



**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH**  
**(Indian Council of Medical Research)**

Department of Health Research, Ministry of Health and Family Welfare, Government of India, Nirmal Bhawan-ICMR Complex (II Floor), Poojanahalli, N.H-7, B. B. Road, Kannamangala Post, Bengaluru-562 110 (India)

(Visit us at [www.ncdirindia.org](http://www.ncdirindia.org))

Tender No. NCDIR/ICMR/ 317 /2020

**TENDER FOR**  
**Installation and Commissioning of Rain Water Harvesting**  
**and Ground Water Recharging Facilities**  
**AT NIRMAL BHAWAN ICMR COMPLEX,**  
**BENGALURU**

Name of the tenderer \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Cost of Tender Document – Rs. 500/-**



## **PART I – TECHNICAL BID**

### **TABLE OF CONTENTS FOR INSTALLATION & COMMISSIONING OF RAIN WATER HARVESTING & GROUND WATER RECHARGING FACILITIES AT NIRMAL BHAVAN BENGALURU**

Sl. No.	Particulars	Page No.
1.	Tender Cover page	1
2.	Index	2
3.	Tender Notice ‘A’ and ‘B’	3 & 4
4.	Instructions for filling up the tender	5 to 7
5.	Covering letter & Declaration	8
6.	General Terms and Conditions (GTC), EMD, Security Deposit, Time of Completion, etc	9 to 12
7.	Pro-forma Agreement	13 to 16
8.	Agency / Contractor Details form	17
9.	No Relation certificate and Declaration	18
10.	Details of Rooftop RWH Project (Annexure-A)	19-46
11.	Details of Ground Water Recharging Project (Annexure-B)	47-53
12.	Part II (Separation Page)	54
13.	Part II (Offer Form & Commercial Bid)	55-64

**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH (Indian  
Council of Medical Research), Bengaluru**

**Tender Notice-A**

**Tender No. NCDIR/ICMR/317 /2020**

**Date: 29-09-2020**

**Subject: Tender for installation and commissioning of Rain Water Harvesting  
and Ground Water Recharging Facilities at ICMR Complex, Nirmal  
Bhawan, Bengaluru**

Sir/Madam,

The ICMR-NCDIR, Bengaluru invited tenders from specialized agencies for installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex, Nirmal Bhawan, Bengaluru. The prospective agencies, fulfilling eligibility criteria, are requested to submit their tender in the prescribed format under **“Two Bid Systems in separate sealed covers i.e. Part –I Technical Bid Part-II Commercial Bid.”** Both these sealed covers should be kept in a bigger cover, which should also be sealed & duly super scribed as **“Tender for installation and commissioning of RWH & GWR Facilities at ICMR Complex, Nirmal Bhawan, BENGALURU”**. The sealed tender document must be dropped in the tender box kept at Administration Department so as to reach this Centre well before the due date and time.

Tender may be submitted after inspection of ICMR Complex – Nirmal Bhawan and allied buildings at any time between **10:00 to 16:00 hrs** on any working day from Monday to Friday. No Additional charges whatsoever shall be payable by ICMR-NCDIR, Bengaluru for non-awareness of the site conditions and constraints.

Yours faithfully,

**Administrative Officer**

**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH**  
**(Indian Council of Medical Research), Bengaluru**

**TENDER NOTICE-B**

<b>SCHEDULE</b>		
<b>S.No.</b>	<b>Activity Description</b>	<b>Schedule</b>
<b>1.</b>	Tender No	No. NCDIR/ICMR/ 317 /2020 for installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities
<b>2.</b>	Downloading of Tender Documents	Tender documents may be downloaded from our website <a href="http://www.ncdirindia.org">www.ncdirindia.org</a> <u>From 05.10.2020 to 02.11.2020</u>
<b>3.</b>	Time and last date of depositing Tender / Bid	02.11.2020 up to 5:00 PM
<b>4.</b>	Time and Date of Opening of Technical Bid	Will be announced later in website.
<b>5.</b>	Time and Date of Opening of Financial Bid	The Financial bid will be opened after evaluation of Technical bid, which will be announced later.
<b>6.</b>	Minimum Validity of tender Offer	180 days from the date of Opening of tender.
<b>7.</b>	Estimated cost of tender	Rs.5 lakh
<b>8.</b>	Amount of EMD to be Deposited	Rs.12,500/-
<b>9.</b>	Tender Fee	Rs.500/-
<b>10.</b>	Duration of contract	The work of Rain Water Harvesting and Ground Water Recharging shall be completed within 5 weeks from the date of placement of work order.
<b>11.</b>	Defect Liability Period	1 year from the date of completion of the project or the next monsoon, whichever is later
<b>12.</b>	Performance Security	The Contractor to whom the work is awarded shall furnish a performance security in the form of a Demand Draft or Bank Guarantee equivalent to 10% of the gross of value of the work which will remain valid for a period of 1 year from the date of virtual completion of the work or the next monsoon, whichever is later, as per clause 10 of GTC.

\*Bidders having MSME Certificate are exempted from EMD and Tender Fee.

**DIRECTOR**  
**ICMR-NCDIR, BENGALURU**



## **Instructions for filling up the Tender for the work of Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan-ICMR Complex, Bengaluru.**

The instructions, specifications given herein will be strictly binding on the tenderers and deviation, if any, makes the tender liable to be considered invalid. Tenders incorporating additional conditions by the tenderers will be rejected summarily.

1. **Eligibility criteria:** The prospective contractors should have sufficient expertise and at least 3 years of experience in the work of survey, installation and commissioning of Rain Water Harvesting and Ground Water Recharging Systems. They should have **desirably** undergone training under Karnataka State Council for Science & Technology, Bengaluru or such other agency for surveying, installation, commissioning and maintenance of Rain Water Harvesting and Ground Water Recharging Facilities. They should have sufficient machinery and tools, etc. at their disposal for undertaking the work. They should submit along with their application full details about their experience and expertise.
2. The agencies should have successfully completed at least
  - i. 1 RWH facility in Central/State government departments/autonomous bodies/corporations or other organizations costing not less than Rs.4.00 lakhs or
  - ii. 2 RWH facilities in central/state government departments/autonomous bodies/PSUs or other organisations etc., each costing not less than Rs.3 lakhs or
  - iii. 3 RWH facilities in central/state government departments/autonomous bodies/PSUs or other organisations each costing not less than Rs.2.50 lakh during last 3 years, on the date of application
3. Before submitting the tender, the tenderer shall inspect the ICMR complex and allied buildings and the entire campus and examine carefully the terms and conditions of the tender and the BoQ for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities. Tenderer shall be required to enter into an agreement with the ICMR-National Centre for Disease Informatics & Research (NCDIR), Bengaluru governing the terms of the contract on non-judicial stamp paper as per the pro-forma enclosed.
4. As a token of their acceptance, the tenderers have to return following documents duly signed on all the pages with official seal
  - a. General terms & conditions
  - b. Company/Firm registration certificate
  - c. Experience and training Certificate
  - d. Work orders/completion certificates of RWH projects
  - e. Pro-forma of agreement
  - f. General technical specifications
  - g. Declaration/Undertaking

4. A token **Earnest Money Deposit (EMD)** of **Rs.12,500/-** is to be deposited for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities by way of Demand Draft/Banker's Cheque drawn on any Nationalized/Scheduled Bank only (Not from any cooperative bank/society) in favour of 'Director, National Centre for Disease Informatics and Research' payable at Bengaluru. EMD shall be returned to unsuccessful tender(s) immediately but not later than one month from the date of opening of the tender. No interest will be paid on the Earnest Money deposited with NCDIR. Contractors having valid MSME/NSIC registration are exempted from Tender Fee and EMD.
5. Tender should be placed in double sealed cover super scribing "Tender for Installation and Commissioning of Rain Water Harvesting & Ground Water Recharging Facilities at Nirmal Bhawan-ICMR Complex, Bengaluru".
6. The Contractor shall furnish his/firm's GSTN.
7. Incomplete tenders will be rejected. Overwriting in the 'Commercial bid' is not permitted and shall be rejected.
8. Conditional offers shall not be accepted.
9. **Tenders will be received at NCDIR, Bengaluru up to 5.00 p.m. on 02.11.2020. Date of opening technical bids of the tender will be announced later in Institute website and bids will be opened in presence of tenderers, if any present, at the time of opening of the tender.** Offer received after the due date and time shall not be accepted.
10. **Part II Commercial Bids of those agencies who are found eligible and competent on evaluation of the Part –I Technical Bids by ICMR-NCDIR shall only will be opened on a date, time and venue which will be announced subsequently.**
11. The authorities of NCDIR, Bengaluru do not bind themselves to accept the lowest tender, and reserve the right to reject or accept any or all tenders wholly or partially without assigning any reason whatsoever.
12. Tender must be submitted in two separate sealed covers marked **PART-I** and **PART- II**.
13. The contents of **PART- I & PART- II** will be as follows:
  - a) EMD of **Rs.12,500/- and Rs. 500/- towards tender fee** for "Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex" in the form of a Bank Draft/Banker's Cheque drawn on any Nationalized/Scheduled bank only (Not from any cooperative bank/society) in favour of "Director, National Centre for Disease Informatics & Research" payable at Bengaluru or MSME/NSIC certificate claiming exemption from EMD & Tender Fee.
  - b) General terms & Conditions, Technical specifications, Pro-forma of Agreement (not to be filled at tendering stage) and Declaration duly signed on all the pages with office seal of the tenderer.



- d) Forwarding letter indicating the documents attached therein. Further, it should be clearly stated that the tenderer has not quoted any extra conditions in the offer form in the Part II and that the tenderer is not related to any employee of ICMR and any of its Institutes including NCDIR, Bengaluru

## **PART-II:**

This sealed cover shall contain the OFFER FORM & COMMERCIAL BID duly filled in all the columns super scribing the name of the work and shall not have any conditions whatsoever. If any such additional conditions are found, it will not be taken into consideration and will not form part of the tender.

Part II of the tender shall be opened only, if all the conditions of Part II are fully met.

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### Covering letter and Declaration

To,  
The Director,  
National Centre for Disease Informatics & Research  
ICMR Complex-Nirmal Bhavan  
Bengaluru-562110

Sub: Submission of tender for “Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex-Nirmal Bhavan, Bengaluru

Sir,

We are submitting the tender for “Tender for Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR-Complex, Nirmal Bhavan, Bengaluru. Please find the following documents enclosed.

#### **PART - I (In a separate cover marked as Part I)**

1. EMD in the form of a Bank Draft/ Banker's Cheque No. \_\_\_\_\_ drawn on Nationalized / Scheduled Bank only (Not from any cooperative bank/society) Dated \_\_\_\_\_ for Rs.12,500/- drawn in favour of 'Director, National Centre for Disease Informatics & Research and payable at Bengaluru'. **(Contractors having valid MSME/NSIC registration are exempted from Tender Fee and EMD).**
2. Tender Fee in the form of a Bank Draft/ Banker's Cheque No. \_\_\_\_\_ drawn on Nationalized / Scheduled Bank only (Not from any cooperative bank/society) Dated \_\_\_\_\_ for Rs.500/- drawn in favour of 'Director, National Centre for Disease Informatics & Research and payable at Bengaluru' **(Contractors having valid MSME/NSIC registration are exempted from Tender Fee and EMD)**
3. **General terms & Conditions, Technical specifications, Pro-forma of Agreement and Declaration duly signed and with office seal of the tenderer**
4. Work orders/Work Completion Certificates as per the eligibility criteria.

#### **PART - II (In a separate cover marked part II)**

1. Separate sealed envelope containing 'Offer Form and Commercial bid duly filled'

**Certified that I/We am/are in no way related to any employee of the Indian Council of Medical Research and its Institutes including National Centre for Disease Informatics & Research, Bengaluru and we have not put any extra condition in the part II of the tender.**

Signature of the Tenderer / Authorized Attorney  
(In case of Authorized Attorney, enclose a copy of authority)

Date:

Office Seal:

## General Terms and Conditions

General terms and conditions for submission of tender for Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex, Nirmal Bhavan, Poojanahalli Road, Bengaluru 562110

1. Tenderer shall be required to take up the work of “Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan-ICMR Complex Bengaluru” as per the specifications and quantities provided, complete in all respects and in finished condition and commission the system as per the completion schedule given in Clause No. 7 of terms and conditions.
2. The Tenderer should have proper mandate for Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities and at least 3 years of experience in the specialized work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities and produce proof of experience in terms of work order, work completion certificate etc. They shall produce proof to this effect to qualify for participating in the tender.
3. The tenderer shall not be a relative of any employee of the Indian Council of Medical Research (ICMR) or the Institutes under the control of ICMR. The Contractor shall submit the following documents within 7 (seven) days from the date of placement of the work order.
  - i) Duplicate copy of the work order duly signed and stamped by the tenderer.
  - ii) The original Agreement governing the terms and conditions of the Contract on Non-judicial stamp paper as per the Pro-forma enclosed.
4. **A token Earnest Money Deposit (EMD)** of Rs.12,500/- along with tender fee of Rs.500/- shall be deposited by way of 2 separate Demand Drafts / Banker’s Cheques drawn on any Nationalized / Scheduled Bank only (Not from any cooperative bank/society) in favour of ‘the Director, National Centre for Disease Informatics & Research’ payable at Bangalore. EMD shall be returned to unsuccessful tender(s) immediately but not later than one month from the date of opening of the tender. No interest will be paid on the Earnest Money deposited with ICMR-NCDIR. *Contractors having valid MSME/NSIC registration certificate are exempted from payment of EMD and tender fee.*
5. In case, the Contractor does not comply with the Clause No. 3 or refuses to accept the offer after finalization or within 7 days from the date of placement of the order as per the finalized and accepted terms and conditions, the order is liable to be cancelled forthwith without any further reference and the EMD shall be forfeited.
6. **Price:** The price and rates indicated shall include cost of transportation of raw materials and cost of labour for installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan – ICMR Complex, Poojanahalli Road, Bengaluru-562110. GST on the value of work to be executed shall be clearly mentioned. TDS will be deducted at source as per rules. The price and rate quoted shall be firm and fixed for the entire period of execution of the work and no escalation of rate on any ground whatsoever shall be applicable.

7. **Time of Completion:** The work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities shall be completed within 5 weeks from the date of placement of Letter of Intent, with time being the essence of contract.
8. **Penalty Clause:** The Contractor shall strictly observe the time allowed for carrying out the works as stipulated in Clause No. 7. The work shall, throughout the stipulated period of the contract, be proceeded with due diligence (time being deemed to be the essence of the contract). Tenderer shall pay to ICMR-NCDIR an amount equal to 1% of the amount of the contract value for every week or a part thereof that the work may remain incomplete as per the completion schedule stipulated in Clause No.7, subject to a maximum compensation of 10% of the contract value after which period, appropriate action will be taken by ICMR-NCDIR, as deemed fit. ICMR-NCDIR may extend the time for completion of the tendered work at its discretion on the written request of the Contractor for such purpose provided that ICMR-NCDIR considers the reasons for such extension as genuine, sufficient and acceptable.
9. Every effort should be made by the Contractor to complete the work within the specified time schedule. In case, the tenderer fails to complete the work within the specified time as per the finalized and accepted terms and conditions, ICMR-NCDIR shall have the right to either impose the Penalty Clause or cancel the order or both. The decision of ICMR-NCDIR in this regard shall be final and binding on the Contractor. The Contractor cannot claim any compensation for such cancellation or termination of contract.
10. Performance Security equivalent to 10% of the gross value of the work order after adjusting the **EMD of Rs.12,500/-** as at Clause No. 4, shall be furnished by the Contractor before commencement of the work either in the form of a Demand Draft or an irrevocable bank guarantee for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex and it will remain valid for period of 1 year from the date of virtual completion of work or the next monsoon, whichever is later. The security deposit shall be released as per conditions stated at Clause 13. No interest shall be paid on the security deposit retained with ICMR-NCDIR.
11. **Inspection:** The Contractor shall commence the work as per the terms and conditions of the tender. Any defects pointed out by the competent authorities of ICMR-NCDIR during the course of the work have to be promptly rectified by the tenderer at his own cost, including material cost, to ensure desired quality of work, failing which action shall be taken as deemed fit by ICMR-NCDIR and the additional cost incurred in rectifying the defects by engaging other agency shall be recovered from the tenderer. The decision of ICMR-NCDIR in this regard shall be final and binding on the Contractor.
12. **Terms of payment:** No advance payment shall be made by ICMR-NCDIR under any circumstances. The final payment within 30 days from the date of receipt of final bill/invoice duly supported by satisfactory inspection/work completion certificate from the ICMR-NCDIR authorities.
13. **Defect liability period:** The defect liability period shall be for a period of 1 year or the next monsoon, whichever is later, from the date of completion of the work of installation and



commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex in all respects. The Contractor shall be responsible for rectification of the defects in the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan-ICMR Complex for a period of 1 year from the date of virtual completion of the work or the next monsoon, whichever is later. The Contractor shall rectify the defects/defective parts within the specified time to complete satisfaction of the competent authority of ICMR-NCDIR, failing which, ICMR-NCDIR shall have the right to get the defects rectified through some other agency at the Contractors own risk and cost which will be adjusted from the security deposit. Decision of ICMR-NCDIR in this regard shall be final and binding on the Contractor. The security deposit shall be refunded to the Contractor on completion of the defect liability period of 1 year from the virtual date of completion of the work or the next monsoon, whichever is later, without any interest, and after deduction of the cost of rectification, if any, carried by ICMR-NCDIR, as per clause 10 hereinabove.

14. Bad workmanship will not be accepted and should be rectified at the site by the Contractor at its own cost as per specifications and directions given by the authorized representatives of NCDIR. The decision of the competent authority of the ICMR-NCDIR as to items of bad workmanship and proper replacement/rectification shall be final and binding on the Contractor.
15. BoQ of the items under tender are enclosed for execution of the work. However, ambiguity in the BoQ, if any, shall be promptly brought to the notice of the authorities of ICMR-NCDIR for clarifications before submission of tender.
16. The Contractor shall be liable to pay compensation as per Workmen's Compensation Act for any kind of injury resulting in temporary or permanent disability or loss of life of any employees who are deployed by the Contractor at the worksite during the time of execution of the said work. The Contractor shall indemnify ICMR-NCDIR against any such liability.
17. The authorities of ICMR-NCDIR reserve the right to amend, alter or modify the bill of quantities of the work as mentioned above, if necessary.
18. The authorities of ICMR-NCDIR, who do not bind themselves to accept the lowest tender, reserve the right to accept/reject any or all tenders wholly or partially without assigning any reason whatsoever.
19. Access: The authorities of ICMR-NCDIR shall have free access to the worksite and the Contractor shall cooperate with them for inspection and/or examination and testing of the materials and workmanship.
20. The Contractor shall obtain necessary trade and other licenses as may be required to carry on the tendered job and shall also be responsible for compliance of all rules and regulations which may be in force from time to time by the appropriate authority at his/their own cost.
21. The quantities mentioned in the BoQ are provisional and may vary depending upon the site conditions. The Contractor shall use only branded and high quality materials for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities.

22. Sealed Tenders will be received at ICMR-NCDIR, Bengaluru up to 5.00 p.m. on 02.11.2020. Part I Technical Bids will be opened first on date to be announced/notified later in the meeting room on the 2nd floor of ICMR-NCDIR Block, ICMR Complex Nirmal Bhavan, Poojanahalli Road, Bengaluru 562110 in presence of tenderers, if any present, at the time of opening of the tender. Tenders received after the due date and time shall not be accepted. (The quoted price should be valid for a period of 3 months from the date of submission of the tender).
23. Work will be awarded to the successful bidder, who have quoted overall lowest technically acceptable rate (%age) as per the BoQ including the materials required for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities, at the discretion of Director, ICMR-NCDIR. ***The replacement motors, equipment, machinery, accessories etc., with new ones shall be in conformity and at par with the specifications and quality in all respects.***
24. All other conditions given in the tender document under various sections shall stand valid and form an integral part of this agreement and the Contractor shall abide by them.
25. It shall be the responsibility of the Contractor to carry out the work at the site.
26. All disputes and differences of any kind between the Contractor and the ICMR-NCDIR, except quality of workmanship, whatever arising out of or in connection with the order on carrying out the work (whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the terms and conditions of the order) shall be referred to the sole arbitration of a person nominated by the Director, National Centre for Disease Informatics & Research, Bengaluru whose decision in this regard shall be final and binding on both the Contractor and the ICMR-NCDIR.
27. The provisions of the Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof and of the rules made there under for the time being in force shall apply to arbitration proceedings.
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## **PROFORMA AGREEMENT**

ARTICLES OF AGREEMENT made at Bangalore this- between ICMR-National Centre for Disease Informatics & Research (hereinafter referred to as 'ICMR-NCDIR' which expression shall unless repugnant to the context or meaning thereof include its successors in interest and assigns of ICMR-NCDIR) on the ONE PART and

Name of firm

Address

Police

Station

(hereinafter referred to as "Contractor" which expression shall unless repugnant to the context or meaning thereof include his/their heirs, executors, administrators, successors, in interest, legal representatives and/or assigns) on the OTHER PART)

WHEREAS the ICMR-NCDIR is desirous of getting the work of installation and commissioning of Rain Water Harvesting Facilities at ICMR Complex, Nirmal Bhavan, Poojanahalli Road, Kannamangala Post, Bengaluru-562110 as per the BoQ and the terms and conditions of the tender.

**THIS ARTICLES OF AGREEMENT WITNESSETH AND IT IS HEREBY AGREED, DECLARED, RECORDED AND CONFIRMED BY BOTH THE PARTIES HERETO AS FOLLOWS: -**

1. **Time of Completion:**

Time is the essence of this contract. **The work of installation and commissioning of Rain Water Harvesting Facilities - Within 5 weeks from the date of issue of Letter of Intent/Work order.**

2. **Penalty Clause:** The Contractor shall strictly observe the time allowed for carrying out the work as detailed in Clause No.1 hereinabove. The work shall, throughout the stipulated period of the contract, be proceeded with due diligence (time being deemed to be the essence of the contract) and the Contractor shall pay to NCDIR an amount equal to 1% of the amount of the contract value for every week or a part thereof the work that may remain incomplete as per the completion schedule stipulated in Clause No.1 hereunder, subject to a maximum compensation of 10% of the contract value after which period, appropriate action will be taken by ICMR-NCDIR as deemed fit. ICMR-NCDIR may extend the time of delivery of the tendered job at its discretion on the written request of the Contractor for such purpose provided that ICMR-NCDIR considers the reasons for such extension as genuine, sufficient and acceptable.

3. Every effort should be made by the Contractor to complete the work within the specified time schedule. In case the Contractor fails to comply with Clause No.1 hereinabove within the specified time schedule as per the finalised and accepted terms and conditions, ICMR-NCDIR shall have the right to either impose Penalty clause or cancel the order. The decision of NICMR-CDIR in this regard shall be final and binding on the Contractor.
4. **Security deposit:** Security deposit equivalent to 10% of the gross value of the work order after adjusting the EMD of Rs.12,500/-, shall be deducted from their bill towards security deposit as at Clause No. 4 of the GTC. No interest shall be paid on the security deposit retained with ICMR-NCDIR. The security deposit shall be released as per conditions stated at Clauses 10 & 13 of the GTC.
5. **Inspection:** The Contractor shall commence the work in the right earnest and immediately after the inspection and approval of all the raw materials/equipment by the authorized officials of ICMR-NCDIR. Any defects pointed out by the competent authorities of ICMR-NCDIR during the course of the work have to be promptly rectified by the tenderer at its own cost, including material cost, to ensure desired quality of work, failing which action shall be taken, as deemed fit, by ICMR-NCDIR and the additional cost incurred in rectifying the defects by engaging other agency shall be recovered from the tenderer. The decision of ICMR-NCDIR in this regard shall be final and binding on the Contractor.
6. **Terms of payment:** No advance payment shall be made by ICMR-NCDIR under any circumstances. The final payment within 30 days from the date of receipt of invoice/Bill duly supported by satisfactory inspection/work completion certificate from ICMR-NCDIR authorities.

TDS as applicable shall be deducted from the bill. The agencies should have a valid GSTN.

7. **Defect liability period:** The defect liability period shall be for a period of 1 year from the date of completion of the work of Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan-ICMR Complex-Bengaluru or the next monsoon, whichever is later. The Contractor shall be responsible for rectification of the defects of work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan - ICMR Complex for a period of 1 year from the date of completion of the job or the next monsoon, whichever is later. The Contractor shall rectify the defects/defective parts within the specified time to the complete satisfaction of the competent authority of ICMR-NCDIR, failing which ICMR-NCDIR shall have the right to rectify the defects at the Contractors own risk and cost which will be adjusted from the security deposit. Decision of ICMR-NCDIR in this regard shall be final and binding on the Contractor.
8. The security deposit shall be refunded to the Contractor on completion of the defect liability period of 1 year from the virtual date of completion of the work or the next monsoon, whichever is later, without interest and after deduction of the cost of rectification, if any carried by ICMR-NCDIR as per clause 10 of GTC.

9. Bad workmanship will not be accepted and should be rectified by the Contractor at its own cost as per specifications and directions given by the authorized representatives of ICMR-NCDIR. The decision of the competent authority of ICMR-NCDIR as to items of bad workmanship and proper replacement/rectification shall be final and binding on the Contractor.
10. Specifications of the items under tender are enclosed for guidance. However, any ambiguity in the specification shall be promptly brought to the notice of ICMR-NCDIR for clarification during the mobilization period. The Contractor without written approval of this office shall make no deviation from the approved specifications.
11. ICMR-NCDIR shall not be liable for any kind of injury resulting in temporary or permanent disability or loss of life of any employee who is deployed by the Contractor at the work site during the execution of the said work.
12. The authorities of ICMR-NCDIR reserves the right to amend, alter or modify the bill of quantities, specifications and drawings of the work as mentioned above, if necessary.
13. **Access:** The Authorities of ICMR-NCDIR shall have free access to the work site where materials are brought / prepared or constructed for the contract and the contractor shall cooperate with them for inspection and/or examination and testing of the materials and workmanship.
14. The Contractor shall obtain necessary trade and other licenses as may be required to carry out the tendered job and shall also be responsible for compliance of all rules and regulations which may be in force from time to time by the appropriate authority at his/their own cost.
15. The Contractor shall not under any circumstances whatsoever transfer wholly or partially this contract/agreement to any other person(s)/firm/company or assign the contract/agreement or benefits of this contract/agreement to any other party for any reason whatsoever in which case this contract/agreement will automatically stand cancelled.
16. It shall be the responsibility of the Contractor to carry out the work within his scope of his work at the site Address Nirmal Bhawan – ICMR Complex, Poojanahalli Road, Kannamanagala Post, Bengaluru-562110 as per the BoQ and materials list.
17. All disputes and differences of any kind between the Contractor and ICMR-NCDIR except quality of workmanship and materials whatever arising out of or in connection with the order on the carrying out the work (whether during the progress of the work or after their completion and whether before or after the determination, abandonment or breach of the terms and conditions of the order) shall be referred to the sole arbitration of a person nominated by the Director, ICMR-National Centre for Disease Informatics & Research, whose decision in this regard will be final and binding on both the Contractor and ICMR-NCDIR.



18. The provisions of the Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof and of the rules made there under for the time being in force shall apply to arbitration's proceedings.

Signed by

National Centre for Disease Informatics & Research, Bengaluru

Signature

WITNESS:

1. Name:

2. Name:

Address:

Address:

Signature:

Signature:

Signed by

Signature

The Contractor's Name

The Contractor above named in presence of witness

1. Name :  
Address :

2. Name :  
Address :

Signature :

Signature :



### Agency / Contractor Details Form

Sl. No	Information Sought	Yes/No	Page No
1.	Name of the Firm/Company		
2.	Date of Establishment/Incorporation		
3.	Status Proprietary/Partnership/Private Limited Company/ Public Limited Company. Please furnish a copy of valid registration certificate		
4.	Correspondence Address Telephone No. Email ID. Mobile No.		
5.	Address of Head Office (If separate) and Telephone Number.		
6.	Training Certificate issued by KSCST, if any		
7.	Details of valid MSME/ NSIC registration certificates, if applicable		
8.	Name of the MD/Proprietor/Partners, Address, Mobile No.		
9.	Banker of Agency with full address (Attach Bankers Certificate of account maintenance for the last two years). Telephone number of Banker		
10.	PAN/TAN No. of the Firm (Please enclose self-attested photocopy), as applicable		
11.	GST Registration No. (Please enclose self-attested photocopy of certificate)		
12.	Income Tax Return (I.T.R) copies of last 3years, Balance Sheet & Revenue Account for last 3years (Please enclose self-attested photocopy of certificate) paid during 2016-17, 2017-18, 2018-19.		
13.	Turnover for the last three financial years 2016-17,2017-18,2018-19		
14.	Certificate — Not blacklisted etc.		
15.	Details of the Draft of EMD (Name of the Bank, D.D. No Date & Amount		
16.	Details of Demand Draft or Banker's cheque for tender fee (Name of DD No.Date Amount)		
17.	Details of works executed during the past 3 years including list of prominent clients (See eligibility criteria)		

**NB: Please enclose self-attested copies of relevant documents as proof.**

Signature of the authorized person

Name:

Seal:

Date:

Place:

### **NO RELATION CERTIFICATE**

**This is to certify that I/We have no relative as an Employee of Indian Council (close relative means Father, Mother, Brother, sister, Son, Daughter and spouse) nor any such close relatives associated with us as Proprietor/Partner/Share holder/Director and like.**

Signature of the Tenderer  
Address with Office Seal and Date

### **CERTIFICATE**

**This is to cert installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities that we have executed similar works for large establishments during the 3 years and we have not been blacklisted by any of our clients where such works were carried out by us during the past 3 years.**

Signature of the Tenderer  
Address with Office Seal and Date

### **UNDERTAKING**

**We do hereby accept the general terms and conditions as provided by the ICMR-NCDIR for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan - ICMR Complex, Bengaluru-562110 and also undertake to execute the work strictly as per the Bill of Quantities. We understand that the work will have to fully be executed as per actual requirement and site conditions, as provided along with the tender document in the event of placement of any order on us. Further, we have inspected the worksite and clearly understood the scope of work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at Nirmal Bhawan - ICMR Complex, Poojanahalli Road, Bengaluru. ICMR-NCDIR shall be at liberty to cancel the order in full or in part and also forfeit the Earnest money deposit or Security deposit in the event of failure of any of the above declaration made by us.**

**Signature of the Tenderer / Authorized Attorney**

**ANNEXURE – A**

**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH**  
**(Indian Council of Medical Research), Bengaluru**

Detailed Project Report on Rain Water Harvesting

**AT**

**Nirmal Bhavan-ICMR Complex (II Floor), Poojanahalli, NH-7, B. B.  
Road, Kannamangala post, Bengaluru – 562 110**

## CONTENTS

Sl. No.	Subject	Page No.
1	<b>Project Highlights</b>	21-22
2	<b>Background</b> Rain Water Harvesting(RWH) at NCDIR- ICMR	23
3	<b>RWH at Main building &amp; Canteen building</b> 3.1 Assessment of Rooftop Rainwater Yield 3.2 Engineering Drawings of Different Components	24-32
4	<b>RWH at Guest House Building</b> 4.1 Assessment of Rooftop Rainwater Yield 4.2 Engineering Drawings of Different Components	33-41
5	<b>Notes for Maintenance</b>	42-44
6	<b>Field survey Photographs for Rain Water Harvesting Facilities</b>	45-46



## 1. Project Highlights

<b>Project Name</b>	Installation and Commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at National Centre for Disease Informatics and Research, Indian Council of Medical Research (NCDIR-ICMR), Bengaluru, Karnataka
<b>RWH and GWR site address</b>	National Centre for Disease Informatics and Research, Nirmal Bhawan, ICMR Complex, Poojanhalli Road, Off NH-7, Adjacent to Trumpet Flyover of BIAL Kannamangala, Bengaluru, 562110

### Components of the Project:

#### 1. RWH for Main building and Canteen Building

1	Total campus area	19,812sq.m
2	Rainwater Potential from the campus	15 MI
3	Annual Rainfall	773mm
4	Roof Area of Main and Canteen buildings	1501(1300+201)sq.m
5	Roof Top Annual Rainwater Potential	18, 54, 000l
6	Existing sump	50, 000 l
7	First Flush Float Lock& Pebbles Bed Filter (750 L.)	1no
8	Inspection Chamber	2 no
9	Piping and Accessories	
	<b>Sub Total - Estimated cost</b>	<b>Rs.1, 10,000</b>

#### 2. RWH for Guest house building

1	Total campus area	19,812 sq. m
2	Rainwater Potential from the campus	15 M l.
3	Annual Rainfall	773 mm
4	Roof Area of Guest House buildings	502sq.m
5	Roof Top Annual Rainwater Potential	3,30,000 l.
6	Underground sump – Proposed	10, 000 l
7	First Flush Float Lock & Pebbles Bed Filter (750 L.)	1 no.
8	Inspection Chamber	1 no
9	Piping and Accessories	
	<b>Sub Total</b>	<b>Rs. 2, 40, 000/-</b>

**Total Comprehensive Project Cost for Rain Water harvesting in the selected buildings of the campus : Rs. 3, 50, 000/-**



## **Proposed Plan for Rain Water Harvesting in National Centre for Disease Informatics and Research, (NCDIR-ICMR), Bengaluru, Karnataka**

### **2. Background:**

The National Centre for Disease Informatics and Research, Indian Council of Medical Research (ICMR) is located at II Floor of Nirmal Bhawan, ICMR Complex, Poojanhalli Road, Off NH-7, Adjacent to Trumpet Flyover of BIAL Kannamangala, Bengaluru, 562110, Karnataka having an area about 4.89 acres consisting of Administrative building, Canteen building and Guest house.

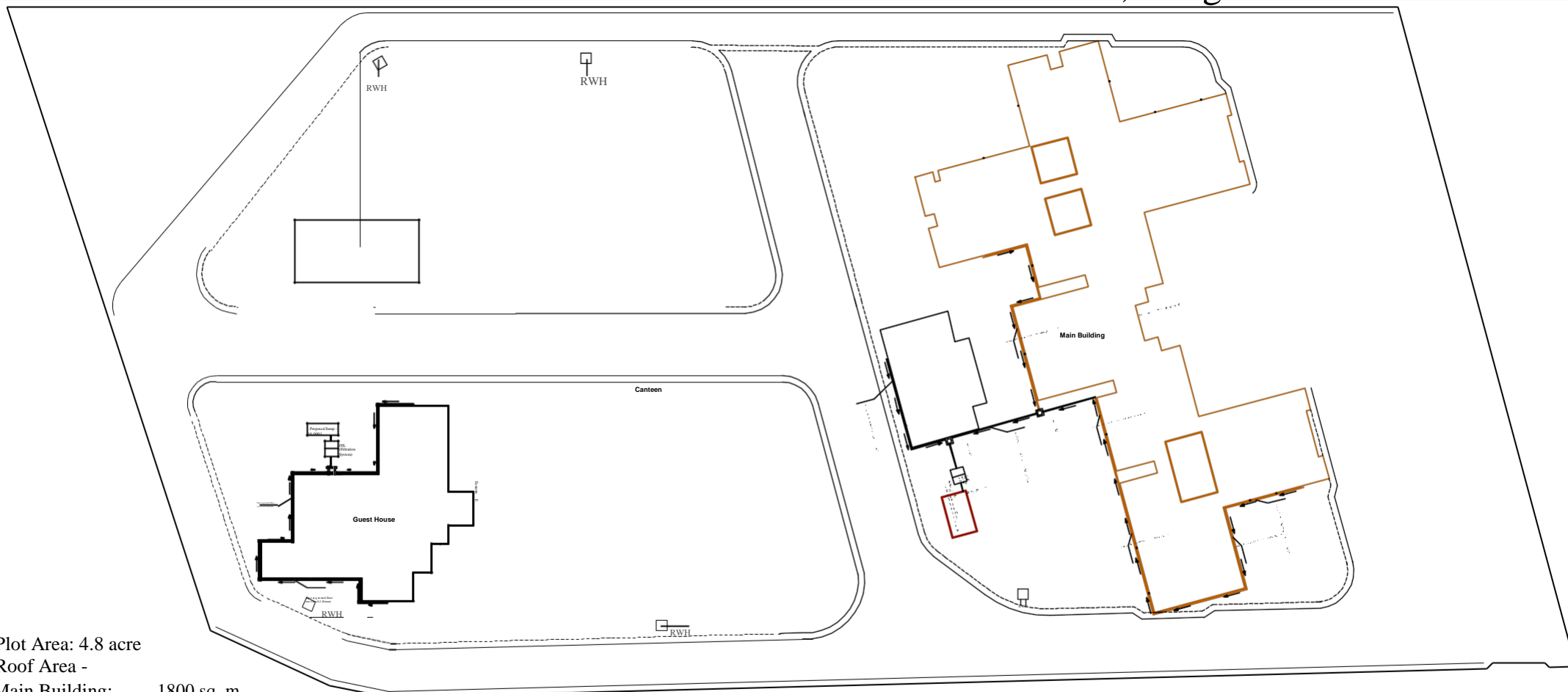
The broad and overall objective of the centre is to sustain and develop a national research data-base on cancer, diabetes, CVD and stroke through recent advances in electronic information technology with a national collaborative network, so as to undertake aetiological, epidemiological, clinical and control research in these areas. The centre would encourage and extend technical support to all Central/Regional/State medical institutions and medical colleges, non-governmental or private centres for constituting and establishing data collection (on cancer, CVD, Diabetes and Stroke) in their institutions along internationally acceptable and nationally adaptable formats and standards. Use of the internet and electronic information networking will be a regular feature. The entire campus has flat land and nearly level with slight sloped topography and has fine soil as the major type of soil. The campus has 3 bore wells out of which 2 are working. Water supply from the source is being used for laboratories, wash rooms, flushing in toilets, gardening. Water is also being used for drinking purposes after being treated through RO filtration units. During discussion with the concerned officials it is proposed to consider the main building with canteen and Guest house building to install rain water harvesting system to store roof water to be used for various uses including ground water recharge.

The detailed field survey has been carried out to prepare the comprehensive plan for installing RWH system to store roof water of these selected buildings to be used for various uses including ground water percolation. It is estimated that, around 15 Million litres of rain water can be harvested annually with an average annual rainfall of 773mm in the campus area and around 21,84,000 lts of roof water can be harvested from the roof tops of these selected buildings. The total cost of the comprehensive plan for the proposed RWH activities worked out to be Rs.3,50,000=00 as detailed in the following contents.

-----

## Layout plan of NCDIR- ICMR Campus

### National Centre for Disease Informatics & Research, Bengaluru



Plot Area: 4.8 acre

Roof Area -

Main Building: 1800 sq. m.

Canteen: 201 sq. m.

Guest House: 502 sq. m.

Note: 1. All dimensions are in m  
2. Not to scale

### **3. 1 Rain water harvesting at Main and Canteen Building**

The roof top of Main building and Canteen building is considered for roof top rainwater harvesting.

It is assessed that, the potential of rainwater is 18,54,000 liters from the roof area of 1501(1300+201) sq.mt with an average annual rainfall of 773mm. The existing rainwater pipes are provided on the back side and sides of the building. It is proposed to inter connect these rain water pipes at the roof level and brought to the back side of the building where the existing sump of 50,000 liters' capacity through the First flush lock and sand bed filter along with Inspection chambers are proposed to store the roof top rain water. The outlet of the sump will be connected to nearby storm water drain to drain off the excess overflow water through main storm water drain. The estimated cost of the RWH system is worked out to be Rs.1.10 lakhs including the cost of pipelines with Filtration systems as per the Schedule Rates of PWD Department, Govt of Karnataka as detailed in the following contents.



Fig 3.1: View of Nirmal Bhawan, ICMR Complex Building







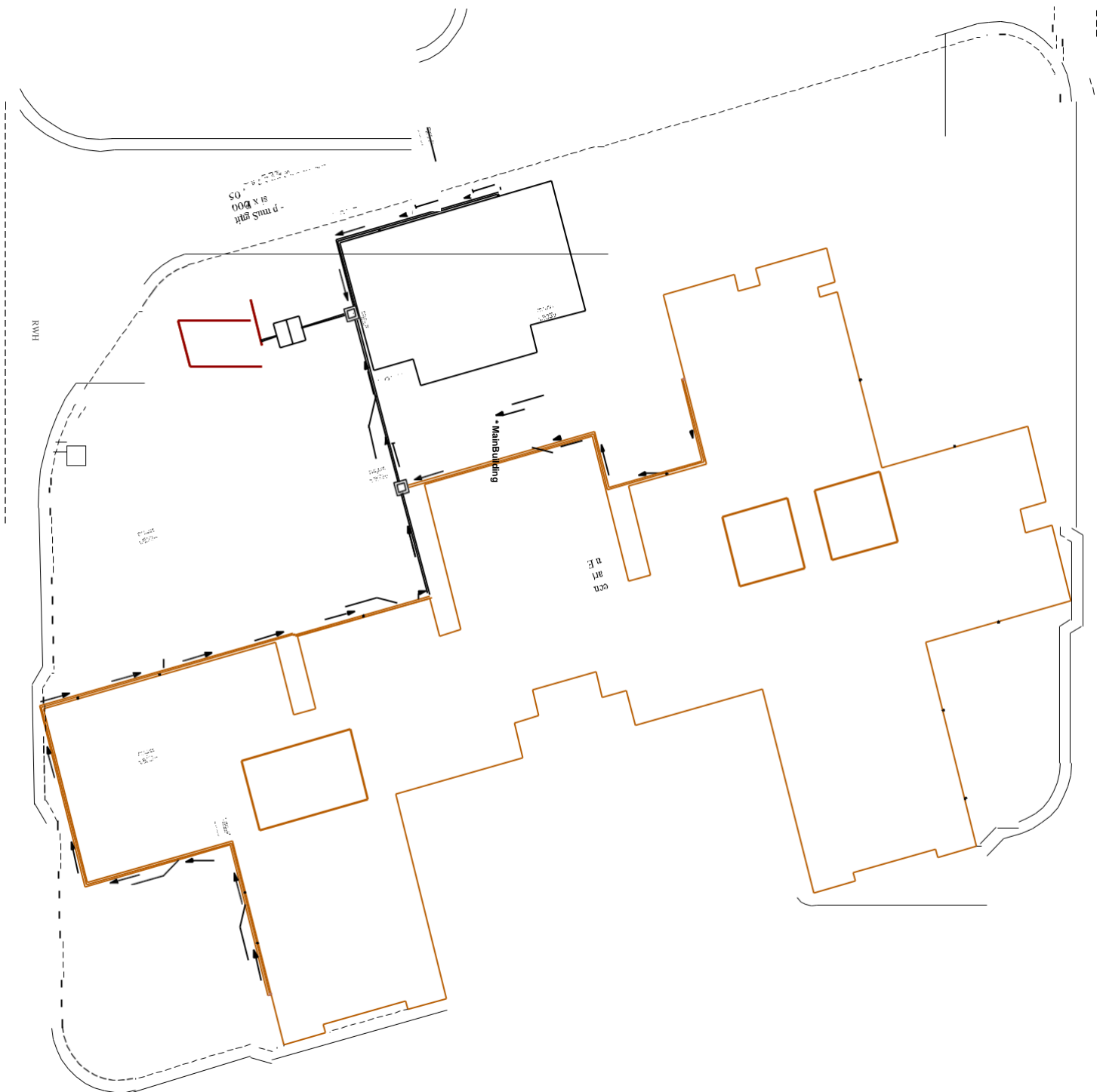
Fig 3.2: View of Canteen Building



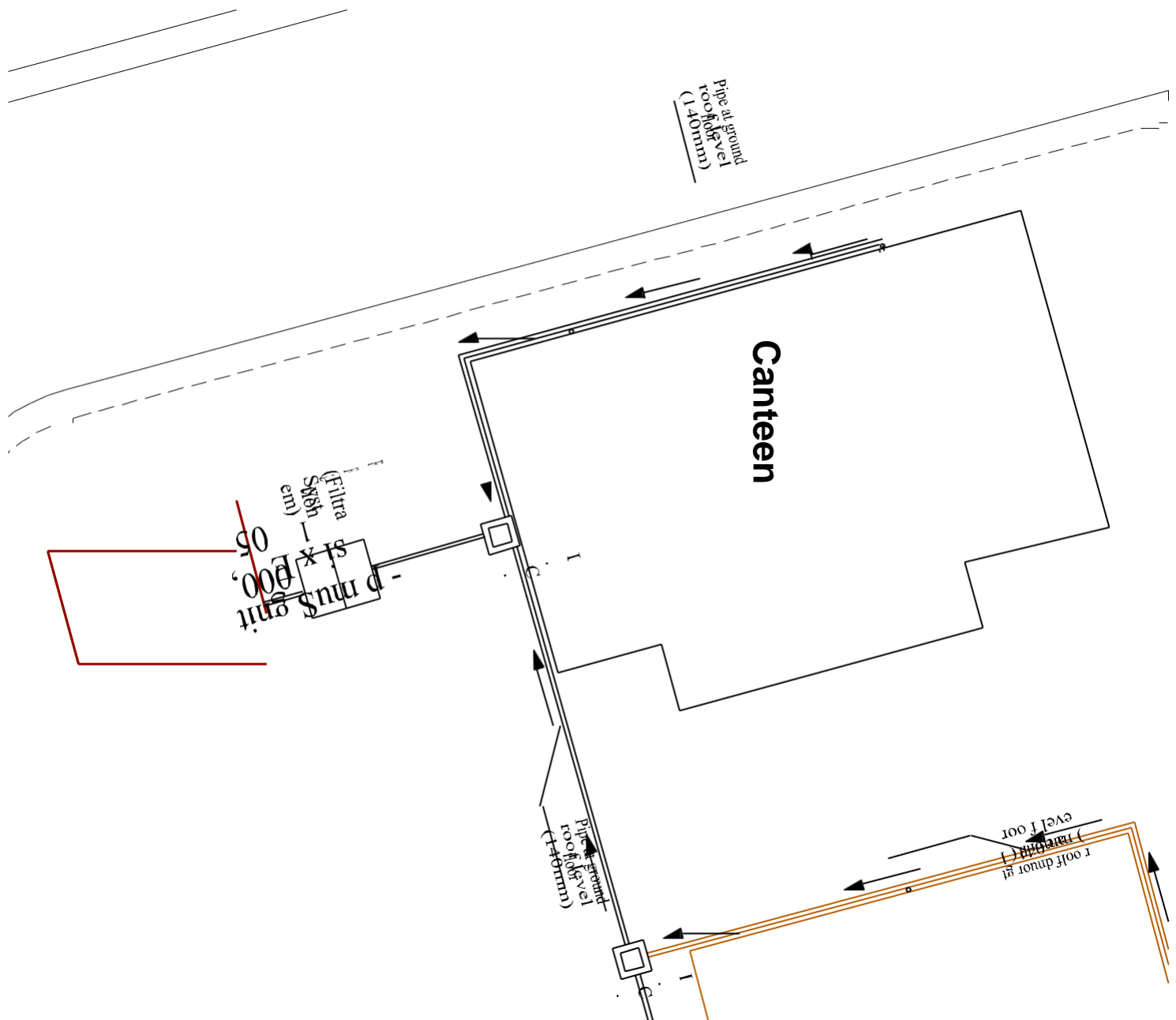
Fig 3.3: View of location of existing water storage Sump/Tank

		Rainwater Harvesting at National Centre for Disease Informatics & Research, Bengaluru															
Main Building & Canteen																	
 <b>Rainfall data of year 2011</b>	Total area of the plot sq.m.	19,812	Annual rainfall mm	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
	Rainwater available lt.	1,53,20,778	773	-	49,530	-	12,08,532	16,84,020	7,62,762	13,19,479	54,22,703	8,12,292	32,98,698	6,14,172	1,48,590	1,53,20,778	
	Daily water requirement lt.	5,000	Watering required for - days / yr.	365													
	Yearly water requirement lt.	18,25,000	Roof top rainwater available for - days.	197	With sump storage (lt)	50,000	132	36%									
	Rainwater available from roof lt.	9,85,310	Rainwater from roof - available lt.														
<b>Rainy s in 2011</b>	64	Roof area sq.m.		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
		Main Building	1,298	0	3245	0	79178	110330	49973	86447	355273	53218	216117	40238	9735	10,03,754	
		Canteen	201	0	503	0	12261	17085	7739	13387	55015	8241	33467	6231	1508	1,55,435	
		Total roof area	1,499	0	3747.5	0	91439	127415	57711.5	99833.4	410288.292	61459	249583.5	46469	11242.5	1159188.692	
		Effective roof area	1,274	0	3185	0	77723	108303	49055	84858	348745	52240	212146	39499	9556	9,85,310	
<b>Month &amp; Date</b>		Day of the year	Rainfall in plot mm- Kilo liter	Water from roof - Kilo liter	Excess RW of the day - days	Rainwater availability - days (excluding days with >10mm rainfall)	Rainwater availability - days (minimum half a days requirement)	Number of days in a year sump over flows	Rainwater availability - days (average)								
			773	15,321	985	49	139	125	8	132							

## Layout plan of Main building and Canteen along with Proposed interconnections of rainwater pipes to the Existing sump with filtration system



## Layout plan of Canteen along with Proposed interconnections of rainwater pipes to the Existing sump with filtration system







# **DRAWINGS FOR FILTRATION SYSTEM**

# Flush Lock & Pebbles Bed Filter

750 Liter

9" thick Wall

140 mm Rainwater inlet

Perforated Pipe

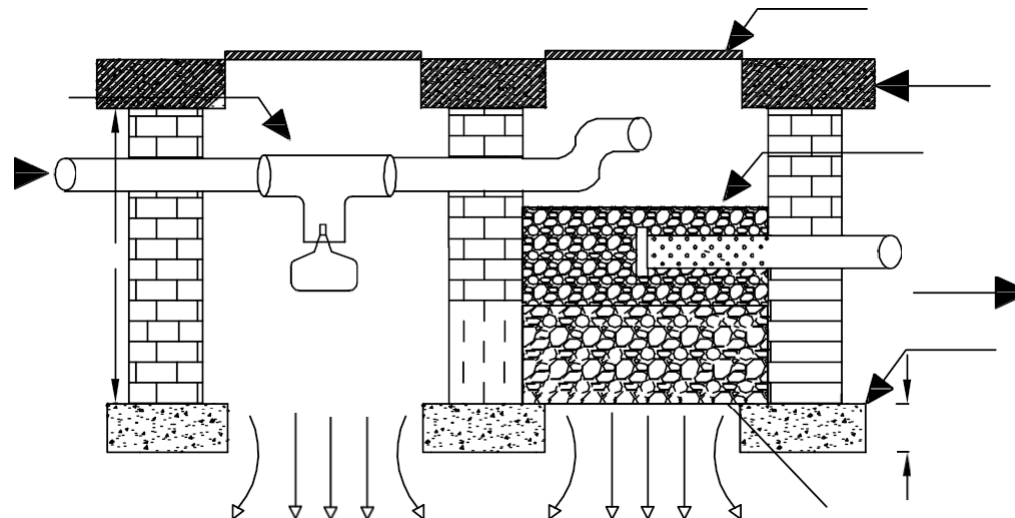
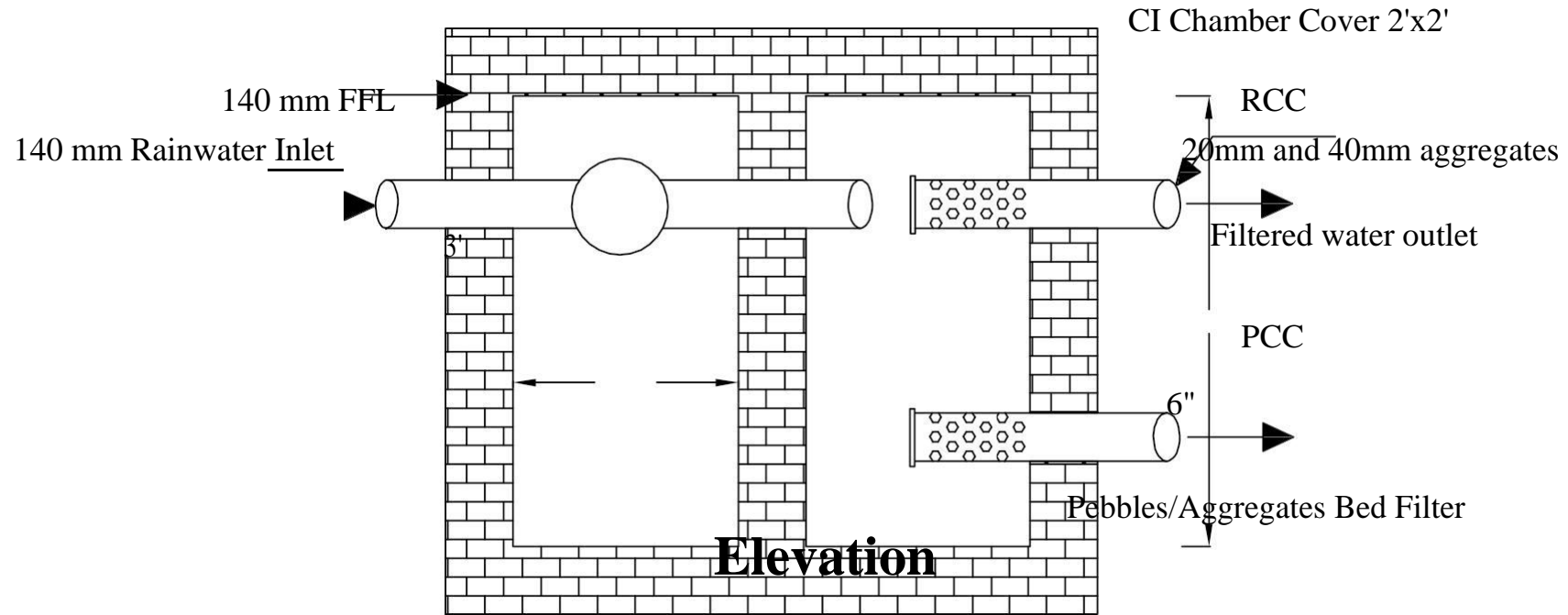
Filtered water outlet

5'

2'-6"

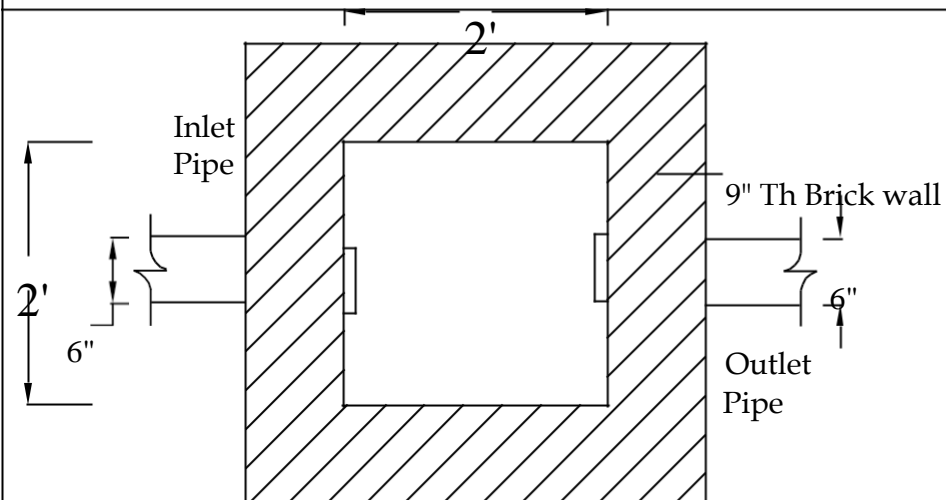
Filtered water outlet

**Plan**

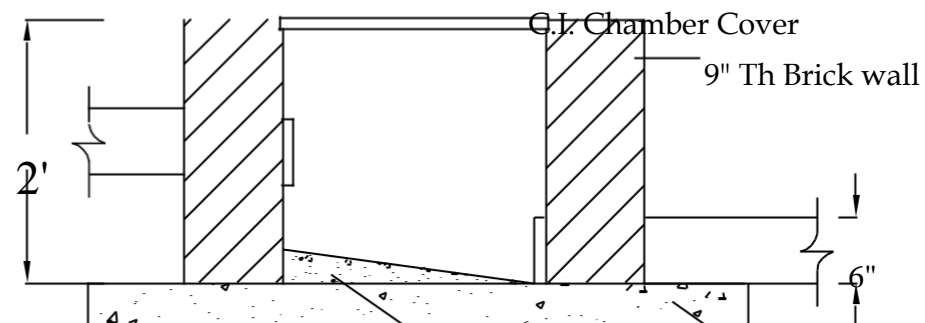


## RWH Inspection Chamber

IC - 2' x 2' x 2'



PLAN



Smooth Cement finish with  
Water Proof Slope

Concrete Bed 1:4:8, 4" Th  
using 40mm Course  
Aggregate

SECTION

Note: All dimension are in fo

#### **4. Rain water harvesting at Guest house building**

The roof top of VIP Guest house building is also considered for roof top rainwater harvesting

It is assessed that, the potential of rainwater is 3,30,000 litres from the roof area of 502 sq.mt with an average annual rainfall of 773mm. The existing rainwater pipes are provided on the back side and sides of the building. It is proposed to inter connect these pipes at the ground level and brought to the back side of the Guest house building through pipes where sump of 10,000 litres capacity and first flush lock and sand bed filter are proposed to store the roof top rain water. The outlet of the sump will be connected to nearby storm water drain to drain off the excess overflow water through main storm water drain. The estimated cost of the RWH system is worked out to be Rs.2.40 lakhs including the cost of construction of underground sump and pipelines with necessary pipe fittings as per the Schedule Rates of PWD Department, Govt of Karnataka as detailed in the following contents.

Fig 4.1: View of Guest house Building







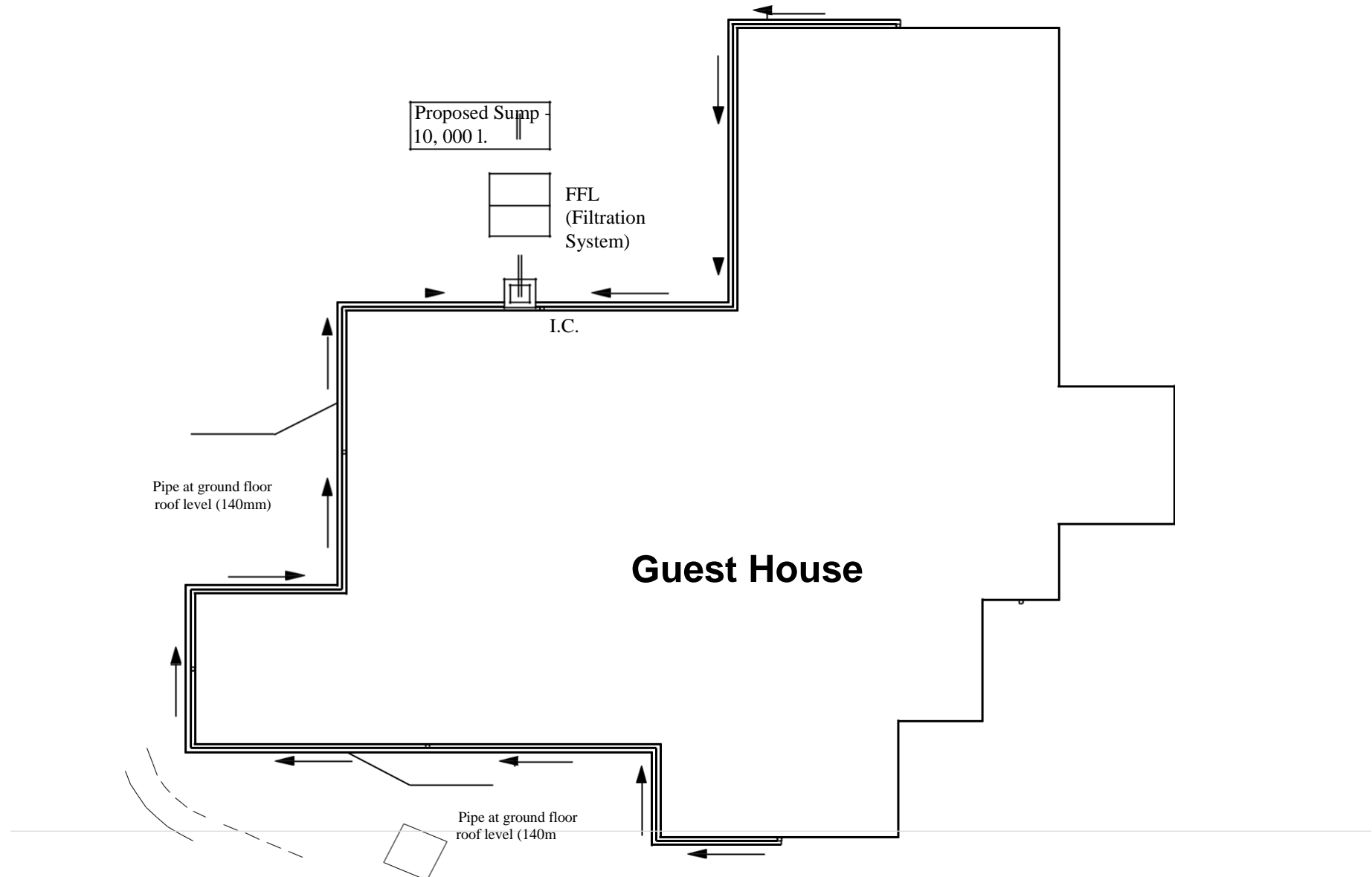
Fig 4.2: front View of guest house Building



Fig 4.3: View of location of proposed water storage underground Sump

Rainwater Harvesting at National Centre for Disease Informatics & Research, Bengaluru																
Guest House																
Rainfall data of year 2011	Total area of the plot sq.m.	19,812	Annual rainfall mm	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	Rainwater available lt.	1,53,20,778	773	-	49,530	-	12,08,532	16,84,020	7,62,762	13,19,479	54,22,703	8,12,292	32,98,698	6,14,172	1,48,590	1,53,20,778
	Daily water requirement lt.	5,000	Watering required for - days / yr.	365												
	Yearly water requirement lt.	18,25,000	Roof top rainwater available for - days.	66	With sump storage (lt)	10,000	35	9%								
	Rainwater available from roof lt.	3,29,971	Rainwater from roof - available lt.													
Monthly Rainfall	Roof area sq.m.		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Total
	Guest House		502	0	1255	0	30622	42670	19327	33433	137401	20582	83583	15562	3765	3,88,201
	Total roof area		502	0	1255	0	30622	42670	19327	33433.2	137401.416	20582	83583	15562	3765	388200.616
	Effective roof area		427	0	1067	0	26029	36270	16428	28418	116791	17495	71046	13228	3200	3,29,971
Month & Date	Day of the year	Rainfall in mm	Water from plot - Kilo liter	Water from roof - Kilo liter	Excess RW of the day - days	Rainwater availability - days (excluding days with >10mm rainfall)	Rainwater availability - days (minimum half a days requirement)	Number of days in a year sump over flows	Rainwater availability - Days (average)							
		773	15,321	330	20	38	31	8	35							

Layout plan of guest house along with interconnections of rainwater pipes to the proposed sump with filtration system

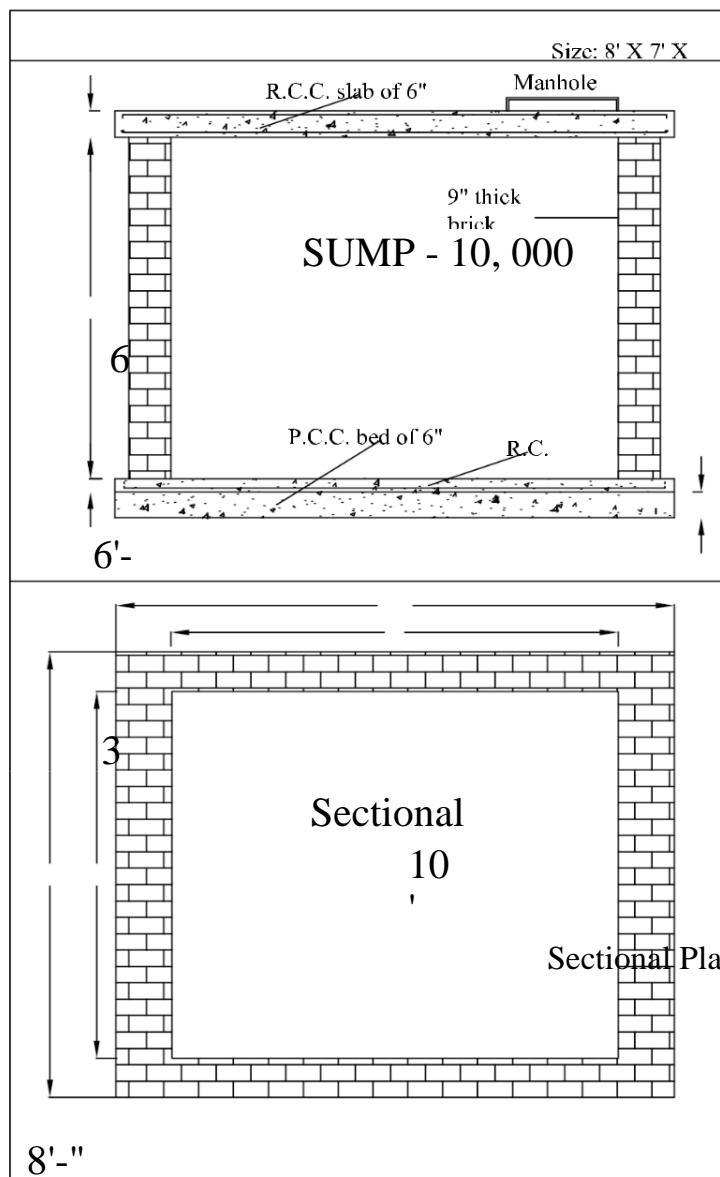




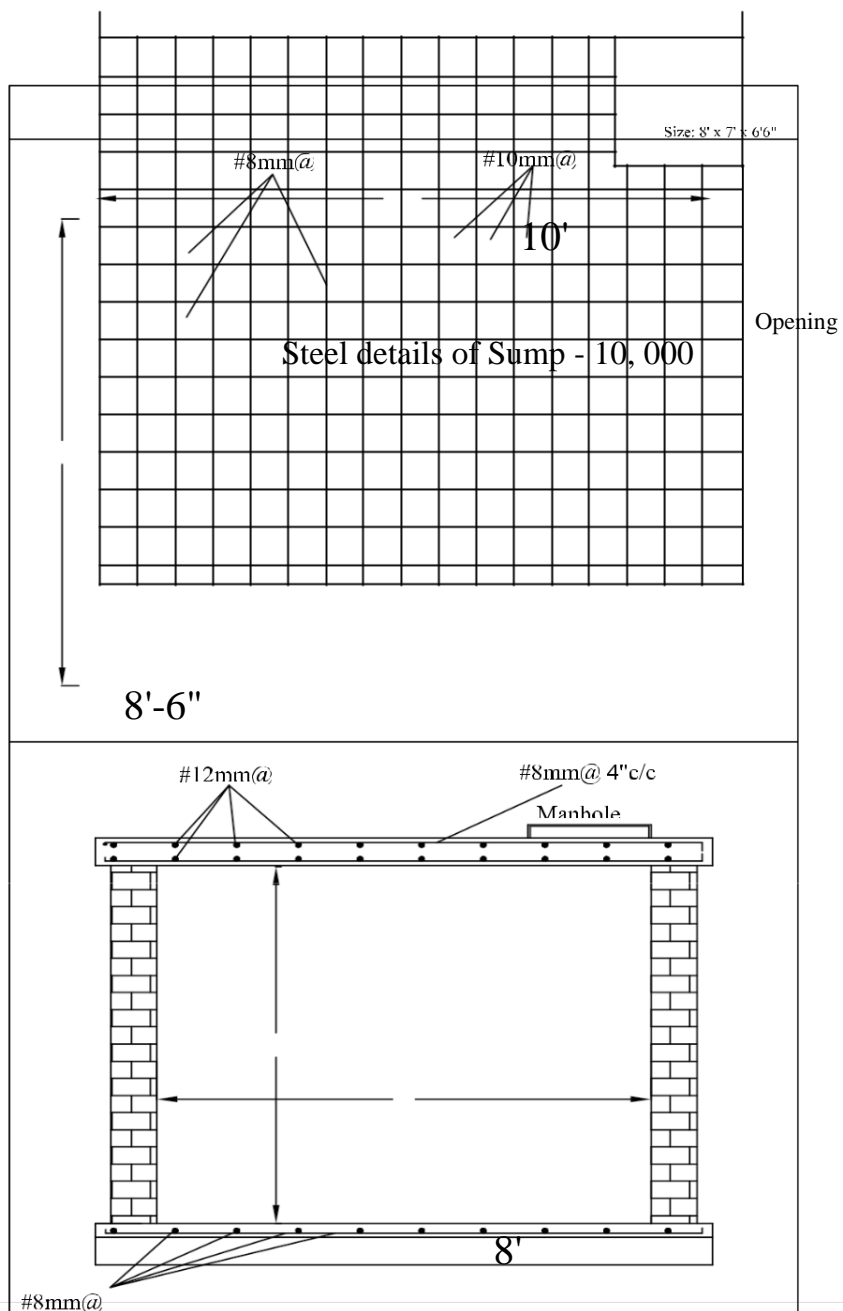


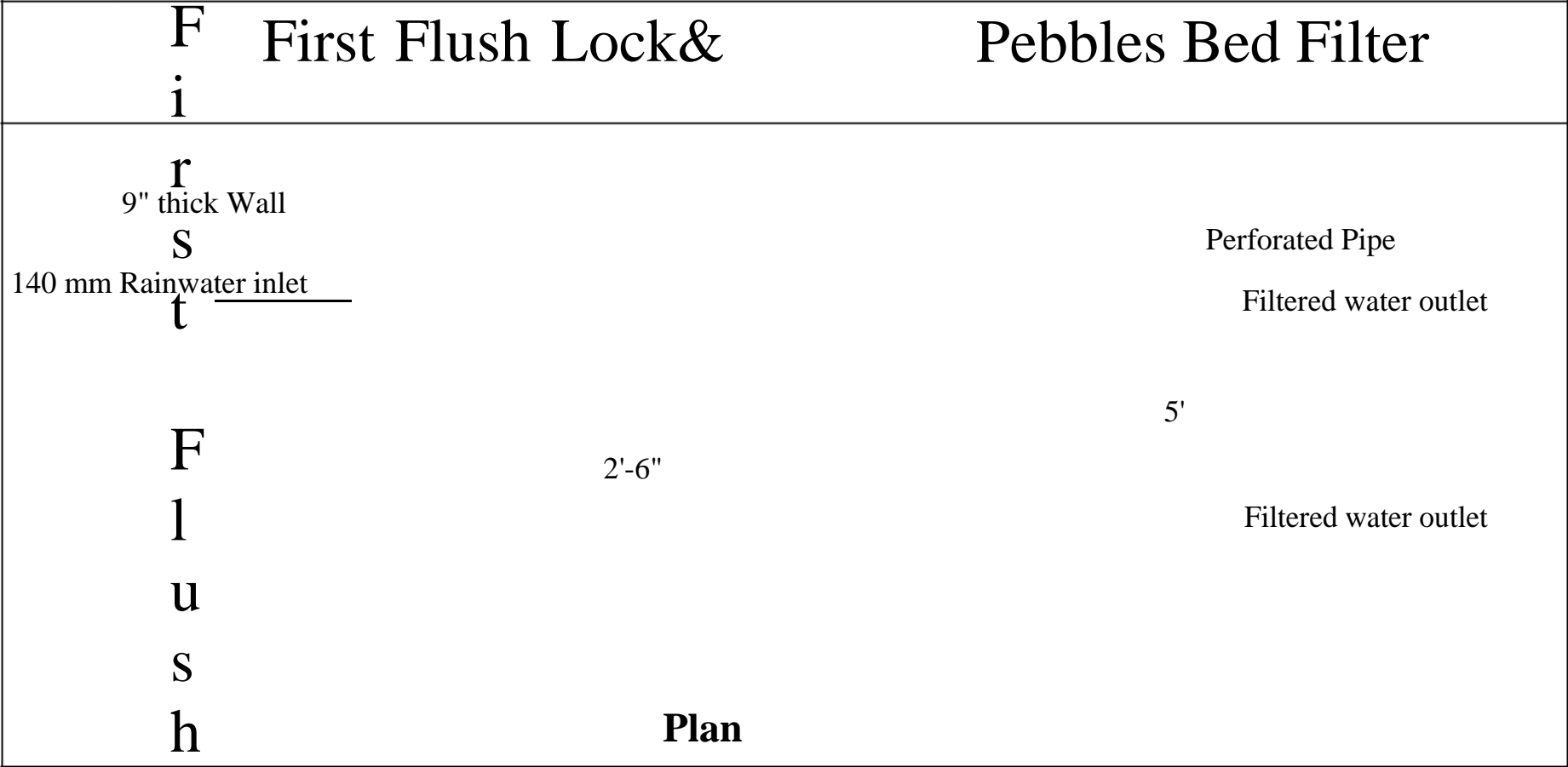
# **DRAWINGS FOR SUMP**

## **(10,000 Lts capacity)**

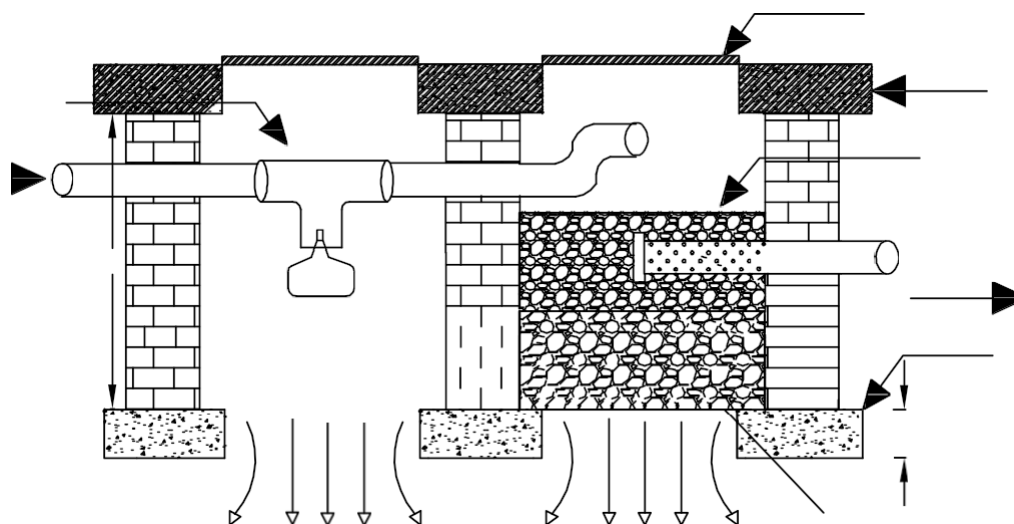
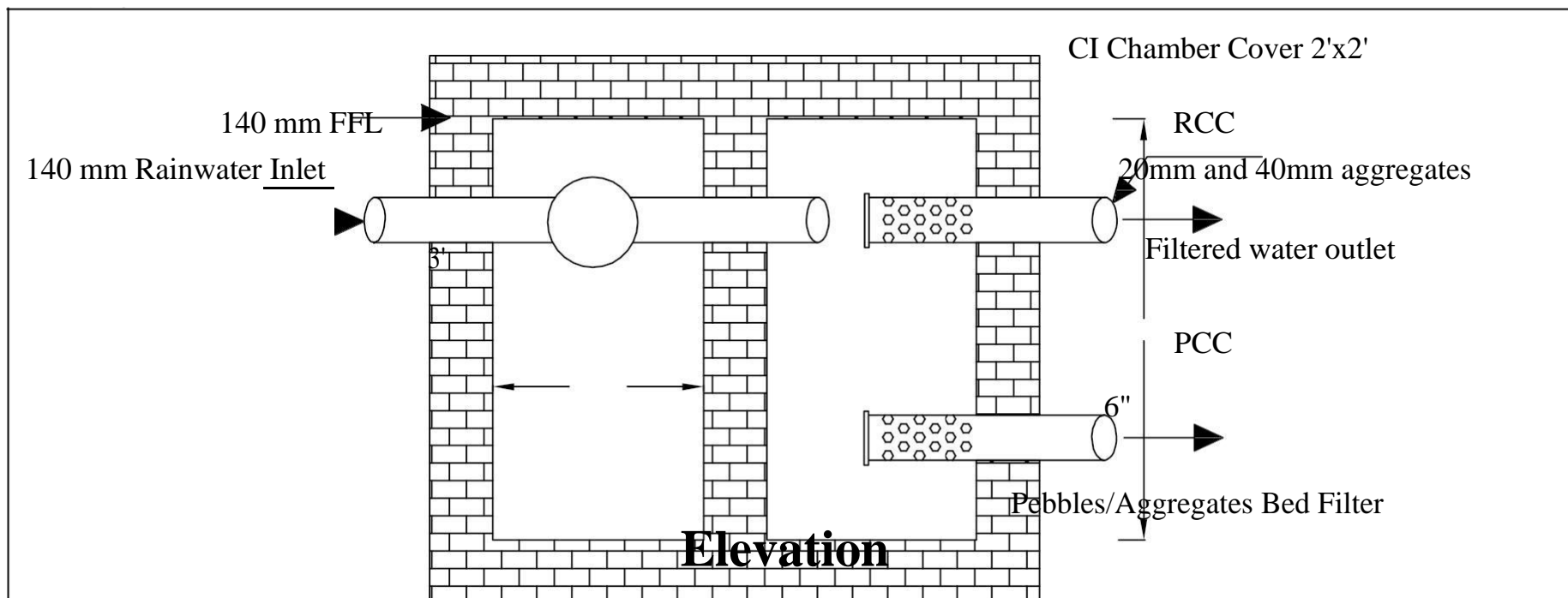


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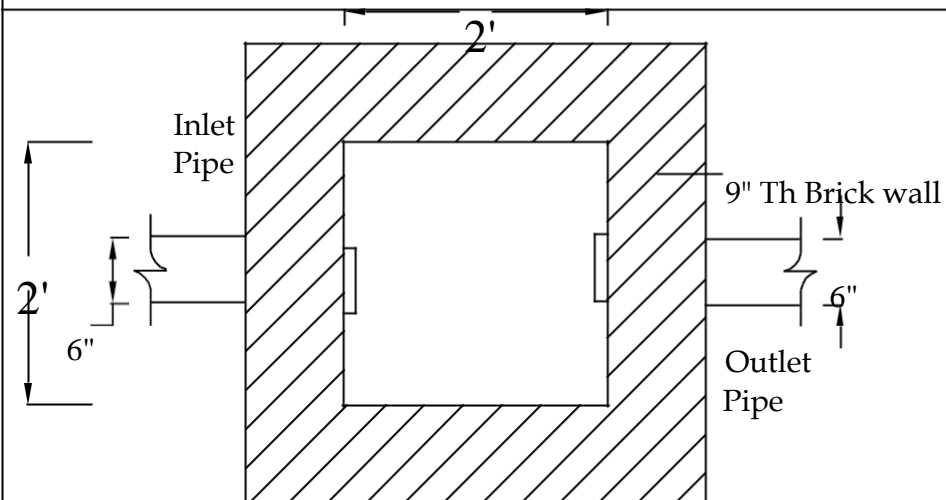


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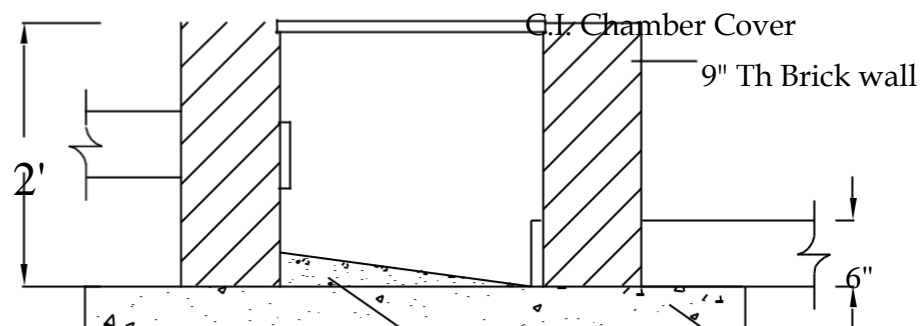


## RWH Inspection Chamber

IC - 2' x 2' x 2'



PLAN



Smooth Cement finish with  
Water Proof Slope

Concrete Bed 1:4:8, 4"  
Th using 40mm Course  
Aggregate

SECTION

Note: All dimension are in fo

## **5. General Maintenance for RWH:**

**The following measures needs to be followed in order to get clean water from the roof top and surface.**

- Keeping the roof clean and free from undesirable articles will improve the quality of rainwater collected
- Water / other fluid or chemical waste spilling or entering the rainwater collection surface and channels should be avoided
- Surface rainwater from road, pavements, garden area and other open space should be separated / diverted from the roof top rainwater harvesting channels
- Slight gradient sloping from the highest point of the roof to the storage sump of rainwater should be maintained for all the pipes and channels to avoid water stagnation
- Filter beds must be cleaned for the sediments during the rainy season
- Rainwater sump should have light proof covers / manhole and other openings
- Cost and details of pipeline installation in the project proposal are not detailed.
- Depending on the site condition the pipelines have to be installed with a gentle slope towards the rainwater storage sump
- Existing storm water entry in to the designated rainwater pipelines / chambers should be diverted to storm water drain
- Perforated chamber covers should be replaced with air tight CI chamber covers
- Rainwater collected may be tested for its quality before using other than washing and gardening.
- It is advised to keep the roof of the buildings clean before the rains and preferably apply a coat of lime (white wash) every year.
- The silt traps and filter bed chambers need to be cleaned once or twice a year.
- Water conservation measures needs to be taken up in the campus
- Water budget needs to be prepared and measures to be taken up.

## 5.1 Maintenance of First Flush Lock and Pebbles Bed Filter:

The function details of automatic first flush separator and pebbles bed filter.

Rainwater collected from the roof top will enter the first flush lock, which will allow only the initial rainwater with all the dirt and contaminants of the roof to flow in to the flush tank and automatically divert the subsequent flow in to the pebbles bed filter chamber. The filtered water from the pebbles bed filter will flow in to the sump for future use. The stagnant water in the first flush tank and pebbles bed filter chamber is allowed to in filter in to the ground (the bottom of these tanks are not cemented to facilitate ground water recharge). This arrangement automatically keeps the first flush and pebbles bed filter chambers dry during the non-rain days.

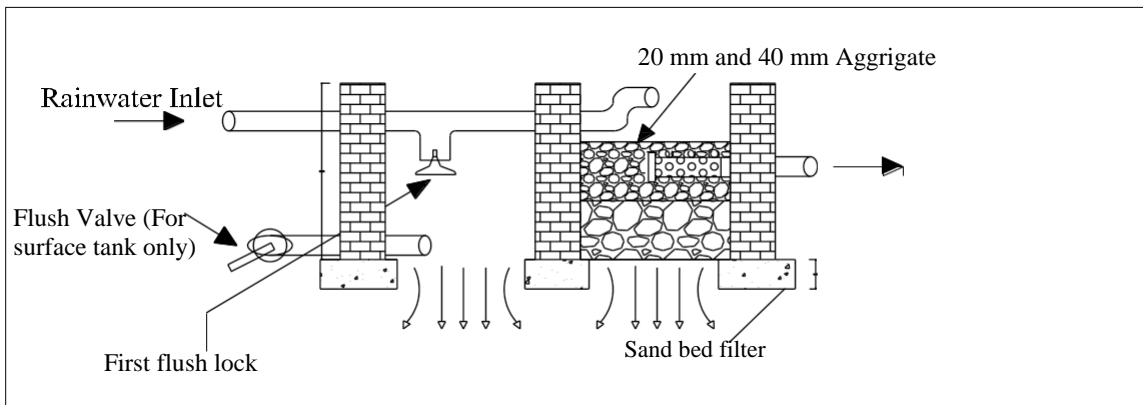


Figure 1

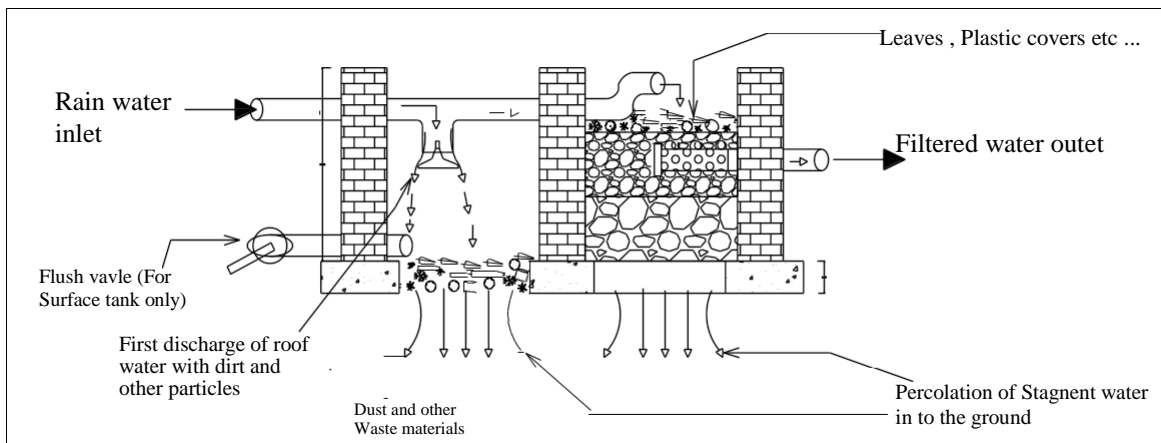


Figure 2

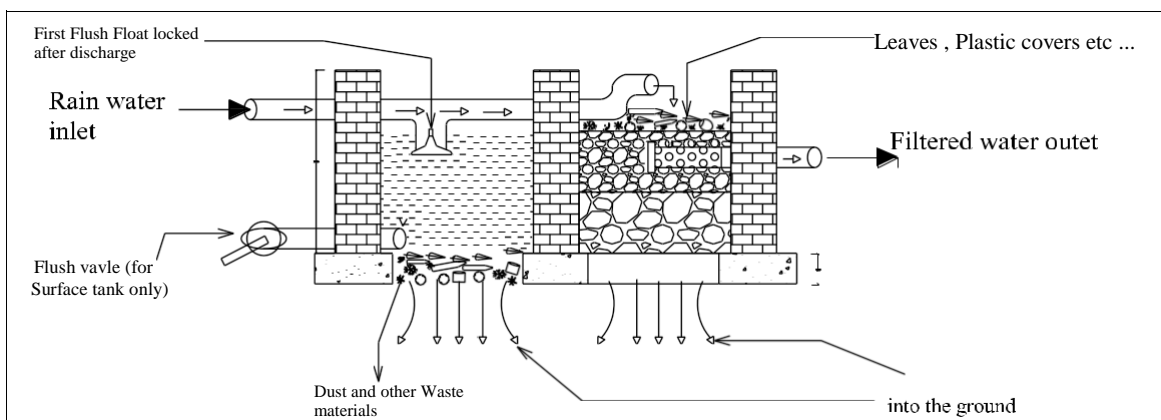


Figure 3

- ✚ Clean the first flush chamber once in a month during the rainy season by scraping the bottom and removing all the silt and other material collected in the chamber.
- ✚ Physically remove any floating elements trapped on the filter bed periodically.
- ✚ Filter bed of aggregates or pebbles need to be taken out of the filter chamber once in three months and washed in fresh water, dry in sun and refill them back in the filter chamber.

**Important:**

- Fix FFL vertically only.
- Do not tamper the gas filled pressurized float of the FFL
- Keep the FFL and filter bed chamber covers closed after cleaning



## 1. Main building and Canteen Buildings



## 2. Guest houses



**Annexure B**

**NATIONAL CENTRE FOR DISEASE INFORMATICS AND RESEARCH**  
**(Indian Council of Medical Research), Bengaluru**

Detailed Project Report on Ground Water Recharging

**AT**

**Nirmal Bhavan-ICMR Complex (II Floor), Poojanahalli, NH-7, B.  
B. Road, Kannamangala post, Bengaluru – 562 110**

**Note: \*Drawings will be given separately during site visit.**



## CONTENTS

<b>Sl No.</b>	<b>Subject</b>	<b>Page No.</b>
1	Background - Groundwater Recharging	48
2	Location Photographs	49
2	Lay out Plan	50
3	Drawings of GW Recharging – Cement Ring Well	51-53



## **Proposed Plan for Groundwater recharge through Cement ring well in National Centre for Disease Informatics and Research(NCDIR-ICMR)Campus, Bengaluru, Karnataka**

### **Background:**

The National Centre for Disease Informatics and Research, Indian Council of Medical Research (ICMR) is located at II Floor of Nirmal Bhawan, ICMR Complex, Poojanhalli Road, Off NH-7, Adjacent to Trumpet Flyover of BIAL Kannamangala, Bengaluru, 562110, Karnataka, having an area about 4.89 acres consisting of Administrative building, Canteen building, Guest house and other buildings.

The detailed field survey was carried out to prepare the comprehensive plan for installing RWH system to store roof top rain water of these selected buildings to be used for various uses including ground water percolation. It is estimated that, around 15 Million litres of rain water can be harvested annually with an average annual rainfall of 773mm in the campus area and around 21,84,000 lts of roof water can be harvested from the roof tops of these selected buildings. Accordingly DPR was submitted to NCDIR to install roof top rain water harvesting from the selected buildings as mentioned in the report. In addition to that, it was also decided to prepare comprehensive plan to harvest roof top water along with plan to harvest the surface water to recharge the ground water in the campus. Accordingly one more field survey was carried out to determine the quantum and place of storage of surface water flow. It was observed that, the rainwater flowing through surface which flows through storm water drains currently segregates near Sewage Treatment Plant which is the lowest point where majority of surface water collected and stagnated as shown in the figure 1. The surface water flowing to this plant can be diverted from storm water drain and allowed in to flow in proposed Cement ring dug well to recharge in the ground to percolate into ground thereby recharging groundwater as shown in figure 2. The total cost of the proposed Ground water recharge well worked out to be Rs.1,00,000=00 as detailed in the following contents. The necessary estimate and drawings are also prepared the following sections.



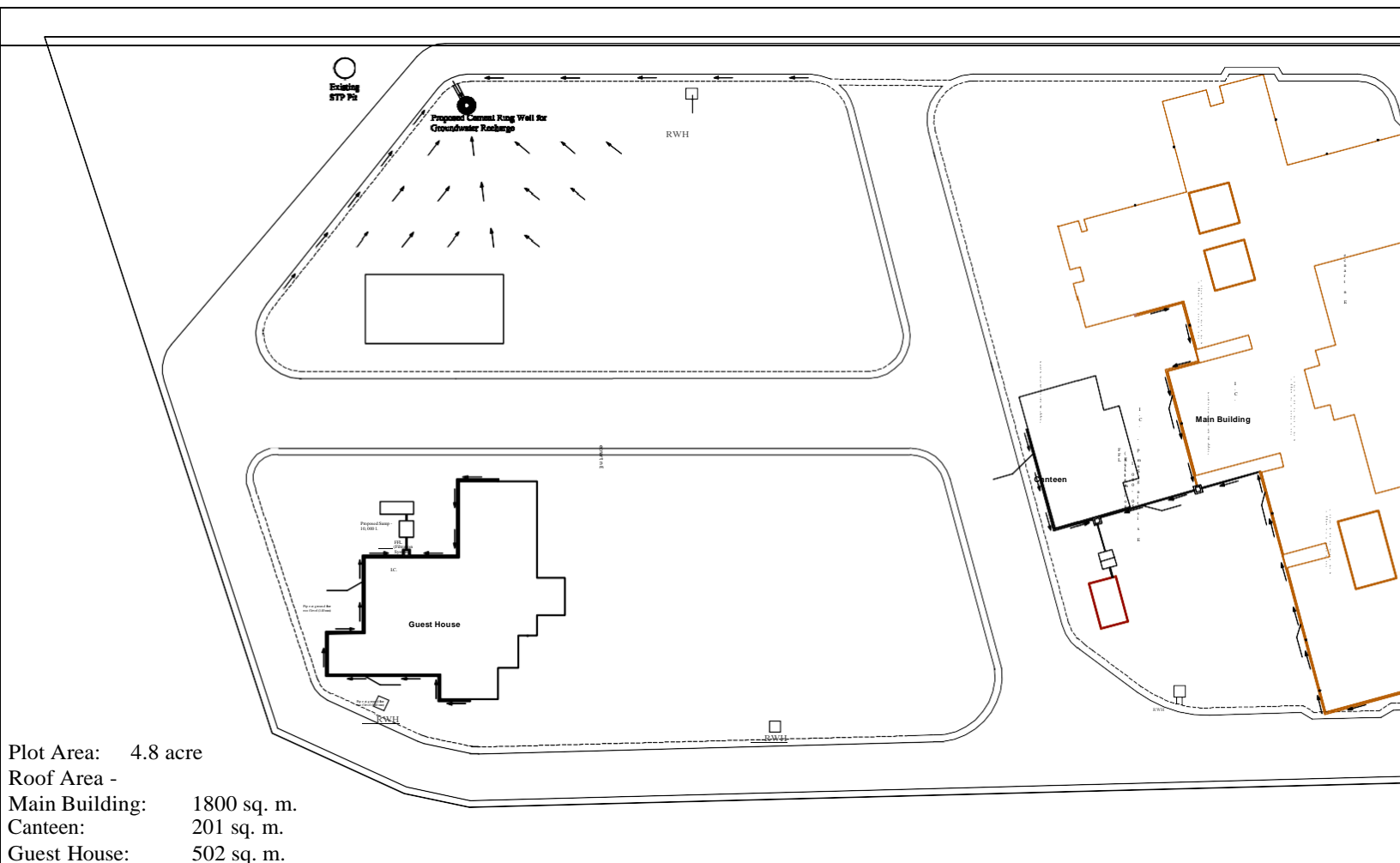
Fig 1: View of the Place where currently water being stagnated and stored



Fig 2: Location for Proposed Cement ring well for Groundwater recharge

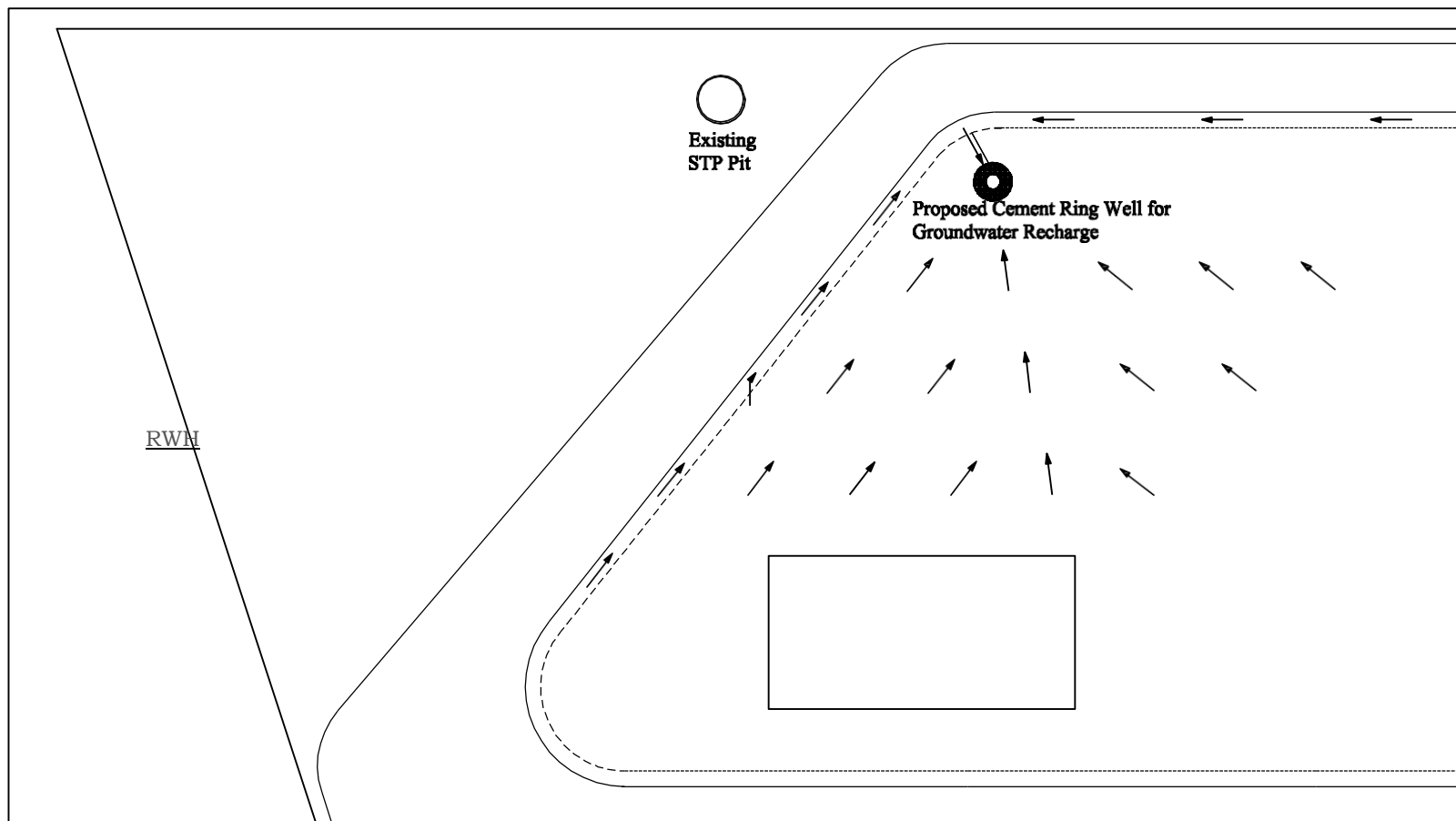


## *Layout Plan of NCDIR-ICMR Campus with Proposed Ground water recharge well*

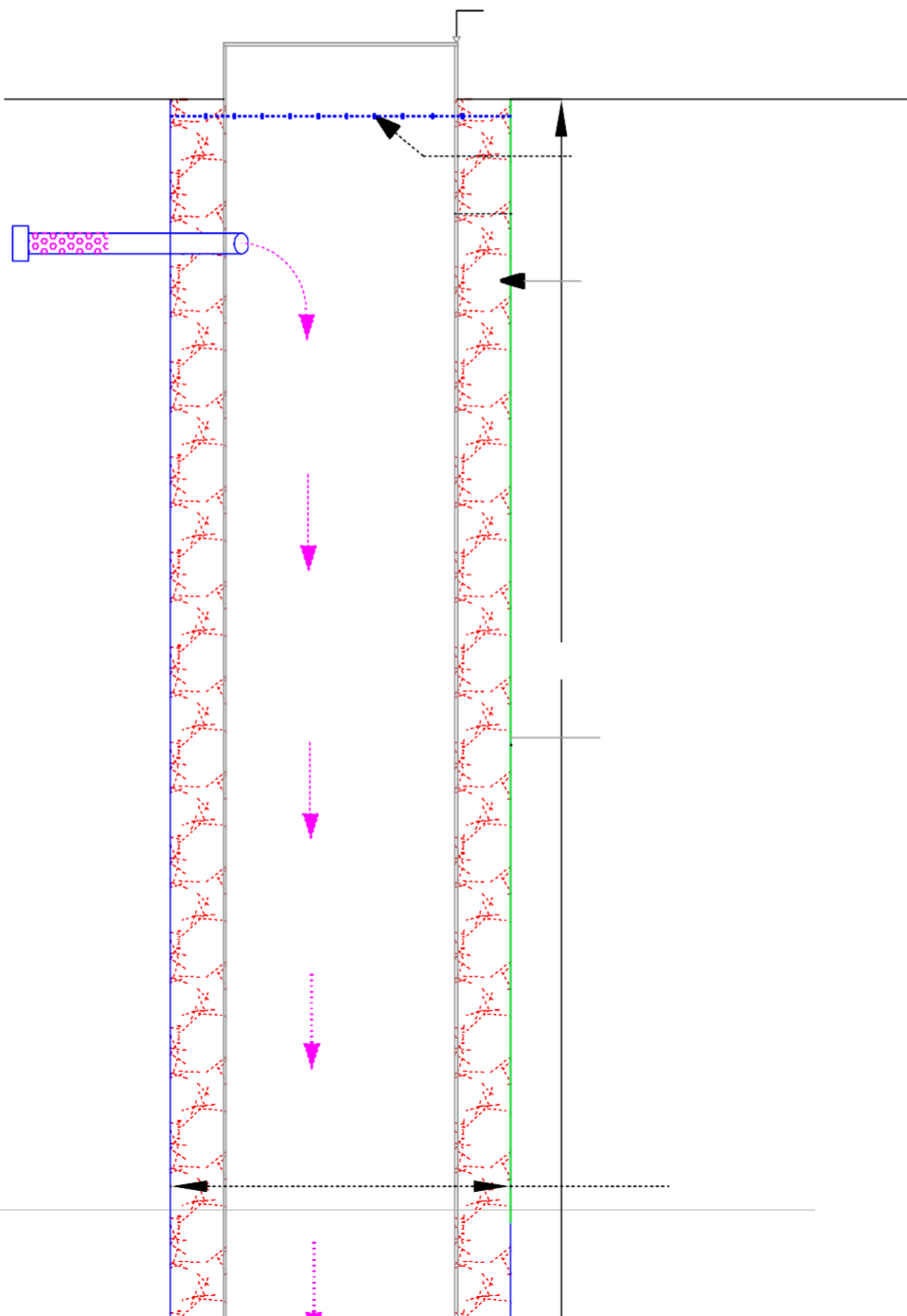
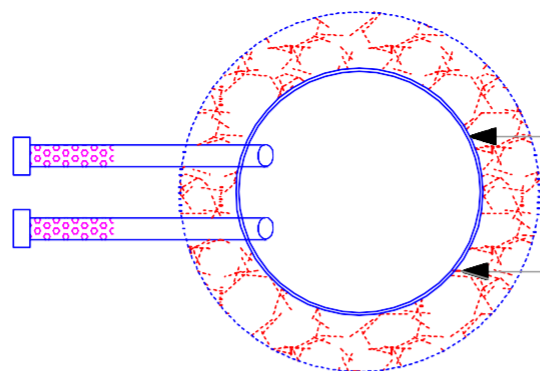




## Layout Plan of NCDIR-ICMR Campus with Proposed Ground water recharge well







**PART –II (COMMERCIAL BID)**  
**(Separation Page)**

**Commercial bid for installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex, Nirmal Bhavan, Poojanahalli Road, Bengaluru**

**This part should be detached from the tender document and may be submitted in a separately sealed cover as per instructions given in the tender as Part-II Commercial Bid for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities in ICMR Complex, Nirmal Bhavan, Bengaluru-562110**



## **Part – II (A)**

### **OFFER FORM**

**Tender for the work of installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex, Nirmal Bhavan, Poojanahalli Road, Bengaluru 562110**

I/We have read, understood and accepted all the General Terms and Conditions for the work **installation and commissioning of Rain Water Harvesting and Ground Water Recharging Facilities at ICMR Complex, Nirmal Bhavan, Poojanahalli Road, Bengaluru 562110** as per GTC, technical specifications and step by step procedure given in the tender document.

1.	Name of the Tenderer :	
2.	Permanent address ( Complete address of the Registered Office including jurisdiction of the Police station should be given) :	
3.	We offer to undertake the work of installation and commissioning of Rain Water Harvesting (RWH) and Ground Water Recharging (GWRH) Facilities at ICMR Complex, Nirmal Bhavan, Poojaohalli Road, Bengaluru-562110	i) At par with the departmental estimate  ii) %age above the departmental Estimate  iii) %age below the departmental Estimate
4	Add GST @ %	

**Note: It is stated that rate is quoted by taking into consideration the costs of the required / specified materials, labour and transportation and all other cost involved for execution of the work complete in all respect. The booklets containing the departmental estimates and other details such as survey report is signed on all pages and marked as “Annexure II(B) & II (C)” and submitted along with Commercial Bid. We have not stipulated any additional conditions in either Part I or Part II of this tender.**

Date

Seal and Signature of the tenderer

## Bill of Quantities for Installing Rainwater Harvesting (RWH) System at ICMR-National Centre for Disease Informatics & Research, Bengaluru

### Main Building & Canteen

Sl No	Description	No	L	B	D	Qty	Unit	Rs. PS.	Amou Nt
									Rs. Ps.
1	<b>First flush lock and Pebbles bed filters - 750 liter</b>	1.00	2.21	1.98	0.91		m		
	KSRB 2-2.2 : Earth work excavation by manual means for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. after breaking of clods complete as per specifications								
	<b>Page No.6, Item No. 2.4 of</b>								
a	<b>PWD SR : 2018-19</b>	2.36	2.13	1.07	5.38	Cum		322.92	1,736
b	<b>Transport of excavated earth Page No. 136 &amp; Item No. 17.1 &amp; 17.4</b>	2.36	2.13	1.07	5.38	Cum		83.16	447
	Providing and laying in position <b>plain cement concrete of mix 1:2:4 with OPC @ 240kgs</b> 40mm and down size graded granite metal coarsev metal aggregates @ 0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15cms thick well compacted in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. <b>Page No.13 item No.4.1</b>	2.00	2.36	0.38	0.15	0.27			
		3.00	1.52	0.38	0.15	0.27			
						0.54	Cum	5705.64	3,080
	Providing and laying in position <b>reinforced cement concrete of mix M20 with OPC cement @ 320 kgs, with 20mm</b> and down size graded granite meta coarse aggregates @ 0.87 cum and fine aggregates @ @ 0.460 cum, with super plastisiser @ 3 lts. confirming to IS 9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works <b>in foundation for footings, pedestals, retaining walls, return walls, walls</b> (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor bolts & plinths etc., including cost of all materials, labour, HOM of machinery, curing complete as per specifications. <b>Page No.14 item</b>								
d	<b>No.4.11</b>								
	Roof Slab	1.00	2.36	2.13	0.15	0.77	Cum		
	Deduct for chamber openings	2.00	0.61	0.61	0.15	0.11			
						0.65	Cum	6528.60	4,275
	KSRB 4.9.1 : Providing TMT steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (lap, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. S.R.page 18 Item. No. 4.46 (32 x 0.02 x 7850) =5024 kgs								
f	<b>S.R.page 16 Item. No. 4.45</b>								
	Roof Slab - 19.56 Cft = 0.67 Cumt								
	- @ 1.00 % per Cumt					0.01			
						0.01	Cum		
	@ 7850 Kg / Cumt					51.81	Kg		
					or	0.05	T	76643.28	3,971
	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as suspended floors, roofs, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications for heights more than 3.50 m from ground level. <b>SR page No. 16 Item No. 4.29</b>								
g	<b>SR page No. 16 Item No. 4.29</b>								
	Roof slab, Bottom	1.00	2.36	2.13		5.04	Sqm	284.08	1,432

Seal and signature of the tenderer



Sl No	Description	No	L	B	D	Qty	Unit	Rate Rs. PS.	Amount Rs. Ps.
	Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0 Newton per sqmm (table moulded) with cement mortar 1:8 for basement and superstructure including cost of materials, labour charges, curing complete as per specifications								
	<b>SR. Page No. 29 Item No. 6.5</b>	3.00	1.52	0.23	0.91	0.96			
		2.00	2.21	0.23	0.91	0.92			
						1.88	Cum	7128.00	13,397
	KSRB 15.3.1 : Providing <b>12mm thick cement plaster in single coat</b> with cement mortar 1:3, to brick masonry including rounding off corners wherever required smooth rendering, : providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB 15-4.1 : Extra for providing and mixing <b>waterproofing compound</b> in cement plaster work at one kg per bag or in the proportion recommended by the manufactures, for cement mortar 1:3 12mm thick cost of materials complete as per specifications. <b>Page No. 122 &amp; 123, Item No. 15.9 &amp; 15.23</b>	4.00	0.76		0.91	2.79			
		4.00	1.52		0.91	5.57			
						8.36	Sqm	235.44	1,969
	<b>j</b> Aggregates 40mm and above	1.00	1.52	0.76	0.30	0.35	Cum	1305.10	462
	<b>k</b> Aggregates 20mm and above	1.00	1.52	0.76	0.30	0.35	Cum	1305.10	462
	<b>l</b> Nelton mesh	1.00	1.52	0.76	0.00	1.16	Sqm	100.00	116
	<b>m</b> Relevant plumbing accessories for inlet and outlet with auto FFL of 160 mm					1.00	LS	6000.00	6,000
	<b>n</b> Manhole Covers "ISI "Marked : 24" X 24" of 50 Kg in weight. with locking arrangements	Nos	2.00			2.00	LS	3135.00	6,270
	<b>Sub Total</b>								<b>43,617</b>
	<b>2 Inspection Chamber - 2'x2'</b>	2.00	0.61	0.61	0.61		m		
	<b>a</b> KSRB 2-2.2 : Earth work excavation by manual means for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. after breaking of clods complete as per specifications <b>Page No.6, Item No. 2.4 of PWD SR : 2018-19</b>	1.00	1.22	1.22	0.46	0.68	Cum	322.92	219
	<b>b</b> Providing and laying in position <b>plain cement concrete of mix 1:2:4 with OPC @ 240kgs</b> 40mm and down size graded granite metal coarsev metal aggregates @ 0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15cms thick well compacted in foundation, including cost of all materials, labour, HOM of machinery, curing complete as Per specifications. <b>Page No.13 item No.4.1</b>	1.00	1.22	1.22	0.15	0.23	Cum	5705.64	1,293
	<b>c</b> Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0 Newton per sqmm (table moulded) with cement mortar 1:8 for basement and superstructure including cost of materials, labour charges, curing complete as per specifications								
	<b>SR. Page No. 29 Item No. 6.5</b>	4.00	0.84	0.23	0.61	0.47	Cum	7128.00	3,330
Sl No	Description	No	L	B	D	Qty	Unit	Rate Rs. PS.	Amount Rs.Ps.
<b>d</b>	<b>KSRB 15.3.1 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to brick masonry including rounding off corners wherever required smooth rendering, : providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB 15-4.1 : Extra for providing and mixing</b>								



waterproofing compound in cement plaster work at one kg per bag or in the proportion recommended by the manufactures, for cement mortar 1:3						
12mm thick cost of materials complete as per specifications. Page No. 122 & 123, Item No. 15.9 & 15.23						
Inside	4.00	0.61	0.61	1.49		
Outside	4.00	1.07	0.61	2.60		
Top	4.00	0.84	0.23	0.77		
				4.85	Sqm	235.44
						1,143

e Manhole Covers "ISI "Marked : 24" X 24" of 50 Kg in weight. with

locking arrangements	Nos	1.00				1.00	LS	3135.00	3,135
Sub Total									9,120
Sub Total for 2 no.									18,241
3 RPVC Pipe 4kg/cm2 and Accessories BIS Certified									
a 160 mm rigid PVC pipe	1.00	-				0.00	m	550	-
b 140 mm rigid PVC pipe	1.00	172.00				28.67	m	350	10,033
c 110 mm rigid PVC pipe	1.00	-				0.00	m	250	-
d 160 mm PVC fittings – elbow	1.00	-				0.00	m	396	-
e 140 mm PVC fittings – elbow	1.00	14.00				14.00	Nos	290	4,060
f 110 mm PVC fittings – elbow	1.00	-				0.00	Nos	150	-
g 160 mm PVC fittings – tee	1.00	-				0.00	Nos	558	-
h 140 mm PVC fittings – tee	1.00	12.00				12.00	Nos	400	4,800
i 110 mm PVC fittings – tee	1.00	-				0.00	Nos	180	-
j Reducer collar 160 -140 mm	1.00	-				0.00	Nos	158	-
k Reducer collar 140 -110 mm	1.00	-				0.00	Nos	75	-
l Pipe laying and fixing	1.00	50.00				50.00	LS	200	10,000
m Modification for existing storm water drains	1.00	-				0.00	LS	25,000	-
N Relaying of pavers and misc.	1.00	-				0.00	LS	250	-
Sub Total									28,893
Total Amount									90,751
Add towards Miscellaneous and unforeseen charges (20%)									18,150
Grand Total (in Rupees)									1,08,901
Total Cost of Execution of the Project (in Rupees)									1,08,901

Note: Above estimate is indicative and includes all items . Any deviations required as per the site conditions need to be discussed with the Principal Investigator and necessary changes would be incorporated. Offers will be considered on total value and no additionality will be entertained. Rates mentioned with reference from Schedule of Rates 2018-2019 PW,P & IWTD, Bangalore Circle, Bangalore

Rate quoted: At par / %age above/ %age below

Date

Signature and seal of the agency



## Bill of quantities for Installing Rainwater Harvesting (RWH) System at National Centre for Disease Informatics & Research, Bengaluru

### Guest House

Guest House										Rate	Amount
No	Description	No	L	B	D	Qty	Unit	Rs.	PS.	Rs. Ps.	
1	Underground Sump 10,000 Lts	1.00	2.44	2.13	1.98	1.00	m				
a I)	Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. after breaking of clods complete as per specifications <b>Page No.6, Item No. 2.4 of PWD SR:2018-19</b>	1.00	3.35	3.05	1.48	15.11	Cum	484.92		7,326	
II)	Above 1.5 m. upto 3m. depth add 25 % extra <b>Page No.5 &amp; 7 item No.2.4 &amp; Note. KSRB 2.2 of PWD SR:2018-19</b>	1.00	3.35	3.05	1.26	12.93	Cum	243.00		3,141	
B	Filling available excavated earth (excluding rock) in sides of foundation upto plinth in layers not exceeding 20 cms. In depth, compacting each deposited layer by ramming after watering with a lead up to 50m and lift up to 1.5m including cost of all labour complete as per specifications. <b>Page No.7, Item 2.10</b>	2.00	3.35	0.08	2.74	1.40					
		2.00	2.13	0.08	2.74	0.89					
						2.29	Cum	87.26		200	
c	Transport of excavated earth <b>Page No. 136 &amp; Item No. 17.2 &amp; 17.4</b>					25.74	Cum	119.88		3,086	
d	Providing and laying in position <b>plain cement concrete of mix 1:3:6 with OPC @ 220 kgs</b> using 40mm and down size graded granite metal machine mixed, concrete laid in layers not exceeding 15cms thick well compacted in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. <b>Page No.13 item No.4.2</b>	1.00	3.35	2.74	0.15	1.40	Cum	5609.52		7,863	
e	Providing and laying in position <b>reinforced cement concrete of mix 1:2:4 with 20mm(M15)</b> and down size graded granite metal, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintels, retaining walls, return walls, walls (any thickness) including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping bed blocks, anchor bolts, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing complete as per specifications. <b>Page No.15 item No.4.12</b>										
i)	Floor slab	1.00	3.35	2.74	0.08	0.70					
ii)	Roof Slab	1.00	3.05	2.74	0.15	1.27					
						1.98	Cum				
	Deduction for opening	1.00	0.61	0.61	0.15	0.06	Cum				
	Net quantity					1.92	Cum	6528.60		12,525	
f	Extra for use of <b>water proofing compound in cement concrete of mix 1:1.5:3</b> , at 1 kg of compound per bag of cement <b>Page No.14, Item No. 4.25]</b>					1.92	Cum	167.40		321	
g	Providing and Fabricating Mild Steel / HYSD Steel (Cold, Twisted) reinforcement for R.C.C work including straightening cutting bending hooking placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the anchoring to the adjoining members wherever necessary complete as per design (lap, hooks, and wastages not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. (1.91 x 0.02 x 7850) =301.23 kgs <b>S.R.page 18 Item. No. 4.46.2</b>										
						301.20	Kgs				
						3.01	g	7664.33		23,085	
H	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as suspended floors, roofs, landings, balconies and likes thickness upto 200mm including cost of all materials, labour complete as per specifications. SR page No. 16 Item No.4.30										
	Roof slab, Bottom	1.00	2.44	2.13		5.20	Sqm	475.20		2,472	
I	Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 50 (Table moulded) with cement mortar 1:8 for basement and superstructure including cost of materials, labour charges, curing complete as per specifications										
	SR. Page No.29 Item No.6.5	2.00	2.90	0.23	1.98	2.62					
		2.00	2.13	0.23	1.98	1.93					





						4.56	Cum	7128.00	32,471
j	Providing 12mm thick cement plaster in single coat with cement mortar 1:4 to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Extra for providing and mixing waterproofing compound in cement plaster work at one KG per bag or in the proportion recommended by the manufactures, for cement mortar 1:4 12mm thick cost of materials complete as per specifications. Page No. 115 & 116, Item No. 15.10 & 15.24								
	Long Side	2.00	2.44		1.98	9.66			
	Short Side	2.00	2.13		1.98	8.45			
	Floor Slab	1.00	2.44	2.13		5.20			
						23.32	Sqm	225.72	5,263
k	Chamber covers "ISI" marked 24" X 24" of 50 Kg in weight. Page No. XXXII with locking arrangements. Page No. V, Item No. 137	Nos				1.00	Nos	3002.00	3,002
l	Vertical Alluminium Ladder for maintainance - 6'6" height	Nos				1.00	LS	2600.00	2,600
	Sub Total								1,00,756
2	First flush lock and Pebbles bed filters - 750 liter	1.00	2.21	1.98	0.91		m		
	KSRB 2-2.2 : Earth work excavation by manual means for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. after breaking of clods complete as per specifications Page No.6, Item No. 2.4 of PWD SR : 2018-19		2.36	2.13	1.07	5.38	Cum	322.92	1,736
a	Transport of excavated earth Page No. 136 & Item No. 17.1 & 17.4		2.36	2.13	1.07	5.38	Cum	83.16	447
	Providing and laying in position plain cement concrete of mix 1:2:4 with OPC @ 240kgs 40mm and down size graded granite metal coarsev metal aggregates @ 0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15cms thick well compacted in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Page No.13 item No.4.1	2.00	2.36	0.38	0.15	0.27			
c		3.00	1.52	0.38	0.15	0.27			
						0.54	Cum	5705.64	3,080
	mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite meta coarse aggregates @ 0.87 cum and fine aggregates @ @ 0.460 cum, with super plastisiser @ 3 lts. confirming to IS 9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillers, posts, struts, buttresses, bed blocks, anchor bolts & plinths etc., including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Page No.14 item No.4.11								
d	Roof Slab	1.00	2.36	2.13	0.15	0.77	Cum		
	Deduct for chamber openings	2.00	0.61	0.61	0.15	0.11			
						0.65	Cum	6528.60	4,275

	KSRB 4.9.1: Providing TMT steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoin members wherever necessary complete as per design (lap, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. S.R.page 18 Item. No. 4.46 (32 x 0.02 x 7850) =5024 kgs								
	<b>S.R.page 16 Item. No. 4.45</b>								
	Roof Slab - 19.56 Cft = 0.67 Cumt								
	- @ 1.00 % per Cumt					0.01			
						0.01	Cum		
	@ 7850 Kg / Cumt					51.81	Kg		
					or	0.05	T	76643.28	3,971
	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as suspended floors, roofs, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications for heights more than 3.50 m from ground level. <b>SR page No. 16 Item No. 4.29</b>								
	<b>SR page No. 16 Item No. 4.29</b>								
	Roof slab, Bottom	1.00	2.36	2.13		5.04	Sqm	284.08	1,432
	Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0 Newton per sqmmm (table moulded) with cement mortar 1:8 for basement and superstructure including cost of								
h									



	materials, labour charges, curing complete as per specifications								
	<b>SR. Page No. 29 Item No. 6.5</b>	3.00	1.52	0.23	0.91	0.96			
		2.00	2.21	0.23	0.91	0.92			
						1.88	Cum	7128.00	13,397
	KSRB 15.3.1 : Providing <b>12mm thick cement plaster in single coat</b> with cement mortar 1:3, to brick masonry including rounding off corners wherever required smooth rendering, : providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB 15-4.1 : Extra for providing and mixing <b>waterproofing compound</b> in cement plaster work at one kg per bag or in the proportion recommended by the manufactures, for cement mortar 1:3 12mm thick cost of materials complete as per specifications. <b>Page No. 122 &amp; 123, Item No. 15.9 &amp; 15.23</b>	4.00	0.76		0.91	2.79			
		4.00	1.52		0.91	5.57			
						8.36	Sqm	235.44	1,969
	Aggregates 40mm and above <b>Page No. I I &amp; Sl. No. 25 &amp; Page No. 136 Item. No. j 17.1 &amp; 17.4</b>	1.00	1.52	0.76	0.30	0.35	Cum	1305.10	462
	Aggregates 20mm and above <b>Page No. II &amp; Sl. No. 28 &amp; Page No. 136 Item. No. k 17.1 &amp; 17.4</b>	1.00	1.52	0.76	0.30	0.35	Cum	1305.10	462
	l Netlon mesh	1.00	1.52	0.76	0.00	1.16	Sqm	100.00	116
	m Relevant plumbing accessories for inlet and outlet with auto FFL of 160 mm					1.00	LS	6000.00	6,000
	n Manhole Covers "ISI "Marked: 24" X 24" of 50 Kg in weight. With locking arrangements	Nos	2.00			2.00	LS	3135.00	6,270
	<b>Sub Total</b>								<b>43,617</b>
	<b>3 Inspection Chamber - 2'x2'</b>	1.00	0.61	0.61	0.61		m		
	a KSRB 2-2.2 : Earth work excavation by manual means for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. after breaking of clods complete as per specifications <b>Page No.6, Item No. 2.4 of PWD SR : 2018-19</b>	1.00	1.22	1.22	0.46	0.68	Cum	322.92	219
	b Providing and laying in position plain cement concrete of mix 1:2:4 with OPC @ 240kgs 40mm and down size graded granite metal coarse vel metal aggregates @ 0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15cms thick well compacted in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Page No.13 item No.4.1	1.00	1.22	1.22	0.15	0.23	Cum	5705.64	1,293
	c Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0 Newton per sqmm (table moulded) with cement mortar 1:8 for basement and superstructure including cost of materials, labour charges, curing complete as per specifications								
	<b>SR. Page No. 29 Item No. 6.5</b>	4.00	0.84	0.23	0.61	0.47	Cum	7128.00	3,330
	d coat with cement mortar 1:3, to brick masonry including rounding off corners wherever required smooth rendering, : providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB 15-4.1 : Extra for providing and mixing waterproofing compound in cement plaster work at one kg per bag or in the proportion recommended by the manufactures, for cement mortar 1:3 12mm thick cost of materials complete as per specifications. Page No. 122 & 123, Item No. 15.9 & 15.23								
	Inside	4.00	0.61		0.61	1.49			
	Outside	4.00	1.07		0.61	2.60			
	Top	4.00	0.84		0.23	0.77			
						4.85	Sqm	235.44	1,143
	e Manhole Covers "ISI "Marked : 24" X 24" of 50 Kg in weight. with locking arrangements	Nos	1.00			1.00	LS	3135.00	3,135
	<b>Sub Total</b>								<b>9,120</b>
	<b>4 RPVC Pipe 4kg/cm2 and Accessories BIS Certified</b>								
	a 160 mm rigid PVC pipe	1.00	-			0.00	m	550	-
	b 140 mm rigid PVC pipe	1.00	96.00			96.00	m	350	33,600



c	110 mm rigid PVC pipe	1.00	-			0.00	m	250	-
d	160 mm PVC fittings - elbow	1.00	-			0.00	m	396	-
e	140 mm PVC fittings - elbow	1.00	14.00			14.00	Nos	290	4,060
f	110 mm PVC fittings - elbow	1.00	-			0.00	Nos	150	-
g	160 mm PVC fittings - tee	1.00	-			0.00	Nos	558	-
h	140 mm PVC fittings - tee	1.00	6.00			6.00	Nos	400	2,400
i	110 mm PVC fittings - tee	1.00	-			0.00	Nos	180	-
j	Reducer collar 160 -140 mm	1.00	-			0.00	Nos	158	-
k	Reducer collar 140 -110 mm	1.00	-			0.00	Nos	75	-
l	Pipe laying and fixing	1.00	30.00			30.00	LS	200	6,000
m	Modification for existing storm water drains	1.00	-			0.00	LS	25,000	-
n	Relaying of pavers and misc.	1.00	-			0.00	LS	250	-
	Sub Total								46,060
	Total Amount								1,99,553
	Add towards Miscellaneous and unforeseen charges (20%)								39,911
	Grand Total (in Rupees)								2,39,463
	<b>Total Cost of Execution of the Project (in Rupees)</b>								<b>2,39,463</b>

**Note:** Above estimate is indicative and includes all items. Any deviations required as per the site conditions need to be discussed with the Principal Investigator and necessary changes would be incorporated. Offers will be considered on total value and no additionally will be entertained. Rates mentioned with reference from Schedule of Rates 2018-2019 PW,P & IWTD, Bangalore Circle, Bangalore

**Rate quoted: At par /      %age above/      %age below**

Date

Signature and seal of the agency

## Bill of Quantities for Groundwater Recharge Well at National Centre for Disease Informatics & Research, Bengaluru Groundwater Recharge Pit

Sl. No.	Description	No	L	B	D	Qty	Unit	Rate Rs. PS.	Amount Rs. Ps.
<b>I</b>	<b>Cement Ring Well with Infiltration Gallery (4' dia</b>	1.00	1.83		7.62		m		
<b>a</b>	Earthwork excavation for foundation of buildings, culverts, water supply, sanitary lines and electrical conduites either in pits or in trenches 1.5 m and above in width, <b>in ordinary soil</b> not exceeding 1.5 m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead up to 50 m after breaking of clouds complete as per specifications. Specification	1.00	(3.14*3 *3*1)/4		1.00	7.07	Cum	299.00	2,115
<b>II</b>	<b>From 1 m. to 1.5 m. Page No. 5, Item No. 2.5 &amp; Page No. 7, KSRB: 2.2</b>	1.00	(3.14X1 .83X1.8 3X.5)/4		0.50	1.32	Cum	373.75	492
<b>III</b>	<b>From 1.5 m to 3 m. Page No. 5, Item No. 2.5 &amp; Page No. 7, KSRB: 2.2</b>	1.00	(3.14X1 .83X1.8 3X1.5)/		1.50	3.95	Cum	467.19	1,845
<b>IV</b>	<b>From 3 m to 4.5 m</b>	1.00	(3.14X1 .83X1.8 3X1.5)/		1.50	3.95	Cum	583.98	2,306
<b>V</b>	<b>From 4.5 m to 6 m Page No. 5 &amp; Item No. 2.6</b>	1.00	(3.14X1 .83X1.8 3X1.5)/		1.50	3.95	Cum	729.98	2,882
<b>VI</b>	<b>From 6 m to 7 m</b>	1.00	(3.14X1 .83X1.8 3X1)/4		1.00	2.63	Cum	912.48	2,402
<b>VII</b>	Excavation 1.5m and above in width in <b>soft rock without blasting</b> for foundation of buildings, water supply, sanitary lines and electrical conduites either in pits or in trenches not exceeding 1.5 m. in depth, stacking the excavated stuff from edges of excavation with lead up to 50 m. including cost of explosives, labour and HOM of equipment complete as per specifications. Specification No. KBS 2.1 (b) / 2.3.5		(3.14X6 X6X0.6 2)/4		0.62	1.63	Cum	1140.59	1,861
<b>b</b>	Transport of excavated earth Page No. 136 & Item No. 17.1 & 17.4	1.00				24.50	Cum	77.00	1,886
<b>c</b>	Precast Ferro Cement Rings of diameter 1.22 m. and thickness 0.05 m. with 0.3 m. height	24.00	1.22		0.30	24.00	LS	1500.00	36,000
<b>d</b>	RCC precast Ferro Cement rings top cover (1.52 m. dia 0.15 m. thick)	1.00	1.52		0.15		LS	3000.00	3,000
<b>e</b>	Mild Steel safety grill work made out of 0.5" sq rod with 5" spacing both ways painted for corrosion resistance Page No. 34 & Item No. 7.9 weighing 21	1.00	1.37			1.88	Sqm		
						39.51	Kg	95.00	3,753



	f	Aggregates 40mm and above Page No. II & Sl. No. 25 & Page No. 136 Item. No. 17.1 & 17.4						15.53	Cum	1188.43	18,456
		<b>Sub Total</b>									<b>76,999</b>
		<b>2RPVC Pipe 6kg/cm2 and Accessories BIS Certified</b>									
	a	160 mm rigid PVC pipe	1.00	6.00				6.00	m	418	2,508
	b	140 mm rigid PVC pipe	1.00	-				0.00	m	319	-
	c	110 mm rigid PVC pipe	1.00	-				0.00	m	188	-
	d	160 mm PVC fittings - elbow	1.00	-				0.00	m	304	-
	e	140 mm PVC fittings - elbow	1.00	-				0.00	Nos	167	-
	f	110 mm PVC fittings - elbow	1.00	-				0.00	Nos	115	-
	g	160 mm PVC fittings - tee	1.00	-				0.00	Nos	335	-
	h	140 mm PVC fittings - tee	1.00	-				0.00	Nos	249	-
	i	110 mm PVC fittings - tee	1.00	-				0.00	Nos	145	-
	j	Reducer collar 160 -140 mm	1.00	-				0.00	Nos	197	-
	k	Reducer collar 140 -110 mm	1.00	-				0.00	Nos	101	-
	l	Pipe laying and fixing	1.00	-				0.00	LS	200	-
	m	Modification for existing storm water drains	1.00	-				0.00	LS	25,000	-
	n	Relaying of pavers and misc.	1.00	-				0.00	LS	250	-
		<b>Sub Total</b>									<b>2,508</b>
		<b>Total Amount</b>									<b>79,507</b>
		<b>(25%)</b>									<b>19,877</b>
		<b>Grand Total (in Rupees)</b>									<b>99,384</b>
		<b>Total Cost of Execution of the Project (in Rupees)</b>									<b>99,384</b>

Note: Above estimate is indicative and includes all items . Any deviations required as per the site conditions need to be discussed with the Principal Investigator and necessary changes would be incorporated. Offers will be considered on total value and no additionally will be entertained. Rates mentioned with reference from Schedule of Rates 2018-2019 PW,P & IWTD, Bengaluru Circle, Bengaluru. RPVC Pipe 4kg/cm2 an

Rate quoted: At par /

%age above/ %age below

Date

Signature and seal of the agency