixing NP2 / NP3 / NP4 pipes will be released only after the contractor submits the bill of MISSIDC to authenticate that the pipes have been purchased from the MISSIDC. No payment towards the item of providing and laying of the pipe will be released in absence of the submission of the requisite document. After completion of these items in the particular kilometer the withheld payment will be finally released.

17. **INDEMNITY** : The condition regarding indemnity as defined on Page . At Sl.No.4 will apply mutatis mutandis in case of material brought by contractor at the site for the execution of the work being executed under this contract.
18. In case the material brought by the Contractor become surplus owing to the change in the design of the work, the material should be taken back by the Contractor at his own cost after prior permission of Technical Person ,NHRDF.
19. All empty cement bags shall be returned by Contractor to NHRDF and the Director shall preserve them for one year as token of proof of use of cement in proper proportion in work.

Arrangement of Materials

1. The Contractor shall make his own arrangement for supply of materials including cement and steel , RCC pipes /Collars. The Contractor shall be responsible for all transportation and storage of the materials at the site and shall bear all the related costs. The competent authority of NHRDF shall be entitled at any time, to inspect or examine all such materials. The Contractor shall provide reasonable assistance for such inspection or examination as may be required.
2. The Contractor shall keep as accurate record of use of materials like cement and steel used in the works in a manner prescribed by the competent authority of NHRDF.
3. If there is any doubt regarding the material received, the same should be get tested from the NHRDF laboratory at the cost of the Contractor, and if the results are substandard, the material or the work executed with such material will be rejected
4. The day to day record of the receipt /utility/ balance of material should be kept by the Contractor at plant site / site of work / store and same will be checked by the competent authority of NHRD For authorized Engineer at any time.
5. The procurement of cement/ steel etc. should be from the authorized manufacturing company and the vouchers regarding purchase thereof shall be submitted to Technical Person ,NHRDF.
6. The testing charges shall be entirely borne by the Contractor.

LIST OF APPROVED MAKES

Note:

1. The Technical Person ,NHRDF is at liberty select any of the brands indicated below. The contractor obtains prior approval from Technical Person ,NHRDF. In charge before placing order for any specific material may approved order any the 'Makes' or 'Brands' listed below.
2. All materials should confirm to relevant standard and codes of BIS and shall have ISI mark
3. In case of items for which approved make / vendor is not given below, the contractor shall with the prior approval of the Technical Person ,NHRDF. In charge procure the same of the first quality and satisfy the Technical Person ,NHRDF before use in the works.
4. In case of Contradiction between the approved makes/vendor specified below and mentioned in the Specifications /Bill of quantities. The decision of the Technical Person ,NHRDF shall be final and binding on the Contractor.

| SR. NO | MATERIAL | APPROVED MANUFACTURES. |
|--------|--|---|
| 1 | REINFORCED STEEL | TISCO, SAIL, IICO ,ISPAT INDIA LTD, Jindal , RINIL or equivalent. |
| 2 | CEMENT | ACC, Ultra tech , Manikgarh , Birla, JSW or equivalent |
| 3 | CERAMIC TILES (1st QUALITY | Johnson, Nitco , Sparteck, Nitco , Bell, Kajaria or equivalent |
| 4 | WATER PROOFING COMPOUND | Fosrock, Pidilite , Dr Fixit, BASF, Krishna Chemicals , Sunteck or equivalent |
| 5 | ALUMINIUM SECTIONS | JINDAL, HINDALCO, JINDAL LTD or equivalent. |
| 6 | GLASS | TRIVENI, SHREE VALLABH INDOSHHANI, MODIFOLAT GLASS LTD or equivalent. |
| 7 | LAMINATES SHETS | FORMICA, RAMMICA, NEOLUX, DECOLAM LTD or equivalent |
| 8 | MORTISE LOCK & LATCH | GODREJ, HARISON, KESHVRAM, RAMYUS, DHIMANI LTD or equivalent |
| 9 | ACRYLIC PLASTIC EMULSION (1* Quality) | ASIAN, BERGER, J&N. LTD , JSW, Nerolac or equivalent. |

| | | |
|----|--------------------------|--|
| 10 | SYNTHETIC ENAMEL PAINT | ASIAN, BERGER, J&N. LTD or equivalent. |
| 11 | STRUCTURE PAINTS | NEROLAC, BURGER, ICL. LTD or equivalent. |
| 12 | SANITARY WARE | HINDUSTAN, NYCER, PERRY, CERA LTD or equivalent. |
| 13 | C.P. FITTING | GEM, PARDO, JAQUAR, DRIPLESS LTD or equivalent. |
| 14 | SOIL & WASTE PIPE | RIF BIC, NECO CENTRI (CONFORMING TO IS-3839) LTD or equivalent. |
| 15 | GUN METAL VALVES | LEADER ENGG KIRLOSKAR GG LTD or equivalent. |
| 16 | FLUSH VALUE | JAQUAR, KINSTON, SHREE VALLAB or equivalent. |
| 17 | CISTERN | NOMOS, HINDUSTAN or equivalent. |
| 18 | C.I. SLUISE VALVE | KIRLOSKAR, INDIAN VALVE, LEADER, BURN or equivalent. |
| 19 | G.I. FITTING 1ST QUALITY | ZENITH, TATA, R.M. ENGG. WORKS or equivalent. |
| 20 | P.V.C. FITTINGS | FINOLEX, JAN OR EQUIVALANT GRADE |
| 21 | ANTISTATIC FLOORCOATING | INARCO, PVC WONDER FLOOR, ARMSTRON or equivalent. |
| 22 | CONCRETE ADMIXTURES | FOSCROC, PIDLITE or equivalent. |
| 23 | CORROSION INHBITORS | CORTEC CORPORATION, ACURD ORGANICS, RIMPRO INDIA or equivalent. |
| 24 | SUPER PLASTICIZER | PERMA CONSTRUCTION, AIDS, TECHNOTRADE ASSOCIATES, CONSTRUCTION INDIA PVT. LTD., or equivalent. |
| 25 | Structural Steel Section | Tata, JSW or Jindal |
| 26 | Roofing material | Tata or JSW |

In addition to the condition of contract described before, following General Condition shall also become part of this bid document and will later become part of the contract.

ADDITIONAL GENERAL CONDITIONS

1. COMPETANCY OF TENDERER :

The work will be awarded only to those contractors who are considered to be substantially responsive bidders, capable of performing the class of work to be completed. Before passing the final award any or all bidders may have to show that they have the necessary experience, facilities, ability and financial resources to execute the work in satisfactory manner and also within the stipulated time.

2. PAYMENTS :

The tenderers must understand clearly that the rates quoted are for completed work and include all costs due to labour, all leads and lifts involved and if further necessitated, scaffolding plant, supervision, service works, power, royalties, octroi taxes etc. and to include all to cover the cost of lighting on night work if any and round the clock work as and when required and no claim for additional payment beyond the prices or rates quoted will be entertained and the tenderers shall not be entitled subsequently to make any claim on the ground of any representation or on any promise by any person (whether member in the employment of any Public Works Department or not) or on the ground of any failure on his part to obtain all necessary information for the purpose of making his tender and fixing the several prices and rates therein relieve him from any risks or liabilities arising out of the tender.

3. INDEMNITY :

The Contractor shall indemnify the NHRDF against all actions, suits, claims and demands brought or made against it in respect of anything done or committed to be done by the contractor in execution of or in connection with the work of this contract and against any loss or damage to the NHRDF in consequence to any action or suit being brought against the Contractor for anything done or committed to be done during the execution of this contract.

The NHRDF may at its discretion and entirely at the cost of the contractor defend such suit, either jointly with the Contractor or single in case the latter chooses not to defend the case.

4. ACCEPTANCE :

Intimation of acceptance of tender will be given by a telegram or a letter sent by Registered Post to the address given below the signature of the tenderer in the tenders. The tenders which do not fulfill any of the above conditions or those in

the form and which are incomplete in any respect shall be liable for rejection.

5. PRECAUTIONS TO BE TAKEN BY THE CONTRACTOR TO PREVENT ACCIDENT :

- i) No live electric lines should be allowed to run along the ground in the blasting zone and they should be at least about 10 ft. above ground if not more.
- ii) The wiring cable should not be taken near the live electric line and it should be preferably shot firing cable as supplied by the supplier of explosives. If such a cable is not available a substitute cable recommended by the explosive suppliers should only be used. Under no circumstances should cable made up of several pieces jointed and tapped be used.
- iii) The blasting working shed from where the exploder is to finally operated should be at least 150 metre away from the area to be blasted. It should have a strong roof which can with stand the impact of flying stones at this range.
- iv) Only trained hands should be allowed to handle explosives, cable detonators etc.

6.1 CONTRACTOR TO INFORM HIMSELF FULLY :

The contractors shall be deemed to have carefully examined the work and site conditions including labour, the general and special conditions, the specifications, schedules and drawings and shall be deemed to have visited the site of the work and to have fully informed himself regarding the local conditions and carried out his own investigations to arrive at the rates quoted in the tender. In this regard, he will be given necessary information to the best of the knowledge of NHRDF but without any guarantee about it.

If he shall have any doubt as to the meaning of any portion of these general conditions or the special condition, to the scope of working of the specifications and drawings or any other matter concerning the contract, he shall in good time, before submitting his tender, set forth the particulars thereof and submit them to the competent authority of NHRDF in writing in order that such doubts may be clarified authoritatively before tendering. Once a tender is submitted, the matter will be decided in accordance with tender conditions in the absence of such authentic pre-clarification.

6.2 ERROR, OMISSIONS AND DISCREPANCIES :

(A) In case of errors, omissions and /or disagreement between written and scaled dimensions in the drawing or between the drawings and specifications etc., The following order of preference shall apply.

(I) Between actual scaled and written dimensions or descriptions on a drawing,

the latter shall be adopted.

- (II) Between the written or shown description of dimensions in the drawing and corresponding one in the specifications, the latter shall apply.
 - (III) Between the quantities shown in schedule of quantities and those arrived at from the drawings, the latter shall be preferred.
- (B)** In all cases of omission and / or doubts of discrepancies in the dimensions or description of any item or specifications, a reference shall be made to the competent authority of NHRDF, whose elucidation, elaboration or decision shall be considered as authentic. The contractor shall be held responsible for any errors that may occur in the work through lack of such reference and precaution.

6.3 WORKING METHODS AND PROGRESS SCHEDULES :

- (a)** The Contractor shall submit within the time stipulated by the NHRDF in writing the details of actual methods that would be adopted by the Contractor for the execution of any item as required by competent authority of NHRDF at each of the location, supported by necessary detailed drawing and sketches including those of the plant and machinery that would be used, their locations, arrangement for conveying and handling materials etc. and obtain prior approval of the NHRDF well in advance of starting of such item of work. The NHRDF reserves the right to suggest modifications or make corrections in the method proposed by the contractor, whether accepted previously or not, at any stage of the work to obtain the desired accuracy, quality and progress which shall be binding on the contractor. No claim on account of such change in method of execution will be entertained by NHRDF so long as specifications of the item remain unaltered. The full responsibility for the safety and adequacy of the methods adopted by the contractor shall however, rest on the contractor, irrespective of any approved given by the competent authority of NHRDF.

In case of slippage from the approved work programme at any stage, the contractor shall furnish revised programme to make up the slippage within the stipulated time schedule and obtain the approved of the competent authority of NHRDF to the revised programme.

PROGRESS SCHEDULE

- (b)** The Contractor shall furnish within the period stipulated in writing by the Technical Person ,NHRDF of the order to start the work, progress schedule using PERT/CPM technique in quadruplicate indicating the date of actual start, the monthly progress expected to be achieved and anticipated completion date of each major item of

work to be done by him, also indicating and setting up materials, plants and machinery. The schedule is to be such as is practicable of achievement towards the completion of the whole work in the time limit and of the particular items, if any on the due date specified in the contract and shall have the approval of the Technical Person ,NHRDF. No revised schedule shall be operative without such acceptance in writing. The competent authority of NHRDF is further empowered to ask for more detailed schedule or schedules in weekly form, for any item or items, in any case of urgency of work as will be directed by him and the contractor shall supply the same as and when asked for.

- (c) The Contractor shall employ sufficient plant, equipment and labour as may be necessary to maintain the progress schedule. The working and shift hours restricted to one shift a day for operations to be done under the NHRDF supervision shall be such as may be approved by the Technical Person ,NHRDF. They shall not be varied without the prior approval of the competent authority of NHRDF. Night work requiring supervision shall not be permitted except when specifically allowed by competent authority of NHRDF on each item, if requested by Contractor. The Contractor shall provide necessary lighting arrangements etc. for night work as directed by the competent authority of NHRDF without extra cost to NHRDF.

Further, the contractor shall submit the progress of work in prescribed forms and charts etc. at periodical intervals, as may be specified by the Technical Person ,NHRDF. Schedule shall be in the form of progress charts, forms, progress statement and/or reports as may be approved by the competent authority of NHRDF. The contractor shall maintain proforma, charts, details regarding machinery, equipment, labour, materials, personnel etc. as may be specified by the competent authority of NHRDF and submit periodical returns thereof as may be specified by the Technical Person, NHRDF.

(d) **CONSTRUCTION EQUIPMENT AND LOCATION :**

The Contractor shall be required to give a trial run of the equipment's for establishing, their capability to achieve the laid down specifications and tolerance to the satisfaction of the competent authority of NHRDF before commencement of the work. All equipment provided shall be of proven efficiency and shall be operated and maintained at all times, in a manner acceptable to the competent authority of NHRDF and no equipment or personnel will be removed from site without permission of the competent authority of NHRDF .

- (e) The contractor shall maintain proforma, charts, details regarding machinery,

equipment, labor, materials, personnel etc. As may be specified by the competent authority of NHRDF and submit periodical returns thereof as may be specified by the competent authority of NHRDF.

(f) ***PRIORITIES OF WORKS TO BE EXECUTED:***

Priorities for items to be executed shall be determined periodically keeping in view of the final time limit allowed for the work and all the time schedule fixed for intermediate stages of work.

(g) **Revised Programme of Work in case of slippage:**

In case of slippage from the approved work programme at any stage, the contractor shall furnish revised programme to make up slippage within the stipulated time schedule and obtain the approval of the Technical Person ,NHRDF to the revised programme.

(h) **Action in case disproportionate progress:**

In case of extremely poor progress of the work or any item at any stages of work which in the opinion of the NHRDF cannot be made good by the Contractor considering his available resources, the Technical Person ,NHRDF will get it accelerated to make up the lost time through any other agency, and recover the additional cost incurred, If any, in getting the work done from the Contractor after informing him about the action envisaged by him.

6.4 TREASURE TROVE :

In the event of discovery by the Contractor or his employees, during the progress of the works of any treasure, fossils, minerals or any other articles or value of interest, the Contractor shall give immediate intimation thereof to the competent authority of NHRDF such treasure of things which shall be the property of the NHRDF.

6.5 QUARRIES :

6.5.1 The Contractor (s) shall have to arrange himself / themselves to procure the quarry.

However necessary assistance without any extra cost to NHRDF will be rendered by the NHRDF for procuring the quarries if required by the Contractor.

6.5.2 The quarrying operation shall be carried out by the Contractor with proper equipment such as compressor, jack-hammers, drill bits, explosives etc. and sufficient numbers of workmen shall be employed so as to get the required out-turn.

6.5.3 The Contractor shall carry out the works in the quarries in conformity with all the rules and regulations already laid down or that may be laid down from time to time by the NHRDF. Any cost incurred by the NHRDF due to noncompliance of any rules or regulations or due to damages by the Contractor shall be the responsibility of the Contractor. The NHRDF or his representative shall be given full facility by the Contractor for inspection at all times of the working of the quarry, records maintained, the stocks of the explosives and detonators etc.

So as to enable him to check that the working records and storage are all in accordance with the relevant rules. The NHRDF or his representative shall at any times be allowed to

inspect the work, building and equipment at the quarters.

- 6.5.4 The Contractor shall maintain at his own cost the books, registers etc. required to be maintained under the relevant rules and regulations and as directed by the NHRDF. These books shall be open for inspection at all times by the NHRDF or his representative and the Contractor shall furnish the copies or extract of books or registers as and when required.
- 6.5.5 All quarrying operations shall be carried out by the Contractor in organized and expeditious manner, systematically and with proper planning. The Contractor shall engage licensed blasters and adopt electric blasting and / or any other approved method which would ensure complete safety to all the men engaged in the quarry and its surroundings. The Contractor shall himself provide suitable magazines and arrange to procure and store explosives etc. as required under the rules at his own cost. The designs and the location of the magazine shall be got approved in advance from the Chief Inspector of Explosives and the Rules and Regulations in this connection as laid down by the Chief Inspector of Explosives from time to time shall be strictly adhered to by the Contractor. It is generally experienced that it takes time to obtain the necessary license for blasting and license for storage of materials from the concerned authorities. The Contractor must therefore, take timely advance action for procuring all such licenses so that the work progress may not be hampered.
- 6.5.6 The approaches to the quarrying place from the existing public roads shall have to be arranged by the Contractor at his own cost and the approaches shall be maintained by the Contractor at his own cost till the work is over.
- 6.5.7 The Quarrying operations shall be carried out by the Contractor to the entire satisfaction of the Technical Person and the development of the quarry shall be made efficiently so as to avoid wastage of stones. Only such stones as are of the required quality shall be used on the work. Any stone which is in the opinion of the Technical Person, not in accordance with the specifications or of required quality will be rejected at any time, at the quarry or at the site of work. The rejected stones shall not be used on the work and such rejected materials shall be removed to the place shown at the Contractor's cost.
- 6.5.8 Since all stones quarried from NHRDF quarry (if made available) by the Contractor including the excavated over burden are the property of the NHRDF, no stones or earth shall be supplied by Contractor to any other agencies or works and are not allowed to be taken away for any other works. All such surplus quarried materials not required for work under this contract shall be the property of the NHRDF and

shall be handed over by the Contractor to the NHRDF free of cost at the quarry site duly heaped at the spots indicated by the Technical Person .

- 6.5.9 Quarrying permission will have to be directly obtained by the Contractor, from the Collector of the District concerned for which purpose the NHRDF will render necessary assistance. All quarry fees, royalty charges, Octroi duties, ground rent for staking material etc. if any to be paid, shall be paid directly by the contractor as per prevailing rules in force.
- 6.5.10 The Contractor will be permitted to erect structures such as stores, office, huts for the labours at his own risk and cost at the quarry site, if suitable vacant space in NHRDF area is available for the purpose at places approved by the Technical Person . On completion of the work the Contractor shall remove all the structures erected by him and restore the site to its original condition.
- 6.5.11 The Contractor shall not use any land in the quarry for cultivation or for any other purpose except, that required for breaking or stacking or transporting stones.
- 6.5.12 The rates in the tender include all incidental charges such as opening of a new quarry, opening out a new portion in an existing quarry, removing top soil and the unsuitable material, dewatering a quarry, cost of blasting powder and fuse, lift, lead, repairs to existing cart tracks, making new cart tracks, control charges, Central/State NHRDF or Municipal taxes, Local Boards, Cess, etc.

6.6 COLLECTION OF MATERIALS :-

- (I) Where suitable and approved P.W. Department's quarries exist the Contractor or piece worker will be allowed if otherwise there is no objection to obtain the materials to the extent required for the work from the quarry. He will be, however, liable to pay compensation, if any damage caused to the quarry either deliberately or through negligence or for wastage of materials by himself or his staff or labour. The Contractor shall pay necessary royalty in advance and claim refund according to rules, if admissible and shall submit detailed accounts of materials quarried as directed.
- (II) Where no suitable P.W. Department's quarries exist or when the quantity of the material required cannot be obtained from a P.W. Department Quarry, the Contractor or piece worker shall make his own arrangements to obtain the material from existing or a new quarry in NHRDF waste land, private land or land belonging to other States or Talukas etc. After opening the quarry but before starting collection, the quarry shall be got approved from the Technical Person or his representatives. The Contractor or piece worker shall pay all royalty charges, compensation etc. No claims or responsibility on account of any of obstructions caused to execution of the work by difficulties arising out of private owners of the

land will be entertained.

- (III) The rates in the tender, include all incidental charges such as opening of a new quarry, opening out a new portion in an existing quarry, removing top soil and the unsuitable material, dewatering, quarry, cost of blasting powder and fuse, lift and lead, repairs to existing cart tracks, making new cart tracks, control charges, Central/State NHRDF or Municipal Taxes, etc.
- (IV) The rates in the tender are for the delivery of the approved material on work site, properly stacked at the places specified by the Technical Person , NHRDF and are inclusive of conveyance charges in respect of the leads and lifts. No claims on account of changes in lead will be entertained.
- (V) No material shall be removed from the land within the road boundary or from the land touching it without the written permission of the Technical Person , NHRDF or his authorised agent. If any material is unauthorisely obtained from such places, the Contractor or piece worker shall have to make good the damages and pay such compensation, in addition as may be decided by the Director and will have to stop further collection.
- (VI) Any material that falls on any P.W.D. Road from the cart etc. during conveyance shall be immediately picked up and removed by the Contractor or piece worker, failing which it will be got removed by NHRDF at contractor's cost. No heap shall be left prior to stacking even temporarily on the road surface or in any way so as to cause any obstruction or danger to the traffic. The Contractor or the piece worker shall be liable to pay for any claims of compensation etc. arising out of any accident, etc. Any such materials causing obstruction or danger etc. will be got removed departmentally at his cost and no claim for any loss or damage to the material, thus removed will be entertained. The Contractor shall also be responsible for the damage or accident etc. arising out of any material that falls on the road or track, not in charge of the NHRDF and shall attend to any complaints which may be received.
- (VII) The materials shall not be stacked in place where it is liable to be damaged or lost due to traffic passing over it, to be working shed away by rain or floods, to be buried under the land slides etc. or the slip down an embankment or hill side etc. No claims for any loss due to these and similar causes will be entertained.

6.7 AGENT AND WORK ORDER BOOKS :-

The contractor shall himself engaged an authorized all time agent on the work capable of managing and guiding the work and understand the specifications and contract condition. A qualified and experienced, Engineer shall be employed by the contractor as his agent for

technical matters in case the competent authority of NHRDF considers this as essential for the work and so directs contractors. He will take orders as will be given by the Director or his representative and shall be responsible for carrying them out.

This agent shall not be changed without prior intimation to the Director and his representative on the work site. The Technical Person, NHRDF have the unquestionable right to ask for change in the quality and strength of contractor's supervisory staff and to order removal from work of any of such staff. The contractor shall comply with such orders and effect replacements to the satisfaction of the Technical Person, NHRDF.

A work order book shall be maintained on site and it shall be the property of the NHRDF and the contractor shall promptly sign orders given therein by the Director or his representative and his superior officers and comply with them. The compliance shall be reported by the Contractor to the competent authority of NHRDF in good time so that it can be checked. The blank work order with machine numbered pages will be provided by the NHRDF free of charge for this purpose. The contractor will be allowed to copy out instructions therein from time to time.

6.8 INITIAL MEASUREMENTS FOR RECORD:-

Where for proper measurement of work, it is necessary to have initial set of levels or other measurements taken, the same as recorded in the authorized field book or measurement book by the Engineer or his authorized representative will be signed by the Contractor who will be entitled to have a true copy of the same made at his cost. Any failure on the part of the Contractor to get such levels etc. recorded before starting the work will render him liable to accept the decision of the Engineer as to the basis of taking measurements. Like-wise the Contractor will not cover any work which will render its subsequent measurements difficult or impossible

without first getting the same jointly measured by himself and the authorised representative of the NHRDF. The record of such measurements on the NHRDF side will be signed by the Contractor and he will be entitled to have a true copy of the same made at his cost.

6.9 HANDING OVER OF WORK :-

All the works and materials before finally taken over by NHRDF it will be the entire liability of the Contractor to guard, maintain and make good any damage of any magnitude. Interim payments made for such work will not alter this position. The handing over by the Contractor and taking over by the Director or his authorised representative will be always in writing. Copies of which will go to the Director or

his authorised representative and the Contractor. It is however, understood that before taking over such work, NHRDF will not put it into regular use as distinct from casual or incidental one, except as specifically mentioned elsewhere in this contract, or as mutually agreed to.

6.10 ASSISTANCE IN PROCURING PRIORITIES, PERMITS ETC :

The Engineer on a written request by Contractor will, if in his opinion the request is reasonable and in the interest of work and its progress, assist the Contractor in securing, the priorities for deliveries, transport, permits for controlled materials etc. where such are needed. The NHRDF will not however be responsible for the non-availability of such facilities or delays on this behalf and no claims on account of such failure of delays shall be allowed by the NHRDF.

The Contractor shall have to make his own arrangement for machinery required for the work. However if the same is conveniently available with the NHRDF it may be spared as per the rules in force on recovery of necessary Security Deposit and rent at the rate approved from time to time by the independent agreement to this contract and the supply or non supply of machinery shall not form a ground for any claim or extension of time for this work.

7. SAMPLES AND TESTING OF MATERIALS :

- i)** All materials to be used on work, such as cement, lime, aggregates, stone, asphalt, etc. shall be got approved in advance from the Technical Person , NHRDF and shall pass the tests and analysis required by him, which will be :
 - a)** as specified in the specifications of the items concerned and / or
 - b)** Red book
 - c)** as specified by the Indian Road Congress Standard Specification and code of practice for Road and Bridges or
 - d)** I.S.I. Specifications (whichever and wherever applicable) or
 - e)** Such recognized specifications acceptable to the Technical Person , NHRDF as equivalent there to or in the absence of such authorised specifications
 - f)** Such requirements test and/or analysis as may be specified by the Technical Person , NHRDF in the order of procedure given above.
- ii)** The Contractor shall at his risk and cost make all arrangement and/or shall provide for all such facilities as the Technical Person , NHRDF may require for collecting, preparing required number of samples for test or analysis at such time and to such places as may be directed by competent authority of NHRDF and bear all such charges, such samples shall also be deposited with competent authority of NHRDF.

- iii) The Contractor shall as and when required submit at his cost the samples of materials to be tested or analyzed and if, so directed, shall not make use of or incorporate in the work any material represented by the samples until the required test or analysis have been made and after the test of the materials, finally accepted by the Technical Person , NHRDF
- iv) The contractor shall not be eligible for any claim or compensation either rising out of any delay in the work or due to any corrective measure required to be taken on account of and as a result of testing of the materials.
- v) The contractor or his authorised representative will be allowed to remain present in the Department laboratory which testing the samples furniworking shed by him. However the results of all the tests carried out in the laboratory approved by NHRDF whether in the presence or in absence of the contractor or his authorised representative will be binding on the contractor.
- vi) **Quality Control Tests :-** The testing shall be done as per frequencies mentioned in the specification/additional specification of each item. The test shall be carried out in Vigilance and Quality Control Laboratory or any approved NHRDF Institutions at the cost of contractor
The required tests shall be carried out in approved NABL laboratory at his own costs..
- vii) In case of material procured by the contractor, testing as required by the Codes and Specifications shall be arranged by him at his own cost.
- viii) It is mandatory on the part of Contractor to carry out all the required tests of various construction materials

7.1 QUALITY CONTROL ON WORKS AND MATERIALS :

The Contractor shall be responsible for the quality of the work in the entire construction work within the contract.

7.2 TEMPORARY QUARTER AND SITE OFFICE

The Contractor shall at his own expense maintain sufficient experienced supervisory staff etc. required for the work and shall make his own arrangements for housing such staff with all necessary amenities. General layout plan for such structures shall be got approved from the Technical Person , NHRDF. It will be the responsibility of the Contractor to get his lay out plan of temporary structure approved from the local competent authority.

7.3 WATER SUPPLY :

Availability of adequate water for works and sources thereof shall be confirmed by the

Contractor before submitting the tender.

The Contractor shall make his own arrangements at his own cost for entering into contract with concerned authorities for obtaining the connection and carry the water upto the work site as required by him.

7.4 ELECTRICITY :

The Contractor will have to make his own arrangement at his own cost for obtaining or providing electric supply at work site.

8. SAFETY MEASURES AND AMENITIES :

8.1 SAFETY MEASURES :

The Contractor shall take all necessary precautions for the safety of the workers and preserving their health while working on such job as require special protection and precautions wherever required. The following are some of the requirements listed, through not exhaustive. The contractor shall also comply with the directions issued by the competent authority of NHRDF in this behalf from time to time and at all times.

- (i) Providing protective foot-wear to workers, in situations like mixing and placing of mortar or concrete, in quarries and place where the work is to be done under too much wet conditions as also for movements over surfaces infected with oyster growth etc.
- (ii) Providing protective head wear to workers, working in quarries etc. to protect them against accidental fall of materials from above.
- (iii) Taking such normal precautions like providing hand rails to the edges of the floating platform or barges, not allowing nails or metal parts or useless timber to spread around etc.

8.2 AMENITIES :

- (I) Supporting workmen with proper belts, ropes etc. when working on any masts, cranes, grabs, hoist, dredger etc.
- (ii) Taking necessary steps towards training the workers concerned of the use of machinery before they are allowed to handle it independently and taking all necessary precautions in and around the areas where machines, hoists and similar units are working.
- (iii) Avoiding bare live-wires etc. as would electrocute workers.
- (iv) Making all platforms, stagings and temporary structures sufficiently strong and not causing the workmen and supervisory staff to take undue risks.
- (v) Providing sufficient first aid trained staff and equipment to be available quickly at the work site to render immediate first aid treatment in case of accidents due to suffocation, drowning and other injuries.
- (vi) Providing full length gum boots, leather hand gloves, leather jackets with fireproof aprons

to cover the chest and black reaching upto knees plain goggles for the eyes to the labour working with hot asphalt handling vibrators in cement concrete and also where use of any or all these items is, essential in the interest of health and well being of the labourers in the opinion of the competent authority of NHRDF.

8.3 DAMAGE BY FLOODS OR ACCIDENTS :-

The contractor shall take all precautions against damage by floods or from accident etc. No compensation will be allowed to the Contractor on this account or for correcting and repairing any such damage to the work during construction The Contractor shall be liable to make good at his cost any plant or materials belonging to the NHRDF lost or damaged by floods or from any other cause while is in his charge.

8.4 RELATION WITH PUBLIC AUTHORITIES:

The Contractor shall comply with all rules, regulations, bye-laws and directions given from time to time by any local or public authority in connection with this work and shall himself pay all charges which are leviable on him without any extra cost to the NHRDF.

8.5 MEDICAL AND SANITARY ARRANGEMENTS TO BE PROVIDED FOR LABOUR EMPLOYED IN THE CONSTRUCTION BY THE CONTRACTOR

- a) The Contractor shall provide an adequate supply of pure and wholesome water for the use of labourers on work and in camps.
- b) The Contractor shall construct trench or semipermanent latrines for the use of the Labours. Separate latrines shall be provided for men and women.
- c) The Contractor shall build sufficient number of huts on a suitable plot of land for use of the labourers according to the following specifications :-
 1. Huts with Bamboo's and Grass may be constructed.
 2. A good site not liable to submergence shall be selected on high ground remote from jungle but well provided with tress, shall be chosen wherever it is available. The neighborhood of tank, jungle, trees or wood should be particularly avoided, Camps should not be established close to large cutting of earth work.
 3. The lines of huts shall have open space of at least ten metre between rows. When a good natural site cannot be procured, particular attention should be given to the drainage.
 4. There should be no over crowding. Floor space at the rate of 3 Sq. metre per head shall be provided. Care should be taken to see that the huts are kept clean and in good order.
 5. The Contractor must find his own land and if he wants NHRDF land, he should

apply for it. Assessment for it, if demanded will be payable by Contractor. However the NHRDF does not bind itself for making available the required land.

- a)** The Contractor shall construct a sufficient number of bathing places, Washing places should also be provided for the purpose of washing cloths.
- b)** The Contractor shall engage a Medical Officer with a travelling dispensary for a Camp containing 500 or more persons if there is no NHRDF or other private dispensary situated with 8 Kms. from the camp. In case of emergency the Contractor shall arrange at this cost of transport for quick medical help to his sick worker.
- c)** The Contractor shall provide the necessary staff for effecting satisfactory conservancy and cleanliness of the camp to the satisfaction of the Technical Person , NHRDF. Atleast one sweeper per 200 persons should be engaged.
- d)** The Assistant Director of Public Health shall be consulted before opening a labour camp and his instruction on matters such as water supply, sanitary conveniences, the camp site accommodation and food supply shall be followed by the Contractor.
- e)** The Contractor shall make arrangements for all antimalarial measures to provided for the labours employed on the work. The antimalarial measures shall be provided as directed by the Assistant Director of Public Health.
- f)** The anti-malaria and other health measures shall be as directed by the Joint-Director (Malaria and Filariasis) Health Services, Pune.
- g)** Contractor shall see that mosquito breeding conditions are not created so as to keep vector populations to minimum level.
- h)** Contractor shall carry out anti-malaria measures in the area as per guidelines prescribed under National Malaria Eradication Programme and as directed by the Joint Director, (M & F) of Health Services Pune.
- i)** In case of default in carrying out prescribed anti-malaria measures resulting in increase in Malaria incidence, contractor shall be liable to pay to NHRDF the amount spent by NHRDF on anti-malaria measure to control the situation in addition to fine.
- j)** The Contractor shall make sufficient arrangements for draining away the surface and sullage water as well as water coming from the bathing and washing places and shall dispose off this waste water in such way as not to cause any nuisance. He shall also keep the premise clean by employing sufficient number of sweepers.
- k)** The Contractor shall comply with all rules, regulation bye-law and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charges which are leviable on him without any extra cost to NHRDF.
- l)** In addition to above all provisions of the relevant labour act pertaining to

basic amenities to be provided to the labourer shall be applicable which will be arranged by the Contractor.

9. MISCELLANEOUS :

- 9.1** For providing electric wiring or water lines etc. recesses shall be provided if necessary through walls, slabs, beams etc. and later on refilled it with bricks or stones, chipping cement mortar without any extra cost.
- 9.2** In case it becomes necessary for the due fulfillment of contract for the Contractor to occupy land outside the NHRDF premises limits, the Contractor will have to make his own arrangements with the land owners and pay such rents, if any, are payable as mutually agreed between them.
- 9.3** The stacking and storage of building materials at site shall be in such a manner as to prevent deterioration or inclusion of foreign materials and to ensure the preservation of the quantity, properties and fitness of the work. Suitable precautions shall be taken by Contractor to protect the materials against atmospheric action fire and other hazards. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likelihood of subsidence of soil, heavy materials shall be stored on paved platforms. Suitable separating barricades and enclosure as directed shall be provided to separate materials brought by contractor and from different sources of supply.

10. AUTHORITIES OF THE COMPETENT AUTHORITY OF NHRDF :

Save in so far as it is legally or physically impossible the Contractor shall execute, complete and maintain the works in strict accordance with the contract under the directions and to the entire satisfaction of the competent authority of NHRDF in charge and shall comply with and adhere strictly to the competent authority of NHRDF's instructions and directions on any matter (Whether mentioned in the contract or not) pertaining to this works.

The competent authority of NHRDF shall decide all questions which may arise as to quality and acceptability of materials furnished and work executed, manner of execution, rate of progress of the works, interpretation of the plans and specifications and acceptability of fulfillment of the contract on the part of the Contractor . He shall determine the amount and quantity of work performed and materials furnished and his decision shall be final. In all such matters, and in any technical questions which may arise touching the contract, his decision shall be binding on the Contractor.

The competent authority of NHRDF in charge shall have the power to enforce such decisions and orders if the Contractor fails to carry them out promptly. If the Contractor fails to execute the work ordered by the competent authority of NHRDF. The competent authority of NHRDF in charge may give notice to Contractor specifying a reasonable period therein and on the expiry of that period proceed to execute such

work as may be deemed necessary and recover the cost there of from the Contractor.

10.1 AUTHORITIES OF THE TECHNICAL PERSON, NHRDF'S REPRESENTATIVE

The duties of the representative of the Technical Person , NHRDF are to watch and supervise the work and to test and examine any material to be used for workmanship employed in connection with the works.

10.2 The Technical Person , NHRDF may from time to time, in writing delegate to his representative any of the powers and authorities vested in the Technical Person , NHRDF and shall furnish to the Contractor a copy of all such delegations of powers and authorities. Any written instruction or approval given by the representative of the Technical Person of NHRDF to the Contractor within the terms of such delegations (but not otherwise) shall bind the Contractor and the Department as though it had been given by the Technical Person of NHRDF, provided always as follows.

- a)** Failure of the representative of the Technical Person, NHRDF to disapprove any work or material shall not prejudice the power of the Technical Person , NHRDF there after to disapprove such work or materials and to order to pulling down, removal or breaking up thereof.
- b)** If the Contractor is dissatisfied with any decision of the Representative of the Technical Person , NHRDF he shall be entitle to refer the matter to the Technical Person , NHRDF, who shall there upon confirm/reverse or vary such decision.

11. LAY OUT OF WORK :

Layout of the work will be done by the Contractor in consultation with the Director of NHRDF or his representative, some permanent marks should however be established to indicate the demarcation of the structure or any component there of made to this permanent marks in measurement books and drawing signed by the contractor and NHRDF officer, Responsibility regarding layout will be joint.

12. SETTING OUT

12.1 BUILDING WORKS :-

The Technical Person , NHRDF shall furnish the contractor with only the four corners of the works site and a level bench mark and the contractor shall set out the works and shall provide an efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.

The contractor shall provide, fix and be responsible for the maintenance of all stacks, templates, level marks, profile and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be

responsible for the consequence of such removal or disturbance, should the same take place and for their efficient and timely reinstatement. The contractor shall also be responsible for the maintenance of all existing survey marks, boundary marks distance marks and center line marks, either existing or supplied and fixed by the contractor. The work shall be set out to the satisfaction of the Technical Person , NHRDF. The approval thereof or joining with the contractor by the Technical Person , NHRDF in setting out the work, shall not relive the contractor of any of his responsibilities.

Before beginning the work, the contractor shall at his own cost provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme for bearing marks acceptable to the Technical Person , NHRDF. The center, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the center to enable the theodolite to be set over it. No work shall be started until all these points are checked and approved by the Technical Person , NHRDF in writing but such approval shall not relieve the contractor of any of his responsibilities. The contractor shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.

Pillars bearing geodetic marks located at the sites of units of works under construction should be protected and fenced by the contractor.

On completion of works, the contractor must submit the geodetic documents according to which the work was carried out.

12.2 RESPONSIBILITIES FOR LEVEL AND ALIGNMENT :-

The contractor shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of the work and shall rectify effectually any errors or imperfections therein, such rectifications shall be carried out by the contractor, at his own cost, when instructions are issued to that effect by the Technical Person.

13. STACKING AND STORAGE AND GUARDING OF MATERIALS :

- 13.1 The stacking and storage of material at site shall be in such a manner as to prevent deterioration or intrusion of foreign matter and to ensure the preservation of their quality, properties and fitness for the work. Suitable precautions shall be taken by the Contractor to protect the materials against atmospheric action, fire and other hazards. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likely hood of subsidence of soil, heavy materials shall be stored on paved platforms.

Suitable separating barricades and enclosures as directed shall be provided to separate materials brought by Contractor and materials issued by NHRDF to Contractor under Schedule "A" Same applies for the material obtained from different sources of supply.

- 13.2 The Contractor shall at his own expense engage watchman for guarding the materials and plant and machinery and the work during day and night against any pilferage or damage and also for prohibiting trespassers.
- 13.3 No materials brought to the site shall be removed from the site without the prior approval of the Technical Person , NHRDF.

14. SUPERVISION AND INSPECTION OF WORKS

The Contractor shall either himself supervise the execution of the works or shall appoint the competent agent approved by the Technical Person , NHRDF, to act on his behalf. If in the

opinion of the Technical Person , NHRDF, the Contractor has himself no sufficient knowledge and experience of receiving instructions or cannot give his full attention to the works, the Contractor shall at his own expenses employ as his accredited agent & qualified Engineer approved by the competent authority of NHRDF. Orders given to the Contractor's agent shall be considered to have the force as if these had been given to the Contractor himself. If the Contractor fails to appoint a suitable agent as directed by the competent authority of NHRDF, the competent authority of NHRDF -in charge shall have full power to suspend the execution of the work until such date a suitable agent is appointed and the Contractor shall be responsible for the delay so caused to the works and the Contractor shall not be entitled for.

- 14.1 The Contractor shall inform the NHRDF in writing when any portion of the work is ready for inspection giving him sufficient notice to enable him to inspect the same without affecting the further progress of the work.
- 14.2 The Contractor shall provide at his cost necessary ladders and such arrangements as are considered safe by the Technical Person , NHRDF for proper inspection of all parts of the work.
- 14.3 Contractor shall extend his full co-operation and make all necessary arrangements when needed for carrying out inspection of the work or any part of the work by the local representatives, M.L.As, M.Ps and officers and dignitaries / delegates of NHRDF, local bodies, private sectors etc. No compensation shall be paid to the contractor on this account.
- 14.4 The work shall be carried out by the Contractor without causing damage to the existing NHRDF property and / or private property. If any such damage are caused, the Contractor shall pay for restoration of the property to the original conditions, and any other consequent damages.
- 14.5 In the event of the occurrence of an accident involving serious injuries or death of any person, at site of work or quarry or at any place in connection with the work the same shall be reported in writing within twenty four hours of the occurrence to the Technical

Person, NHRDF of Workmen's compensation.

- 14.6 The Contractor after completion of work shall clean the site of all debris and remove all unused materials other than those supplied by the NHRDF and all plant and machinery, equipment, tools etc. belonging to him within one month from the date of completion of the work, or otherwise the same will be removed by the NHRDF at his cost or disposed off as per NHRDF procedure. In case the material is disposed off by the NHRDF, the sale proceeds will be credited to the Contractor's account after deducting the cost of sale incurred. However, no claim of Contractor regarding the price or amount credited will entertained afterwards.
- 14.7 All constructional plant, provided by the Contractor shall when brought on to the site be deemed to be exclusively intended for the construction and the contractor shall not remove the same or any part thereof (save for the purpose of moving it from one part of the site to another) without the consent in writing of the Technical Person , NHRDF who shall record the reasons for withholding the consent.

15. COMPLETION CERTIFICATE :

- 15.1 The work shall not be considered to have been completed in accordance with the terms of the contract until the Architect & jointly by NHRDF shall have certified in writing to that effect. No approval of material or workmanship or approval of part of work during the progress of execution shall bind the Technical Person, NHRDF or in any way prevent him from even rejecting the work which is claimed to be complete and to suspend the issue of his certificate of completion until such alteration and modifications or reconstruction have been effected at the cost of the Contractor as shall enable him to certify that the work has been completed to his satisfaction.
- 15.2 After the work is completed the Contractor shall give notice of such completion to the Technical Person , NHRDF and within 30 days of receipt of such a notice the Technical Person, NHRDF shall inspect the work and if there is no defect in the work shall furnish the Contractor with a certificate indicating the date of completion. However, if there are any defects which in the opinion of the Technical Person , NHRDF are rectifiable he shall inform the Contractor the defects noticed. The Contractor after rectification of such defects shall then inform the Technical Person , NHRDF and Technical Person , NHRDF on his part shall inspect the work and issue the necessary completion certificate within 30 days if , the defects are rectified to his satisfaction, and if not, he shall inform the Contractor indicating defects yet to be rectified. The time cycle as above, shall continue.
- 15.3 In case defects noticed by the Technical Person , NHRDF which in his opinion are not rectifiable but otherwise work is acceptable at reduced payment, work shall be treated as completed. In such cases completion certificate shall be issued by the Technical Person , NHRDF within 30 days indicating the un-rectifiable defects for which reduction in payment is being made by him.
- 15.4 The site should be cleaned in all respect at the time of issue of completion certificate.

16 SPECIAL CONDITIONS:

- 16.1 The Contractor should ensure that all safety precautions are observed by their labourers, working closed to the State Highway and while closing the State Highway precautions are taken including insurance etc., for their labour at the cost of the contractor and the contractor will bear all the expenses, compensation etc. if any accident occurs to the labour etc. No claim in this regard on whatsoever account shall be entertained and this decision of the NHRDF will be final and conclusive.
- 16.2 The Contractor shall observe the rules and regulation imposed by traffic police for smooth flow of traffic on the diversion road and shall not be entitled for claims any compensation arising thereof.
- 16.3 In case of delay in handing over the land required for the work, due to unforeseen cause, the Contractor shall not be entitled for any compensation what-so-ever from the NHRDF on ground that the machinery or labour was idle for certain period. Contractor may, however apply for extension of time limit which may be granted on the merit of the case.

17. REJECTION OF MATERIALS NOT CONFORMING TO SPECIFICATIONS:

Any stock or batch of material(s) of which sample(s) does not conform to the prescribed test and quality, shall be rejected by the Technical Person or his representative and such materials shall be removed from site by the Contractor at his own cost. Such rejected materials shall not be made acceptable by any modifications.

Materials not corresponding in character and Quality with approved samples will be rejected by the Technical Person or his representative and shall be removed from site at the Contractor's own cost.

18. INSPECTION OF OPERATIONS :

The Technical Person and any person authorized by him shall at all times have access to the works and to all workshops and places (including required documents) where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the Contractor shall afford every facility for & every assistance in or in obtaining the right to such access.

19. SUPPLY OF COLOURED RECORD PHOTOGRAPHS AND ALBUMS:

The Contractor shall arrange to take dated post card size coloured photographs at various stages/facts of the work including interesting and novel features of the work as desired by the Technical Person , NHRDF and supply them in five copies each in separate albums of appropriate size. He shall also arrange for the Video Filming of important activities of the work during the currency of the contract and edit it to a video film of 60 to 180 minutes playing time.

It shall contain narration of the various activities in English/Marathi by a competent narrator. The cassette shall be of acceptable quality and the film shall

be capable of producing color pictures. This shall be considered as incidental to the work and no additional payment whatsoever will be made for the same.

20. SUPPLY OF SAFETY JACKETS TO LABOURERS/SUPERVISORS/ENGINEERS

As a safety measure during the execution of work all labours, construction and supervisory staff shall be provided with an orange colour jacket in flouroscent blue so as to make them starkly visible from a distance even during evening hours.

21. APPROVAL OF CONSTRUCTION MATERIALS AND CONSTRUCTION ACTIVITIES:

Approval of all materials for the work shall be obtained in writing from Technical Person , NHRDF or his representative before its use in the Project.

Before taking up of any construction activity the construction work done earlier shall be got approved in writing. Any failure on this account may result in the work for which the Contractor will be solely responsible.

Materials and job mix, etc. shall be got approved in writing atleast 15 days in advanced of the commencement of the corresponding activity. The testing charges shall be borne by the Contractor .

Besides the prescribed tests and frequencies any other test of tests over the prescribed frequency shall also be carried out by the Contractor at his own cost if so directed by Technical Person , NHRDF or his authorised representative.

22. CONDITION RELATING TO INSURANCE OF CONTRACT WORK.

Contractor shall take out necessary Insurance Policy/ (viz. Contractors All Risks Insurance Policy, Erection All Risks Insurance Policy etc. as decided by the Directorate of Insurance) so as to provide adequate insurance cover for execution of the awarded contract work for total contract value and complete contract period compulsorily from the "Directorate of Insurance, Maharashtra State, Mumbai only its postal address for Correspondence is "264, MHADA, First Floor, Opp. Kalanagar, Bandra (East) Mumbai – 400051" (Telephone Nos. 26590403/26590690 and Fax No. 26592461/26590403) Similarly, all workmen's appointed to complete the contract work are required to insure under workmen's compensation insurance policy. Insurance policy/policies taken out from any other Company will not be accepted. If any contractor has effected Insurance with any insurance company the same will not be accepted and the amount of premium calculated by the NHRDF Insurance Fund will be recovered directly from the amount payable to the Contractor for the executed contract work and paid to the Directorate of Insurance Fund, Maharashtra State, Mumbai, The Director of Insurance reserves the right to distribute the risks of insurance among the other insurers.

23. DIARY :

Contractor shall maintain, throughout the construction period, a diary in the form of a register regarding the following :-

- i) Daily presence of all categories of labours.
- ii) Daily availability and use of machinery and equipment's on work.
- iii) Daily procurement, Consumption and balance of materials on site.
- iv) Daily record of various visiting authorities alongwith name of the officers visited and timing.
- v) Details of work executed per day.
- vi) The register shall be closed on daily basis and signature of Technical Person in charge or his representative should be taken over it.

24. The execution of Electrical work through Joint venture or subletting shall be the responsibility of the tenderer.

25. MAINTENANCE

- i. The Contractor shall maintain the Completed Work for a period mentioned in Tender Clause after the completion of work without any extra cost to NHRDF irrespective of the designs, standards and specifications etc. 5% amount of the total work done shall be recovered from running account bill and shall be withheld for period mentioned tender document from the date of actual completion at the work as maintenance charges of maintaining and keep Structure in good condition.
- ii. On completion of the work in all respects, necessary certificate will be issued by the Architect and the defects liability period will be counted
- iii. It will be responsibility of the contracting Agency to maintain Structure under work portion of this contract Agreement in good condition from the date of issue of work orders, till completion of defect liability period as per tender Clause and this shall be treated as part of total scope of this contract Agreement. In case the contractor fails to maintain Structure properly including rectification of the defects pointed out by the NHRDF within a period of 7 days from the date of written notice by the Technical Person of NHRDF rectification / repairs to such defects will be carried out by the NHRDF at expenditure incurred on such rectification work shall be recovered from the amount withheld as per Tender Clause
- iv. All damages during execution shall be made good by the Contractor at his cost. He will be responsible for any damages during construction and guaranteed maintenance period and no separate payment will be made for restoring such damages. "Any defects noticed in Completed Structure within a period mentioned in tender Clause, after completion of work (including Monsoon) will have to be repaired by the Contractor at his own cost."
- v. Defective work is liable to be rejected at any stage. The Contractor on no account can refuse to rectify the defects merely on reasons that further work has been carried out. No extra payment shall be made for such rectification.

26. Final Bill

- 26.1 The contractor should submit final bill within one month after completion of the work and the same will be paid within 2 months if it is in order. Disputed items and claims, if any shall be excluded from the bill and settled separately later on.
- 26.2 Bills for extra work or for any claim shall be paid separately apart from the interim bills for the main work. The payment of bills for the main work shall not be withheld for want of decision on the extras or claims not covered in the stipulations of the contract.
- 26.3 Claims for extra work shall be registered within 30 days of occurrence of the event. However, bills for these claims including supporting data, details may be submitted subsequently at his own cost.

27. PRELIMINARY ARRANGEMENTS

- 27.1 The Contractor if necessary construct temporary Structures and maintain these in proper condition till the completion of the work at his own cost. If necessary, he shall also, at his own expenses make necessary arrangements for acquisition of land required by him in connection with the execution of the work.
- 27.2 The contractor shall have to make at his own cost all preliminary arrangements for labour, water electricity and materials etc. immediately after getting the work order. No claim for any extra payment or application for extension of time on the grounds of difficulty in connection with the above matter, will be entertained.
- 27.3 The contractor shall at his own expenses, engage watchmen for guarding the materials and plant and machinery and the work during-day and night against any pilferage of damages and also for prohibiting trespassers or damage to them.
- 27.4 The contractor shall have to make his own arrangement for water required for any purpose on the work.

28. EXPECTED RISKS

- 1 The contractor shall be under no liability whatsoever by way indemnity or otherwise for or in respect of destruction of-or damage to the works (save work condemned under the provisions of specifications and conditions of this tender prior to the occurrence of any excepted risk hereinafter mentioned) or

temporary works or to property whether of the NHRDF or third parties or for or in respect of injury or loss of life which is the consequence whatever direct or indirect, were hostilities (whether were to declared or not) invasion, act of foreign enemies, rebellion, revolution, insurrection or military of usurped power. Civil war or riot, commotion or disorder otherwise than among the contractor's own employees or his piece worker and sub-agencies (hereinafter comprehensively referred to as "The said excepted risks") and the NHRDF shall indemnify and save harmless the contractor against and' from the same and against and from all claims, demands proceedings, damages, costs charges and expenses, whatsoever arising there out or in connection therewith and shall compensate the contractor for any loss of or damage to property of the contractor used for intended to be used / or the purpose of the works and laying at site of work and occasioned either directly or indirectly by the said excepted risks.

- 2** If the works or temporary works or any materials (whether for the former or the later brought to site shall sustain destruction or damages by reasons of any of the said excepted risks, the contractor shall be entitled payment for any permanent works and for any materials so destroyed or damaged and shall be paid by the NHRDF the cost of making good any such destruction or damages whatever to the works or temporary works and for replacing or making good such materials so far as may be necessary for the completion of the works on a prime costs basis as
- 3** Destruction, damage injury or loss caused by the explosion or impact whenever and wherever occurring of any mine bomb, shell, grenade or other projectile missile or ammunition or explosive or war resulting from action described in above shall be deemed to be a consequence of the. Said excepted Risk. foreign enemies, rebellion, revolution, insurrection or military of usurped power. Civil war or riot, commotion or disorder otherwise than among the contractor's own employees or his piece worker and sub-agencies (hereinafter comprehensively referred to as "The said excepted risks") and the NHRDF shall indemnify and save harmless the contractor against and' from the same and against and from all claims, demands proceedings, damages, costs charges and expenses, whatsoever arising there out or in connection therewith and shall compensate the contractor for any loss of or damage to property of the contractor used for intended to be used / or the purpose of the works and laying at site of work and occasioned either directly or indirectly by the said excepted risks. the Technical Person, NHRDF may certify to be reasonable. The contractor shall

lodge his claim, in writing, supported by Technical Person, NHRDF immediately, but not later than 30 days of such occurrence of damage to works by excepted risk.

29. Quality Assurance Manual : Contractor shall prepare the quality assurance manual booklet in consultation with the Authority, NHRDF. Quality assurance manual shall be comprehensive document covering every aspect of the work. Technical Person shall approve this document. The quality manual document shall be used only after approval from Technical Person. Provision of the quality manual shall be binding on the contractor. Quality manual shall be treated as a legal document as per with this contract document. It shall be used till the work is completed in full respect.

GENERAL INSTRUCTIONS

1. In the absence of any definite provision on any particular issue in the aforesaid "Standard Specification" reference may be made to the Volume-II. Codes of practice and in case of any dispute arising out of interpretation of the above, the Decision of the Technical Person shall be final and binding in the contractor.
2. In so far as any stipulation made herein conflict or is inconsistent with any provision of the standard specification I.S. codes of practice. The stipulation made here always prevail.
3. The Special stipulations which are in addition and over and above the specification contained in "Standard Specification" are given in foregoing clauses and shall be binding on the contract without any claim for extra labour and material thereof for.
4. The purpose of these stipulation is to achieve good workmanship and the work done in an Engineer-like-manner in part as well as in the totally at proper stage of work. This necessitates and becomes binding on a part of the contractor to obtain written approval and acceptance of the work done under different items of work at different stages from the Technical Person , NHRDF.
5. Not obtaining the written approval /acceptance work done from the Technical Person , NHRDF at a particular stage of items of works stipulated and processing ahead of the next stage of work under the same or different item may viewed as serious lapse on part of the contract. In such an event the work done but not proved by the Technical Person , NHRDF may summarily rejected. Similarly wherever work done which converts the unapproved work may also be rejected. Such rejected work shall be removed by the contractor at his own cost.
6. Acceptation of work done and granting permission to the contractor to proceed with further stage of work as per the stipulation made herein shall be done by the Technical Person by such mentions in "work Order Book" or by letter writing. The Contractor shall have to note and sign such remarks and certifications made in the work order book maintained at the site of work.
7. In case the contractor finds that part of whole of the excavated material is such that useful for refilling the excavated pits and trenches and/ or plinth or land development of site of work he shall informs so in writing to the Technical Person requesting for final disposal outside the premises in the initial stage only. In case the Technical Person approves of his fact and such proposal he shall order for final disposal of excavated un useful material beyond premises.

8. As soon as the excavation pits and trenches partly or fully by the Contractor he shall get the same approved in writing from the Technical Person and shall not proceed with next item of work such as laying of soil or bed concrete etc. Without complying with his requirement.
9. As soon as the excavation for foundation is approved he levels of these same shall be taken recorded by the Technical Person in a Separate book known as field book which will be signed by the Contractor in token of acceptance of the same.
10. The depth and height of work done under different hidden items of work in foundation shall be determined from difference of level of top and bottom. Hence it will be binding upon the Contractor to arrange for level taking at interval of top and bottom. Hence it will be binding upon the Contractor to arrange for level taking at intervals and sign the levels taking at intervals and sign the levels record riled book by the Technical Person in token of acceptance of the same. The Contractor shall not proceed with next items unless this be done
11. The plinth level i.e. floor level of the ground floor shall be got predetermined by the contractor from the Technical Person in Writing.
12. The Floor level shall be fixed in the form of reduced level with reference to the level of permanent or temporary bench mark fixed shall be properly secured, Constructed, Protected, and maintained by the contractor at one or more location as ordered by the Technical Person.
13. For Fixing the plinth level the Contractor shall get the made up or the developed ground level decided before hand writing from the Technical Person.
 1. For this Purpose, the engineer and the Contractor shall take account following considerations.
 1. Contours and slop of natural ground of works sight.
 2. Level of top adjoining public Structure.
 3. The length and gradient of approach from the public Structure to the entrance of building.
14. The plinth level shall be accordance with the height of plinth shown on Architectural drawing measured above the made up or developed ground level decide and fixed in advance as above.
15. On the basis of Reduced levels of made up or developed ground level in plinth the Contract shall submit the Sectional drawing of plinth in to copies to Technical Person duly signed by him. He shall Clearly show thereon the reduced level of flooring at plinth top of bed concrete below flooring top of the plinth filling on the predetermined reduced level of the made up or developed ground level. The sectional drawing shall show the section through internal wall and external walls

distinctly duly indicating top of R.C.C plinth beams incase of frame structure and offset of walls and plinth level and at ground level and inside the foundation, in case of load bearing structure.

16. The Technical Person shall scrutinize the sectional drawing submitted by the Contractor modify the same if necessary and return one copy of approved drawing to the contractor duly signed token of approval and acceptance of the content of the drawing. The contractor shall strictly adhere to the reduced level involved different items of work in plinth as shown on approved plan.

SUBMISSION OF BILL & MINIMUM VALUE OF BILL

1. It is responsibility of the contractor to submit the bill to the Technical Person of NHRDF.
2. Minimum value of works for processing of bill will be Rs.30 Lakhs. Three R/A bills will be submitted by the contractor (Two R/A bills & one final bill)
3. The Architect may from time to time intimate to the contractor that he requires the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the Architect or his representative in taking such measurement & calculation in presence of NHRDF's representative at site and to furnish all details like test report, quality, challan, measurements.

Once the item wise measurement are recorded jointly and paid through R/A bill or final bill the same shall not be disputable.

The work shall not be considered as completed unless the Architect has certified in writing that it has been accepted by the NHRDF. The DLP as mentioned in tender document herein after shall commence from the date on which CS is issued by Architect.

4. Initially after completion of whole work mentioned in tender the contractor shall give notice in writing to Architect with a copy to NHRDF. The work shall be completed to the entire satisfaction of Architect & NHRDF. If satisfied the Architect shall issue a certificate indicating the date on which the work has been completed.

Annexure 'A'

QUALITY CONTROL TESTS

| Sr.No. | Material | Test |
|---------------|---------------------------------------|---|
| 1 | Trap Stone | i) Compressive Strength. ii) Water Absorption |
| 2 | Trap Metal | i) Crushing value. ii) Impact value. iii) Abrasion value. iv) Water Absorption & surface moisture. v) Flakiness Index & Elongation index vi) Gradation |
| 3 | Natural Sand / VSI grade Crushed sand | i) Sieve Analysis ii) Silt / Dust Content iii) Water Absorption iv) Surface Moisture |
| 4 | Bricks / A.A.C. blocks | i) Crushing Strength. ii) Water Absorption. |
| 5 | Flooring Tiles | i) Flexural strength ii) Water Absorption iii) Abrasion Test |
| 6 | Glazed Tiles | i) Water Absorption |
| 7 | Cement | i) Compressive Strength ii) Initial setting time. iii) Final setting time. iv) Specific Gravity v) Soundness vi) Fineness vii) Standard Consistency |
| 8 | Steel | i) Weight per meter. ii) Ultimate Tensile stress. iii) Yield stress iv) Elongation v) Bend Test. vi) Chemical Test |

| | | |
|----|------------------------------------|---|
| 9 | Interlocking concrete paving block | i) Compressive Strength ii) Flexural Test iii) Resistance to wear (Abrasion) |
| 10 | Wood work (shutters) | i) End immersion tests ii) Knife test iii) Glue adhesion test |
| 11 | Cement Concrete | i) Mix design ii) Compressive strength iii) Concrete permeability test v) Flexural strength vi) workability |
| 12 | Structural steel | i) Weight/Running meter ii) Chemical Composition |
| 13 | Aluminum Windows | i) Weight per running meter |
| 14 | Non Destructive Tests | i) Ultra Pulse Velocity ii) Cover meter iii) Schmidt Hammer iv) Core Test |

Annexure 'B'

Construction Material Testing & its frequency

(Refer Additional Specification Condition No.7 (vi) on [Page No.98](#))

| Sr. | Material | Frequency |
|----------|--|--|
| 1 | CEMENT | |
| | 1) Consistency | } Test per 50 M.T. above six tests shall be carried. |
| | 2) Initial & Final Setting time | |
| | 3) Fineness | |
| | 4) Specific Gravity | |
| | 5) Soundness | |
| | 6) Compressive Strength | |
| 2 | METAL | |
| a | 1) Sieve Analysis (Gradation) (Concrete work) | 1 Test for every day work |
| | 2) Sieve Analysis Red Book Specification | 1 Test per 100 m ³ |
| | 3) Sieve Analysis Granular Sub Base (N.H.Work) MOST | 1 Test per 200 m ³ |
| b | Water Absorption | 1 Test per 200 m ³ |
| c | Impact (Concrete WBM/BT) | 1 Test per 200 m ³ |
| d | Crushing | 1 Test per for Each Source |
| e | Abrasion | 1 Test per for Each Source |
| f | Flakiness & Elongation Index | 1 Test per 200 m ³ |
| 3 | SAND | |
| | 1) Water Absorption & Specific Gravity | 1 Test per for Each Source |
| | 2) Fineness Modulus | 1 Test per for Each day |
| | 3) Slit Content | 1 Test per for Each day work |
| | 4) Bulkage | 1 Test per for Each day work |

| | | |
|---|--|--|
| 4 BRICKS / AAC BLOCKS | 1) Water Absorption 2) Comp Strength 3) Effloresce | For each 50000 Nos bricks Above three tests are to be carried out |
| 5 Flooring Tiles | 1) Flexural Strength 2) Water Absorption 3) Abrasion | For 2000 Nos of Tiles above three tests are to be carried out |
| 6 Glazed Tiles | 1) Water Absorption | 1 Test- 6 Tiles per 2000 Nos. |
| 7 Concrete Mix Design | | 1 Concrete Mix Design for each |
| 8 Compressive strength C.C.Cubes for Qty | | grade of concrete per every per hour |
| Qty. utpo 5 m ³ | | 1 Set (3 Nos.) |
| 6-15 m ³ | | 2 Set (3 Nos) |
| 16-30 m ³ | | 3 Set (3 Nos) |
| 31-50 m ³ | | 4 Set (3 Nos) |
| Quantity above 51 m ³ | | 4+1 additional set per 50 m ³ |
| 9 MURUM/ SOIL for earth work | | |
| 1) Optimum Dry Density | | 2 Test per 3000 m ³ |
| 2) C.B.R. | | 1 Test per 3000 m ³ |
| 3) Liquid & Plastic Limit/Plasticity Index | | 1 Test per 3000 m ³ |
| 4) Field Density 97 % P.D. | | 1 Test per 3000 m ³ |
| 5) Filed Moisture Content | | 1 Test per 3000 m ³ |
| 10 WOOD | | |
| 1) Moisture Content | | 1 test per Source |
| 2) Density | | 1 test per Source |
| 11 WATER | | |
| 1) P.H. Value for Water and Sand | | 1 test per Source |
| 2) Chloride & Sulphate content | | 2 test per Source |

| | |
|-----------------------------------|---|
| 12 Steel | |
| 1) Weight per meter | One test for every 5.0 MT or part thereof for each diameter |
| 2) Ultimate Tensile Stress | |
| 3) Yield stress | |
| 4) Elongation | |
| 5) Chemical composition | One test per source / supplier |
| 13 ALUMINIUM WINDOWS | |
| Weight per running meter | One Test per section |
| 14 M 40 Precast Door Frame | |
| 1) Compressive Strength | One Test per 100 frames |
| 15 Roofing Sheets | |
| Thickness & weight per meter | One Test per 250 sq.m. |

Note : If frequency of tests for any material to be used for work is not mentioned in above table, the frequency mentioned in relevant BIS codes / IRC Code / MoRTH specifications shall be followed. The decision of the Technical Person in Charge will be final in that case and the tests will have to be carried out by the contractor at his own costs.

ADDITIONAL SPECIFICATIONS

The contractor shall achieve that following requirements in respect of quantity of work and his contract rate shall provided for the same.

1.1 ADMIXTURES :-

Whenever necessary the admixture should be used to achieved the required workability. The type of admixture should be got approved from Technical Person , NHRDF. The rate is inclusive of all admixtures etc. if found necessary.

Approved superplasticizers and corrosion inhibitors shall be used to improve workability and durability of concrete.

1.2 CEMENT CONCRETE IN CONCRETE :

For this purpose the conditions mentioned in additional specifications in tender clauses shall be applicable.

1.3 WATER / CEMENT RATIO :

For high quality concrete of low permeability, the water/cement ratio shall not be more than 0.45 and preferably 0.40 or less subject to the attainment of adequate workability.

1.4 CURING FOR CONCRETE :

Special attention shall be paid to curing of concrete in order to ensure maximum durability and no minimize cracking. Concrete shall be cured with fresh water whenever it is possible to ensure that the concrete surface can be kept wet despite wind, etc. care shall be taken on avoid rapid lowering of concrete temperatures caused by applying cold water to hot concrete surface (thermal shock) Sea water shall not be used for curing reinforced concrete or prestressed concrete. Where there is doubt about the ability to keep concrete surface permanently wet for the whole of the curing period heavy duty membranes curing compound shall be used.

1.5 CONCRETE COVER TO REINFORCEMENT:

- (i) The cover concrete must be of the same quality, impermeability and strength as the rest of the concrete.
- (ii) The concrete cover must develop sufficient alkalinity, and protect the steel. The alkalinity developed shall not be less than 0.04 N and shall not more than 0.08 N.
- (iii) The cover must be uniform throughout and it's thickness shall be exclusive of plaster or other decorative finishes.
- (iv) The concrete cover shall be as per the relevant clause of IS codes. In the case of poles the cover thickness shall be separately decided by the Technical Person in charge.

1.6 DETAILING OF MISCELLANEOUS ITEM :

Binding Wires : All ends of binding wires shall be carefully turned inwards so that they do not project out of concrete and start rusting action. Galvanised wires shall be used. Wherever possible polythene binding string and polythene bar grips shall be used, after making sure that these do not result in loss of bond or chemical reaction with concrete. The use is subject to approval of Technical Person , NHRDF.

1.7 BAR SPACING : As per relevant I.S. codes and as detailed design drawing or as directed by Technical Person , NHRDF.

1.8 HOLLOWS IN CONCRETE : After concreting is complete the concrete surface particularly where there is congestion of reinforcement, shall be tested by light hammering or if possible by Schmidt hammer. Any portion showing signs of hollowness should be grouted immediately.

SPECIFICATION FOR FORMWORK AND STEEL CENTERING

1. FORMWORK :-

1.1 **Formwork** :- Formwork shall include all temporary forms of moulds required for forming the concrete which is cast-in-situ, together with all temporary construction required for their support. Unless otherwise stated all formwork shall conform to I.S. Specification.

1.2 **Design of Formwork** :- Formwork including complete false work shall be designed by the contractor in accordance with I.S.: 2750 (1964), 4041 (1987) and all other relevant I.S. codes without any extra cost to the NHRDF and these shall be got approved from Technical Person before any formwork is taken up.

1.3 The contractor shall entirely be responsible for the adequacy and safety for false work notwithstanding any approval or review by the Technical Person of his drawing and design. Proprietary system of formwork if used a detailed information shall be furnished to the Technical Person for approval.

2. QUALITY OF SHUTTERING :

The shuttering shall have smooth and even surface and its joints shall not permit leakage of cement slurry.

2.1 Ply-board shuttering materials to be used shall be steel shuttering / marine plywood well seasoned free from projecting nails, splits or other defects that may mark on the surface of concrete. It shall not be so dry as to absorb water from concrete, or so green or wet as to shrink after erection. Mild steel plates or plywood shall be used for slab and beam bottoms.

2.2 The timber shall be accurately spanned planed on the sides and the surface coming in contact with concrete.

2.3 So far as practicable, clamps shall be used to hold the forms together. Where use of nails is unavoidable minimum number of nails shall be used and these shall be left projecting so that they can be easily with drawn. use of double headed nails shall be preferred.

3. TOLERANCE :-

3.1 The formwork shall be made so as to produce furnished concrete true to shape, lines, levels plumb and dimensions as shown on the drawings, subject to the following tolerance unless otherwise specified in these documents or drawings or as directed by the Technical Person:

- a) Section dimension = 5 mm
- b) Plumb = 1 in 1000 of height

c) Levels = 3 mm before any deflection takes place.

3.2 Tolerance given above are specified for local aberrations in the furnished concrete surface and should not be taken as tolerance for the entire structure taken as a whole or for the setting and alignment of formwork which should be as accurate as possible to the entire satisfaction of the Technical Person, Errors if noticed in any lift/ tilt of the structure after stripping of forms, shall be corrected in the subsequent work to bring back the surface of the structure to its true alignment.

4. **SPECIAL PROVISION: -**

Whenever the concreting of thinner members is required to be carried out within shutters of considerable depth, temporary openings in the side of the shutters shall, if so directed by the Technical Person be provided to facilitate the curing and consolidation of the concrete. Small temporary openings shall be provided as necessary at the bottom of shutters of walls and deep beams to permit the expulsion of rubbish etc.

5. **REMOVAL OF FORMWORK: -**

The formwork shall be so removed that it shall not cause damage to concrete. Centering shall be gradually and uniformly lowered in such a manner as to avoid any shock or vibrations. Supports shall be removed in such a manner as to permit the concrete to take stresses due to its own weight uniformly and gradually.

The whole of the formwork removal should be planned and definite scheme of operation shall be worked out. Under no circumstances forms be struck until the concrete reaches a strength of at least twice the stress to which the concrete may be subjected at the time of striking but not before the period as mentioned in IS:456-2000 where ordinary Portland cement is used.

| | | |
|---|--|--------------------|
| a | Vertical Formwork to columns, beams, walls | 16-24 h |
| b | Soffit formwork to slabs {props to be refixed immediately after removal of formwork} | 3 days |
| c | Soffit formwork to beams {props to be refixed immediately after removal of formwork} | 7 days |
| d | Props to slabs 1)Spanning up to 4.5m 2)Spanning over 4.5m | 7 days 14 days |
| e | Props to beams and arches 1)Spanning upto 6m 2)Spanning over 6m | 14 days 21 days |

II) **STEEL CENTERING :-**

1. **Work include :-** Erecting steel centering with contractor's material comprising of

standard steel adjustable props and standard steel trusses / joists / spans, centering place for bottom of slab and steel plats for bottom of beams etc. of adequate strength properly balanced for obtaining adequate rigidity to with stand all loads coming on it including permanent and temporary fixtures and fastenings etc complete for R.C.C. member like beams slabs and canopy including its removal after the specified period, stacking making good the damaged parts / its replacement before its next use with all leads and lift (all centering material shall be contractor.)

2. For R.C.C. works formwork shall be of marine plywood of adequate thickness and grade only. The centering and supporting arrangement such as standard steel trusses/ joists/ spans standards adjustable/ fixed props. H type frames etc shall be designed by the Contractor and approved from the Technical Person before commencement of its erection. The Contractor with the prior approval of the Technical Person shall use standard steel centering arrangement which may be manufactured by the reputed firm. Wooden ballies shall not be used for supporting centering of beam & slab bottoms.
3. The supporting arrangement designed by the contractor shall conform to the relevant I.S. code and Standard practice adopted in this type of work. The centering arrangement shall be adequately braced and properly secured by using appropriate type of fastenings and fixtures to ensure stability and rigidity of the centering to withstand all loads coming on it. The entire responsibility for design, erection, maintenance and safety etc. will exclusively rest with the contractor. The Technical Person reserves right to call detailed design calculations of the entire centering or part there of to verify its stability and also reserve tight to reject entire centering arrangement or part there of and any material used for the centering in the event of which the contractor shall have to arrange for its replacement at his own cost.

SPECIFICATIONS FOR CEMENT CONCRETE WORKS: -

1 DESIGN OF CEMENT CONCRETE MIXES:

- a) The materials (cement, fine aggregates, coarse aggregates & water) required shall comply with specifications laid down for the respective items in specification no. B.6 for ordinary concrete page no. 32 & 33.
1. Standard specifications of Maharashtra 1979 Edition.
 2. I.S. 8112 :- 2000 Specifications for 43 grade ordinary Portland cement.
(Reaffirmed)
 3. I.S. 12269 :- 2004 Specifications for 53 grade ordinary Portland cement.
(Reaffirmed)
 4. I.S. 12330 :- 2000 Specifications for Sulphate Resistant Portland cement.
(Reaffirmed)
 5. I.S. 383 :- 2002 Specifications for coarse and fine aggregate from natural
(Reaffirmed) sources for concrete.
 6. I.S. 1786 :- 1985 (Reaffirmed in 2000) Specifications for H.Y.S.D. bars.
 7. I.S. 432 Part I :- 1982 Specification for mild steel and medium steel bars
(Reaffirmed in 2000)
 8. I.S. 456 :- 2000 Code of practice for plain and reinforced concrete.

If the standard specifications quoted above fall short for items quoted in these schedule of this contract reference shall be made to the latest British Standard Specifications. If any of the items of contract do not fall in reference quoted above, the decision and specifications of the Technical Person shall be final.

- b) The provision of the specification No. B-7 at page - 38 to 40 of Vol. 1 1979 Edition of standard specification book for controlled concrete shall be applicable for all the structural concrete items.
- c) All the cement concrete of grade M-15 and higher strength shall be done with proper mix design as per IS : 10262 - 1982 and shall conform to the durability and other requirements of I.S. 456-2000.

The design of concrete mixes for various concrete items in the work shall be obtained by the contractor at his cost from an approved laboratory.

For concrete of Grade M-15/ M-25 - Preliminary mix design must be carried out from an approved laboratory, for subsequent changes field mix design shall be acceptable. However incase the Director has got difficulty in acceptance of the field mix design, laboratory mix design shall be got done by the contractor from approved laboratory at his own cost.

- d) Cement from same stock sent for mix design shall be used for concrete work. Mix design shall be reverified / modified after every four months or whenever there is change in source of quarry materials , whichever is earlier.

- e) Theoretical consumption of cement considered while framing estimate for cement concrete of M-15 grade is 300 kg/cu.m. , cement consumption for cement concrete M-20 grade is 350 kg/cu.m. & cement consumption for cement concrete M-25 grade is 375 kg/cu.m.
Mix design involving change in theoretical cement consumption more than 2 % on lower side of theoretical consumption will not be allowed.
- f) The minimum cover to the reinforcement shall be provided as stipulated in I.S.456-2000 for the corresponding structural member.
- g) Detailing of the reinforcement shall be as per the guidelines in I.S.456-2000, Design Circle's Technical Note 7502.
- h) Cement from same stock sent for mix design shall be used for concrete work. Mix design shall be reverified / modified after every four months or whenever there is change in source of quarry materials , whichever is earlier.
- i) The river sand brought on site shall be wash mixer sand washing machine prior to its mixing for concrete. This condition is applicable for sand related items elsewhere. No claims or enhancement of rates due to this provision shall be entertained.

2. **FORMWORK FOR CONCRETE WORK :-**

The forms of concrete shall be of the materials as directed by the Director-in-charge and shall preferably be of steel or plywood. Forms shall be of the required shape, profile and lines. Suitable devices shall be used to hold corners, adjacent ends, edges of panel or other forms together in accurate alignment. The forms and joints shall be tight enough. Forms used for circular curved or structures of unusual shape, petal dome etc. shall be of such a character that will result in smooth concrete surface and exact shape. They shall be prepared such that they will not warp or distort during erection or while placing concrete. Their design and layout shall be got approved from the Director-in-charge in advance.

3. **ERECTION AND REMOVAL OF FORM WORK :-**

The centering and strutting shall be of steel or plywood board exclusively for concreting. The design and drawing should be got approved in advance from the NHRDF. For minor members the Technical Person , NHRDF may, at his discretion, permit use of wooden shuttering. The centering and shuttering shall be close and tight to prevent leakage of cement slurry. The centering shall have the necessary props, bracing and edges sufficiently strong and stable which shall not yield or displace while or after laying of concrete. They shall be made in such way that they can be slackened and removed gradually and slowly without disturbing the concrete. Centering and shuttering shall not be removed before the design strength is achieved.

4. **MIXTURE OF CONCRETE :-**

Design mix concrete as well as nominal mix concrete shall be mixed by following the provision in Standard specification at B. 6.4 unless otherwise directed by the Technical Person.

Unless otherwise agreed by the Technical Person concrete shall be mixed in a batch type mixer or such other type of mixer as the Technical Person may approve.

During hot weather the Contractor shall ensure that the constituent materials are sufficiently cool to prevent the concrete from stiffening in the intervals between its discharge from the mixer and its final position.

5. **TRANSPORTATION, PLACING AND COMPACTION OF CONCRETE :-**

The method of transportation placing and compaction of concrete shall be followed as per section B.6.6, 6.7 and 6.8 of Standard Specification unless otherwise directed by the Technical Person. The compaction shall be done with surface float vibrators for slabs and with pin vibrators for columns and beams. Vibrators of adequate vibrating capacity shall be employed for all types of works.

6. **CURING :-**

Curing shall be done by following provision of Section B.6.9 of Standard Specification and as directed by the Technical Person. Concrete surface immediately after finishing shall be covered with L.D.P.E. film and water curing shall be started after final setting of concrete.

7. **WORKING IN EXTREME WEATHER :**

During windy weather sufficient protection shall be provided to prevent the cement from being blown away during the process of proportioning and mixing. During wet weather, the concrete shall be adequately protected as soon as it is placed in position.

No concreting shall be carried out during period of continuous heavy rains unless, it is completely covered during mixing, transporting and placing, In extreme hot weather, concreting shall be restricted to morning and evenings The time between mixing and placing of concrete shall be kept to the minimum and formwork shall be cooled by sprinkling with water.

8. **FINISHING :**

Finishing work shall comply with requirement of section B.6.10 of Standard Specification unless otherwise specified herein below :

Immediately on removal of forms, the R.C.C. work shall be examined by the Technical Person before any defects are made good.

- a) The work that has sagged or contains honey combing to an extent detrimental to structural safety or architectural concept shall be rejected.
 - b) Surface defects of a minor nature shall be rectified generally as indicated below by the contractor.
- i) Surface defects which require rectification when forms are removed usually consist of bulges due to movement of forms, ridges at form joints, honeycombed areas, damage resulting from the stripping of forms and bolt hole. Bulges and ridges shall be removed by careful chipping or tooling and the surface is then rubbed with a grinding stone. Honey combed and other areas shall be chipped out, the edges being cut as straight as possible and perpendicular to the surface, or preferably slightly under cut to provide a key at the edge, of the patch. Bolt holes shall be closed by cement mortar to ensure thorough filling.
 - ii) Shallow patches shall be treated with a coat of thin grout composed of one

part of cement and one part of sand and then filled with mortar similar to that used in concrete. The mortar is placed in layers not more than 10 mm thick and each layer shall be given a scratch finish to secure bond with the succeeding layer. The last layer shall be finished to match the surrounding concrete by floating, rubbing or tooling on formed surfaces by pressing the form material against the patch while the mortar is still plastic.

- iii) Large and deep patches requires filling up with concrete held in place by forms. Such patches shall be reinforced and carefully dowelled to the hardened concrete.
- iv) The same amount of care to cure the material in the patches shall be taken for the whole structure. Curing shall be started, as soon as possible after the patch is finished to prevent early drying. Damp Hessian cloth may be used. But in some locations it may be difficult to hold it in place, a membrane curing compound in these cases will be most convenient.

9. **CONSTRUCTIONS JOINTS :**

Construction joints shall be provided and treated following the provisions of Specification and as directed by the Technical Person , NHRDF.

10. **DURABILITY :-**

Minimum cement contents for different exposures and sulphate attack are given in Tables 4 and 5 o I.S. 456, 2000 shall be followed for design mix. Approved corrosion inhibitors shall be used to improve durability of concrete.

11. **TESTS AND STANDARD OF ACCEPTANCE :-**

11.1 Tests and Standard of acceptance criteria of design mix concrete and nominal mix concrete shall be as follows:

Sampling and testing of Concrete shall be done as per provision of section B.6.12 of Standard Specifications. Acceptance criteria for strength of concrete shall be as per clause 16 of IS 456-2000.

ACCEPTANCE CRITERIA

1) **Compressive Strength**

The concrete shall be deemed to comply with the strength requirements when both the following condition are met

- a) The mean strength determined from any group of four consecutive test results complies with the appropriate limits in column 2 of Table 11 i.e. not less than i) $f_{ck} + 0.825 \times \text{Standard Deviation}$ (i.e. 4.0) or ii) $f_{ck} - 3 \text{ N/mm}^2$ whichever is greater.
- b) Any individual test result complies with the appropriate limits in column no. 3 of Table 11 i.e. not less than $f_{ck} - 3 \text{ N/mm}^2$.

2) **Flexural Strength**

When both the following conditions are met, the concrete complies with the specified flexural strength.

- a) The mean strength determined from any group of four consecutive test

results exceeds the specified characteristic strength by at least 0.3 N/mm^2

b) The strength determined from any test result is not less than the specified characteristic strength less 0.3 N/m^2 .

3) Quantity of Concrete Represented by Strength test Result

The quantity of concrete represented by a group of four consecutive test results shall include the batches from which the first and last samples were taken together with all intervening batches.

For the individual test result requirements given in col 3 of Table 11 i.e. not less than $f_{ck} - 3 \text{ N/mm}^2$ or in item (b) of 16.2 i.e. not less than the specified characteristic strength less 0.3 N/m^2 . Only the particular batch for which the sample was taken shall be at risk.

Case falling outside the above limit shall be examined by the Technical Person on Merits in each case.

11.2 **DEFECTIVE CONCRETE :**

Any concrete which gives substandard results, or is severely damaged due to cracking or shows excessive honey combing and exposure of reinforcement, if exhibits any fault which in the opinion of the Technical Person, seriously impairs its function, may be declared as defective concrete. Such non acceptable concrete shall be removed from the site and replaced by fresh concrete of the specified quality by the contractor at his own expenses. Alternatively in case of acceptable concrete, the Contractor shall carry out whatever other remedy the Technical Person may reasonably suggest "Small rendering shall be done by the Contractor without extra cost."

12 **KEEPING RECORDS :**

The record of mix design, mixing, slump, testing of C.C. cubes etc. shall be maintained in accordance with Section B-6.13 of the Standard Specification.

GENERAL SPECIFICATION FOR WATERPROOFING

Rates for respective items shall include for the additional specification

1. The work of waterproofing described in the following items shall be carried out by The contractor only through a renowned specialist waterproofing agency using cement waterproofing compounds, as approved in writing by the Technical Person , NHRDF.
2. The Contractor shall give before execution, detailed specifications for each item of works of waterproofing to be executed according to the specifications of the specialized agency, he proposes to employ, for approval. The work shall not be started unless approval in writing is given by the Technical Person in charge to the said specification.
3. The Contractor shall give a guarantee bond on requisite stamp paper for a minimum period of 10 years for all the items of waterproofing done. During the guarantee period the Contractor shall entirely be responsible to rectify any defect at his own cost to maintain the work in waterproof condition. The waterproofing Contractor shall also have to make good all the surroundings disturbed by him during the rectification work at his own cost. The form of written guarantee shall be on a legal stamped agreement acceptable to the NHRDF. The Guarantee shall be given within one month from the date of completion of water proofing treatment but any delay in furnishing the guarantee shall not relieve the contractor from implications of the clause.
4. 10% (Ten percent) of the cost of the waterproofing work executed shall be retained as "Retention Money" for a period of 10 years covering the guarantee, and the same shall be released only after satisfactory performance of the treatment during guarantee period of 10 years. This amount may be converted into any approved interest bearing security (for 10 years after completion of defect liability period), in the name of Director, NHRDF on receipt of such written request from the contractor.
5. The waterproofing agency as approved by Technical Person , NHRDF shall provide and install at his own cost the following for his own use and remove the same after completion of the work: I) Two pumps electrical/ diesel operated for watering and curing of work at any level in the building. Curing for all items shall be carried out for a minimum period of 14 days. Temporary Mild Steel Water storage tanks. Temporary galvanized iron piping and fittings for water line. Flexible hose lengths. Cement Godown, site office.
6. Injections .to reinforced cement concrete slab, wherever required, have to be undertaken by the Contractor free of cost.
7. Before starting the waterproofing work, the surface receiving the treatment shall be cleaned properly.
8. The item of waterproofing as given in the Schedule `B' applies for work in any position and on any floors and at any heights. The lift of materials shall not form any criteria for extra payment.

QUALITY ASSURANCE AND MAINTENANCE

To ensure the specified quality of work which shall also include necessary surveys, temporary works etc., the contractor shall prepare a quality assurance plan and get the same approved from the Technical Person **in charge** within eight days from the date of work order. For this, contractor shall submit an organization chart of his technical personnel to be deployed on the work along with their qualification, job descriptions defining the functions of reporting, supervising inspecting and approving. The contractor shall also submit a list of tools, equipment's and the machinery and instrumentation which he proposes to use for the construction and for testing in the field and/or in the laboratory and monitoring. The contractor shall modify/supplement the organization chart and the list of machinery, equipment etc. as per the direction of the Technical Person and shall deploy the personnel and equipment on the field as per the approved chart and list respectively. The contractor shall submit written method statements detailing his exact proposals of execution of the work in accordance with the specifications. He shall get these approved from the Technical Person **in charge**. The quality of the work shall be properly documented through certificates, records, check-lists and logbooks of results etc. Such records shall be compiled from the beginning of the work and be continuously updated and supplemented and this shall be the responsibility of the contractor. The forms should be got approved from the Technical Person **-in-charge**.

The contractor shall prepare detailed completion drawings after completion of the work. He shall also prepare and submit a maintenance manual giving procedure for maintenance, with the period of maintenance works including inspections, tools and equipment to be used, means of accessibility for all parts of the structure. He shall also include in the manual, the specifications for maintenance work that would be appropriate for his design and technique of construction. This manual shall be submitted within the contract period.

Test for Crushed Sand / Artificial Sand / Fine Aggregates.

1. VSI Crushed Sand / Artificially manufactured sand / fine aggregates herein after referred for as "Crushed Sand" shall be as defined under CL. 3.1.2 of IS 383-2016.
2. The properties of "Crushed Sand" shall conform to the provisions of IS 383-2016.
3. The "Crushed Sand" shall be free of dust and other Deleterious material.
4. The "Crushed Sand" shall be manufactured using "Automatic Vertical Shaft impactor" type Crusher only.
5. The quantity of Microfines (Particles below 75 microns) in "Crushed Sand" shall not be more than 7 %
6. The Contractor shall intimate the Technical Person In-Charge regarding the source of supply of "Crushed Sand". The source of supply of "Crushed Sand" shall be got approved by the Director (Technical Person , NHRDF) prior to the start of work.
7. Each Load of Crushed sand whenever brought on site shall be tested for "Fineness modulus". Fineness modulus shall be within permissible limits. If it doesn't fall within acceptable limits, it shall be rejected.
9. The Test of Compressive strength of concrete / Mortar using "Crushed sand" shall be carried out in presence of NHRDF's Technical Person as given below.
8. 100 % Cube testing in presence of Junior Asstt. / Technical Person
9. 25 % Cube testing in the presence of sub Technical Person
10. 5 % Cube testing in the presence of (Technical Person , NHRDF)
11. The flakiness index and elongation index tests shall be within permissible limits.
The Concrete mix design for each grade of concrete using "Crushed sand" shall be carried out only in NHRDF Quality Control laboratory and the same Mix Design shall be adopted.
As far as possible freshly produced "Crushed Sand" shall be used stored "Crushed sand" shall not be used.
12. For Plastering purpose, if the use of Crushed sand is proposed it shall be used with addition of super plasticisers at the rate of 100 ml / Bag of Cement without extra cost to NHRDF. Separate permission shall be taken for use in plastering from concerned Authority, NHRDF

13. The following tests shall be carried out for the use of "Crushed sand"
 - a) Sieve analysis
 - b) Specific gravity
 - c) Water absorption
 - d) Bulk density
 - e) Alkali aggregate reaction
 - f) Soundness
 - g) Deleterious Material
 - h) Organic impurities
 - 1) Micro fines content
 - j) Test for silt and *clay*
 - k) *Fineness* Modulus test
14. *Necessary* Bond regarding the use of "Crushed sand" shall be submitted by the Contractor *clearly* stating that, if any defects are observed during execution and *defect* liability period, the same shall be rectified at his own risk and cost.
15. *Grading* zone II mentioned under Clause 6.3 table 9 of fine aggregates is IS 383:2016 *shall only be* used for concreting.
16. *Reversible drum* type / *Batch mix* plant (pan type) concrete mixer shall be used for *concrete*.
17. "*Crushed sand*" shall not *be used for* prestressed concrete works.

DECLARATION OF THE CONTRACTOR

I/We hereby declare that I/we have made myself / ourselves thoroughly conversant with the local conditions regarding all materials and labour on which I/we have based my/our rates for this tender. The specifications and lead of materials on this work have been carefully studied and understood by me/us before submitting this tender. I/we undertake to use only the best materials approved by the NHRDF or his duly authorised representative before starting the work and to abide by his decision.

I/We hereby undertake to pay the labourers engaged on the work as per minimum wages Act 1948 applicable to the Zone concerned.

Signature of Contractor