List of Content

Water Conservation Policy

Jain VishvaBharati Institute

(Declared Deemed-to-be University Under Section 3 of The UGC Act, 1956)

Ladnun - 341306 (Raj.)

Preamble

While water remains one of the most abundant resources on earth, but less than 1 percent of the total supply is reliably available for human consumption. Drinking-water is certainly essential for human survival but water-related illnesses are the most common health threat in the developing world. An estimated 25 000 people die every day as a result of water-related diseases Human existence depends on water. Water interacts with solar energy to determine climate and it transforms and transports the physical and chemical substances necessary for all life on earth.

Water is a natural resource, fundamental to life, livelihood, food security and sustainable development. It is also a scarce resource. India has more than 17 percent of the world's population, but has only 4% of world's renewable water resources with 2.6% of world's land area. There are further limits on utilizable quantities of water owing to uneven distribution over time and space. In addition, there are challenges of frequent floods and droughts in one or the other part of the country.

With a growing population and rising needs of a fast developing nation as well as the given indications of the impact of climate change, availability of utilizable water will be under further strains in future with the possibility of deepening water conflicts among different user groups. Low public consciousness about the overall scarcity and economic value of water results in its wastage and inefficient use. In addition, there are inequitable distribution and lack of a unified perspective in planning, management and use of water resources.

Limited availability-Introduction

Since water is a prime natural resource, a basic human need and a precious national asset, planning and development of water resources need to be governed by national perspectives. It has been estimated that out of the total precipitation of around 400 million hectare meters in the country, the surface water availability is about 178 million hectare meters. Out of this about 50 % can be put to beneficial use because of topographical and other constraints. In addition, there is a ground water potential of about 42 million hectare meters. The availability of water is highly uneven in both space and time. Precipitation is confined to only about three or four months in the year and varies from 10 cm in the western parts of Rajasthan to over 1000 cm at Cherrapunji in Meghalaya. Further, water does not respect state boundaries. Not merely rivers but even underground aquifers often cut across state

boundaries. Water as a resource in one and indivisible: rainfall, river waters, surface ponds and lakes and ground water are all part of one system, water is also a part of larger ecological system.

The JVBI's Water Conservation Policy: Focusing Innovations

- The JVBI has envisaged a new policy paradigm with regards to the principles, approaches and strategies for managing water in the university campus. The policy paradigm aims at a dedicated programme on participatory and decentralised water management and governance, which indeed is the need of the hour.

- The salient features would be as follows:

- It shall accord a preemptive priority for safe and clean drinking water and sanitation for all, and prioritizes meeting water requirements for ecosystems.

- Recycling and reuse of water would be incentivized.

- The policy shall stress on water use efficiency improvements across the university campus and shall aim at bringing improvements in managing water supply, waste water treatment and re-use of treated waste water.

- It shall encourage exploring all avenues using technology, to conserve ground water. The water storage of reservoirs also would be needed to be addressed to maintain water table and also ensure that surplus water during monsoons does not get wasted by run-off. It shall emphasize to manage the surface and ground water available in the institute's campus in a sustainable manner.

- It shall encourage innovations in water-saving technologies. It would envisage a physical management of water through technical and engineering means having ability to capture, store, deliver and treat water appropriately.

- The water resource management would try to shift from capturing more water towards that to designing demand and user-focused approaches that influence people's behavior. In addition, the need for appreciating the utmost efficiency in water utilization and a public awareness of the importance of its conservation shall be enforced by increasing awareness.

- The Policy shall also focus on the other important aspect related to ensure water quality. Improvements in existing strategies and the innovation of new techniques resting on a strong science and technology base will be needed to eliminate the pollution of surface and ground water resources, to improve water quality and to step up the recycling and re-use of water.

- The Wtaer Conservation Policy of the JVBI shall emphasise that there is wide temporal and spatial variation in availability of water, which may increase substantially due to climate changes, causing more water crisis and incidences of water related disasters, i.e., floods, increased erosion and increased frequency of droughts, etc. Climate change may also increase the sea levels. This may lead to salinity intrusion in ground water aquifers / surface waters and increased coastal inundation in coastal regions.

- Another area of concern shall be to increase access to safe drinking water, which is continuing to become a problem. Groundwater, though part of hydrological cycle and a community resource, is perceived as an individual property and is exploited inequitably and without any consideration to its sustainability leading to its over-exploitation in several areas. However, higher concentration of salts in the ground water is still a major concern, which needs to be addressed.

- The water conservation policy shall aim at strengthening the existing water resources infrastructure and shall focus on its proper maintenance properly so as to remove the possibilities of under-utilization of available resources.

- Natural water bodies and drainage channels would be saved from being encroached upon, and diverted for other purposes.

- Pollution of water sources would be minimized so as to not affect the availability of safe water and minimize the health hazards.

- Low public consciousness about the overall scarcity and economic value of water results in its wastage and inefficient use shall be addressed appropriately.

- The lack of adequate trained personnel for scientific planning, utilizing modern techniques and analytical capabilities incorporating information technology constrains good water management shall be taken into consideration and gaps would be filled.

- Water is essential for sustenance of eco-system, and therefore, ecological needs should be given due consideration. Therefore, over and above the pre-emptive need for safe drinking water and sanitation should be treated as an economic good so as to promote its conservation and efficient use.

- All the elements of the water cycle, i.e., evapo-transpiration, precipitation, runoff, river, lakes, soil moisture, and ground water, sea, etc., are interdependent and the basic hydrological unit is the river basin; therefore, would be considered as the basic unit for planning.
- Since, water quality and quantity are interlinked, need to manage in an integrated manner, consistent with broader environmental management approaches inter-alia including the use of economic incentives and penalties would be taken into consideration in order to reduce pollution and wastage.

- Recycle and reuse of water, after treatment to specified standards, would be encouraged through a properly planned tariff system, in which there would be a reasonable cost for the quantity withdrawn, a refund for properly treated water returned for reuse, and heavy fines for returning polluted waters.

- Sources of water and water bodies would not be allowed to get polluted. System of third party periodic inspection would be evolved and penalty would be imposed on the basis of polluter pays principle.

- The need for reduction of distribution losses and pilferages is even more underscored in the context of water tariffs. The lesser the losses and pilferages, the more the availability of water, and the lower the per-unit water tariff would be. The policy needs to clearly establish this inter-linkage.

- Further, such efficient handling of water on the supply side as well as on the demand side may also reduce the pressing need for the 'multi-purpose' water resource projects mentioned in the Policy, which are large and complex, may involve high inefficiencies, and have large negative social, environmental, and financial and economic implications.

- Provisions would be placed to channelize the rain water through PVC pipes drainage system to the ground water table directly.

- The third party system shall be placed for making an objective assessment of the status of conservation.

53

क्र सं	सामग्री का नाम	खरीद की दिनांक	मात्रा	उपयोग में आई की मात्रा	कार्य का विवरण	बाकी	[illegible]
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14	सीमेन्ट [illegible] [illegible] [illegible] ईंट	22/3/2018	2 बैग 02 नग 20 F.T 02 नग 100 नग	2 बैग 01 नग 10 F.T. 02 नग 100 नग	[illegible]	[illegible]	

वर्ष - 2018-19

क्र.सं. बैंक/बिल/व्हाउचर	सामग्री का नाम	खरीद की दिनांक	मात्रा	उपयोग की जाने वाली मात्रा	कार्य का विवरण	बाकी
01	सिमेन्ट	8-6-18	3 बैग	3 बैग	[illegible] रिपेयरिंग हेतु	NIL
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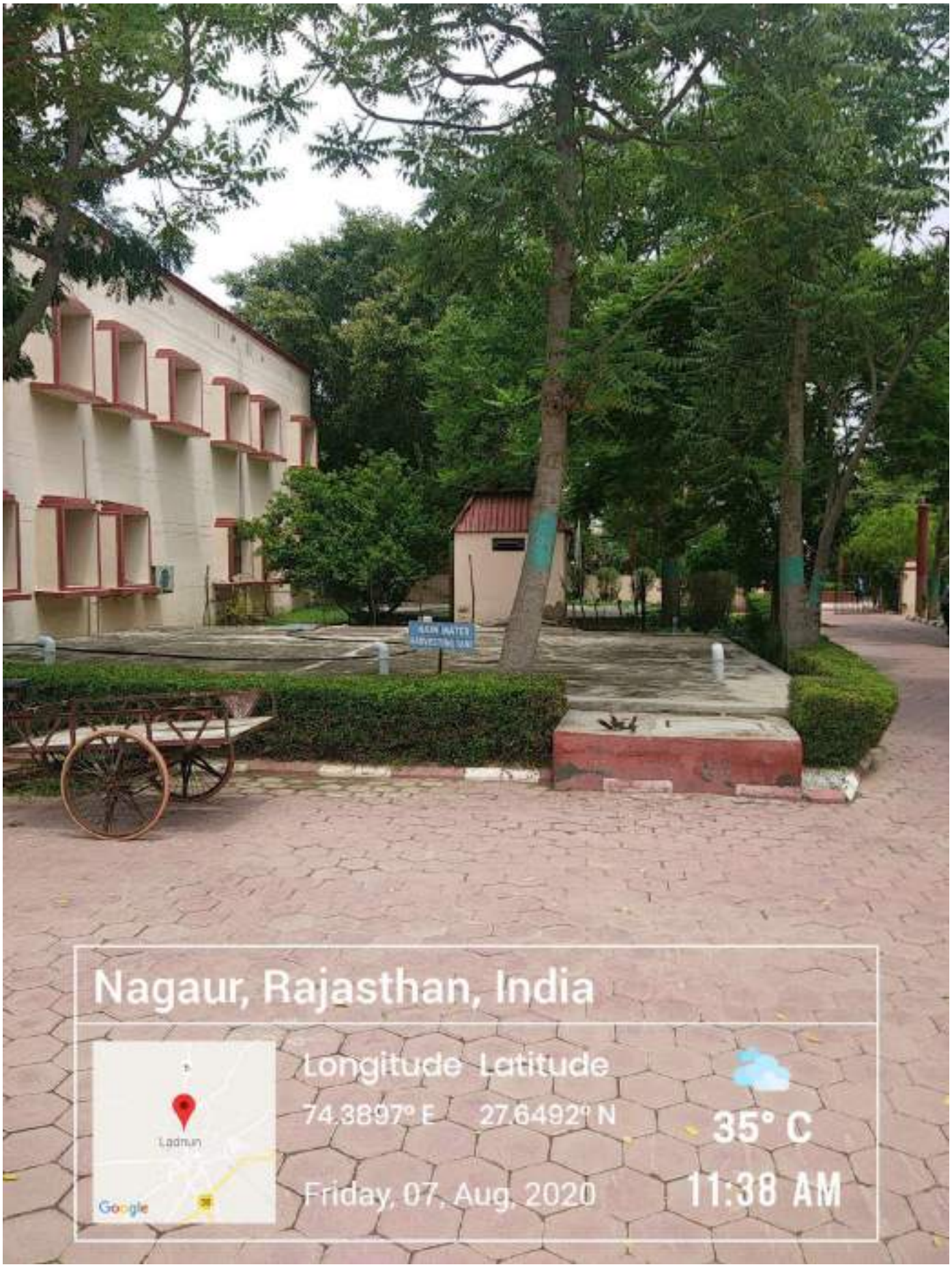
Rain Water Harvesting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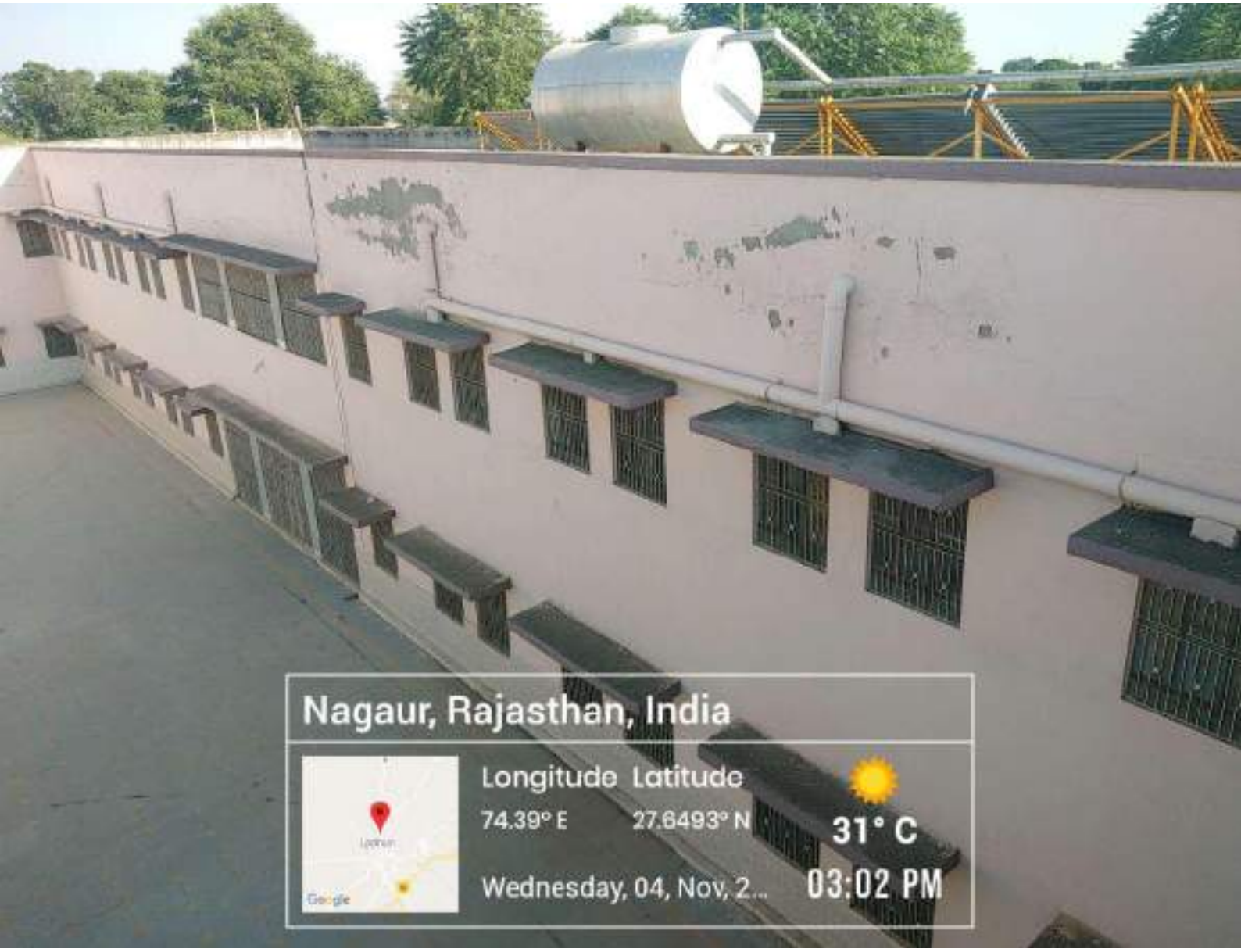
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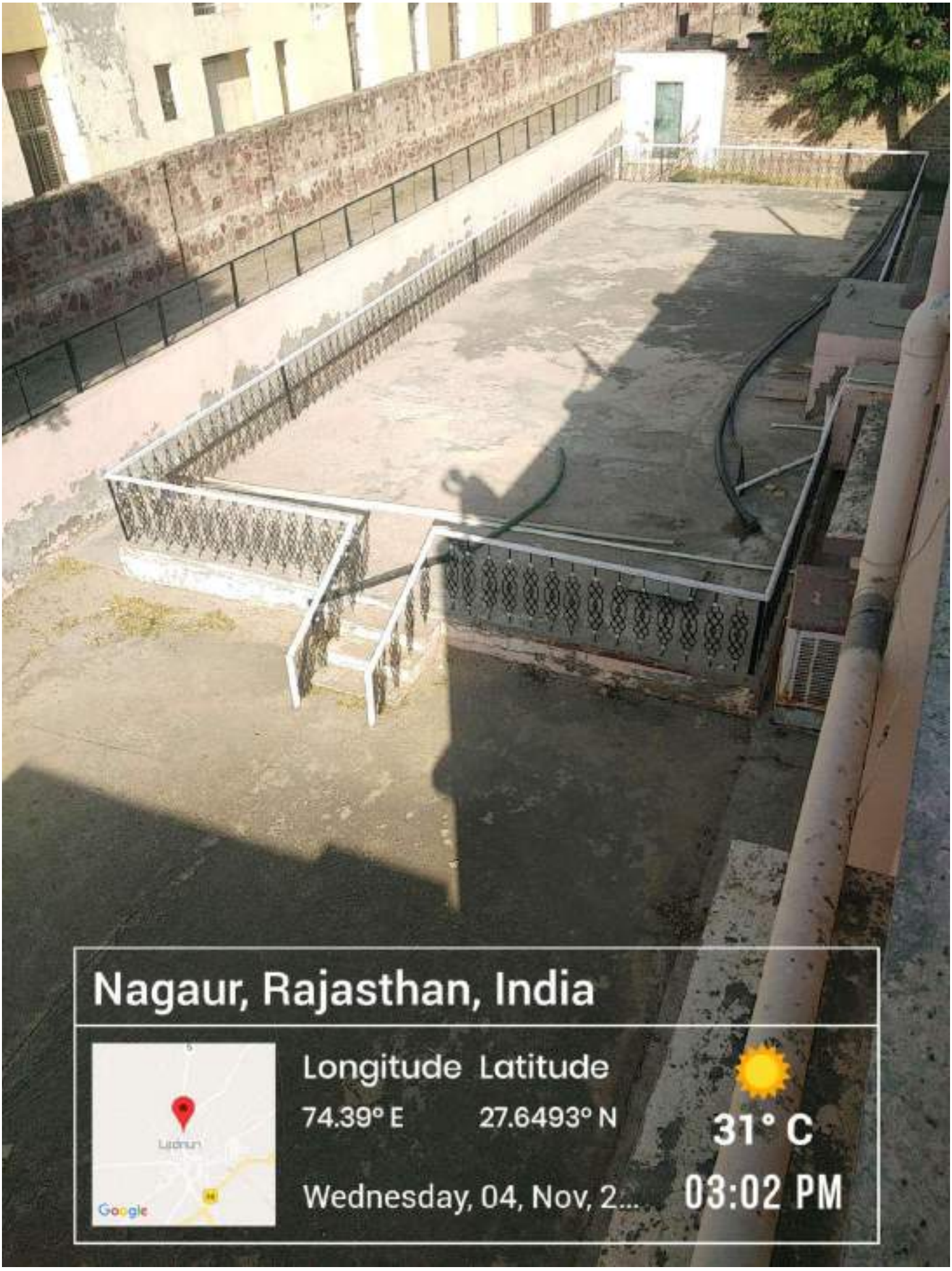
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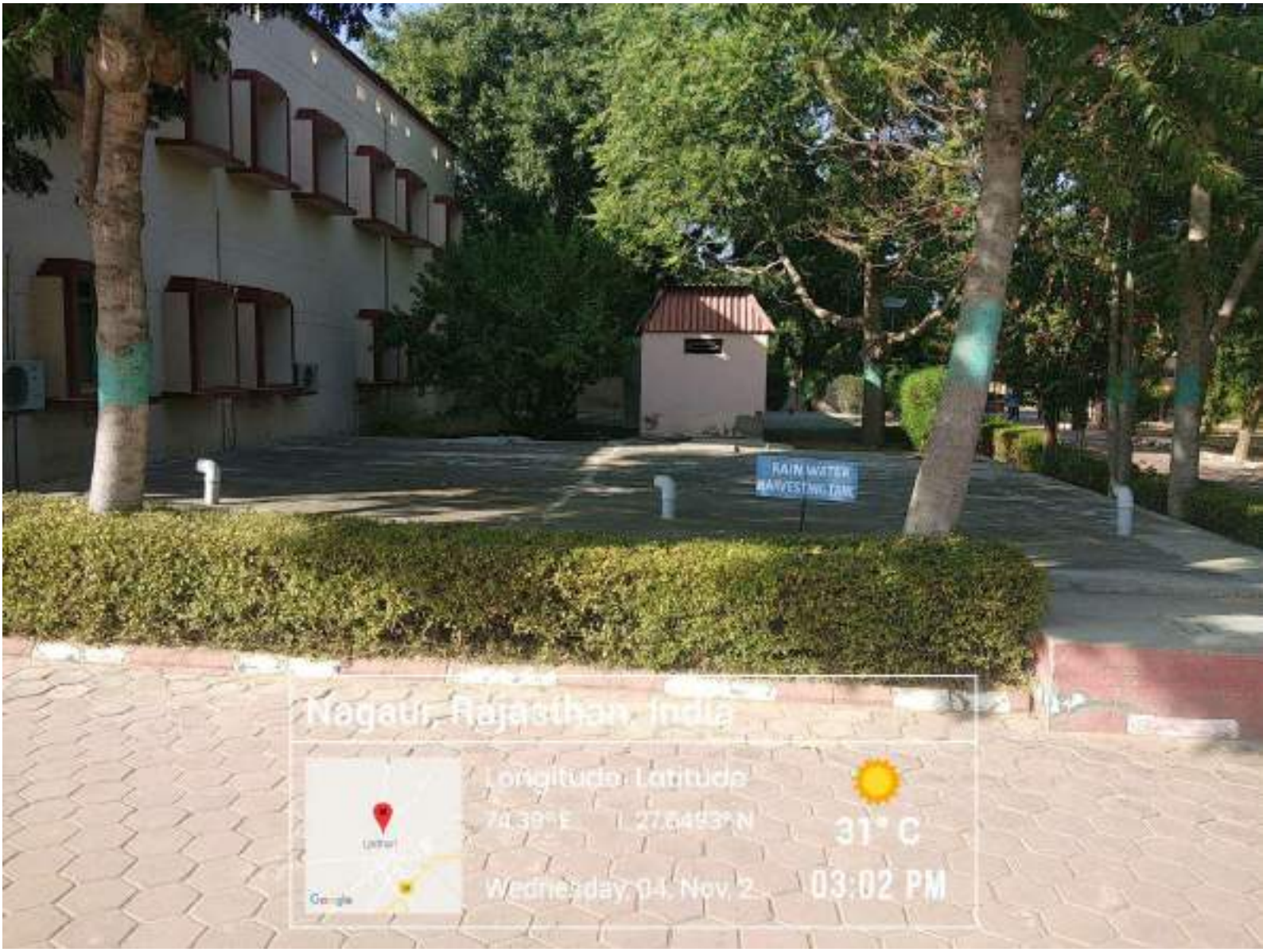
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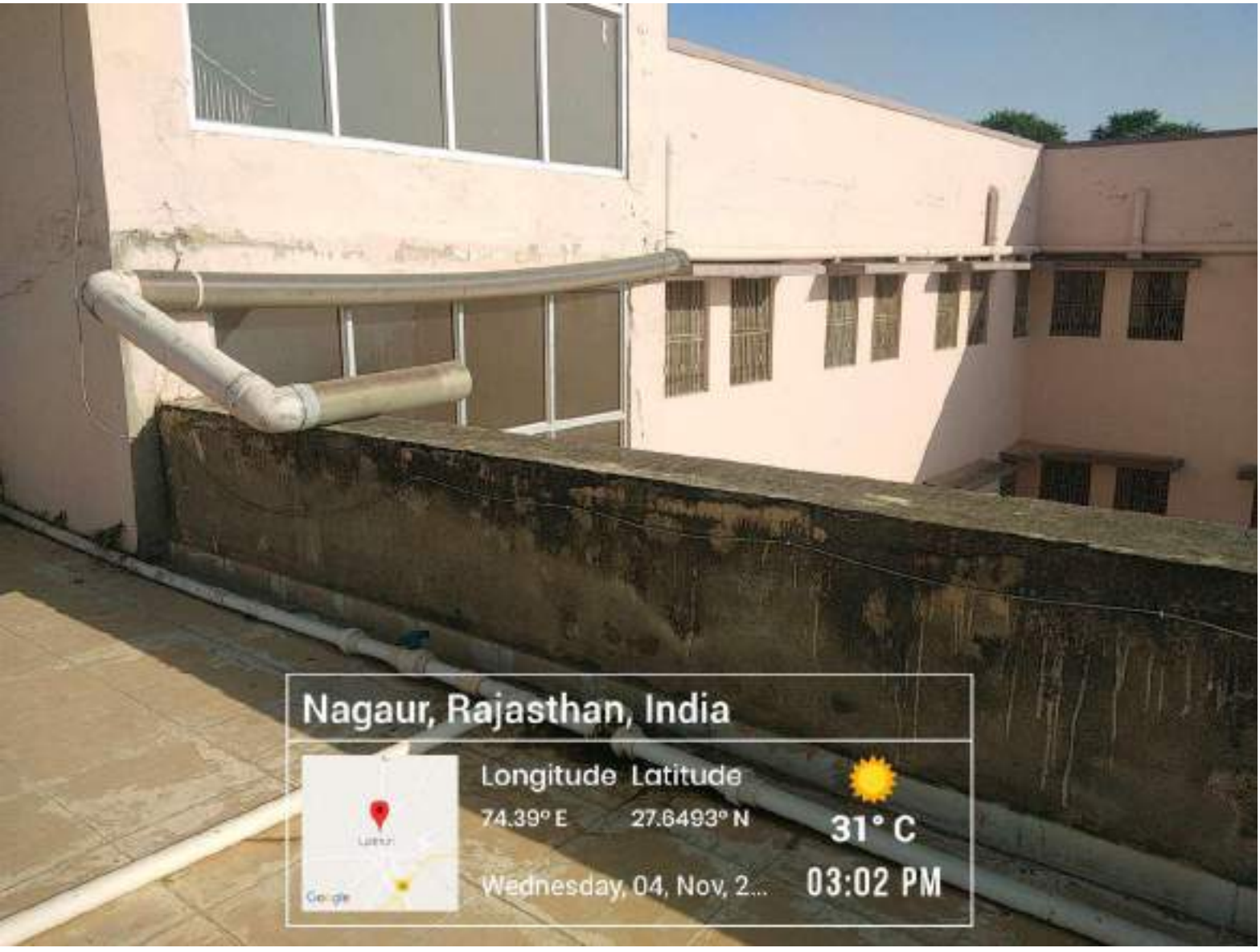
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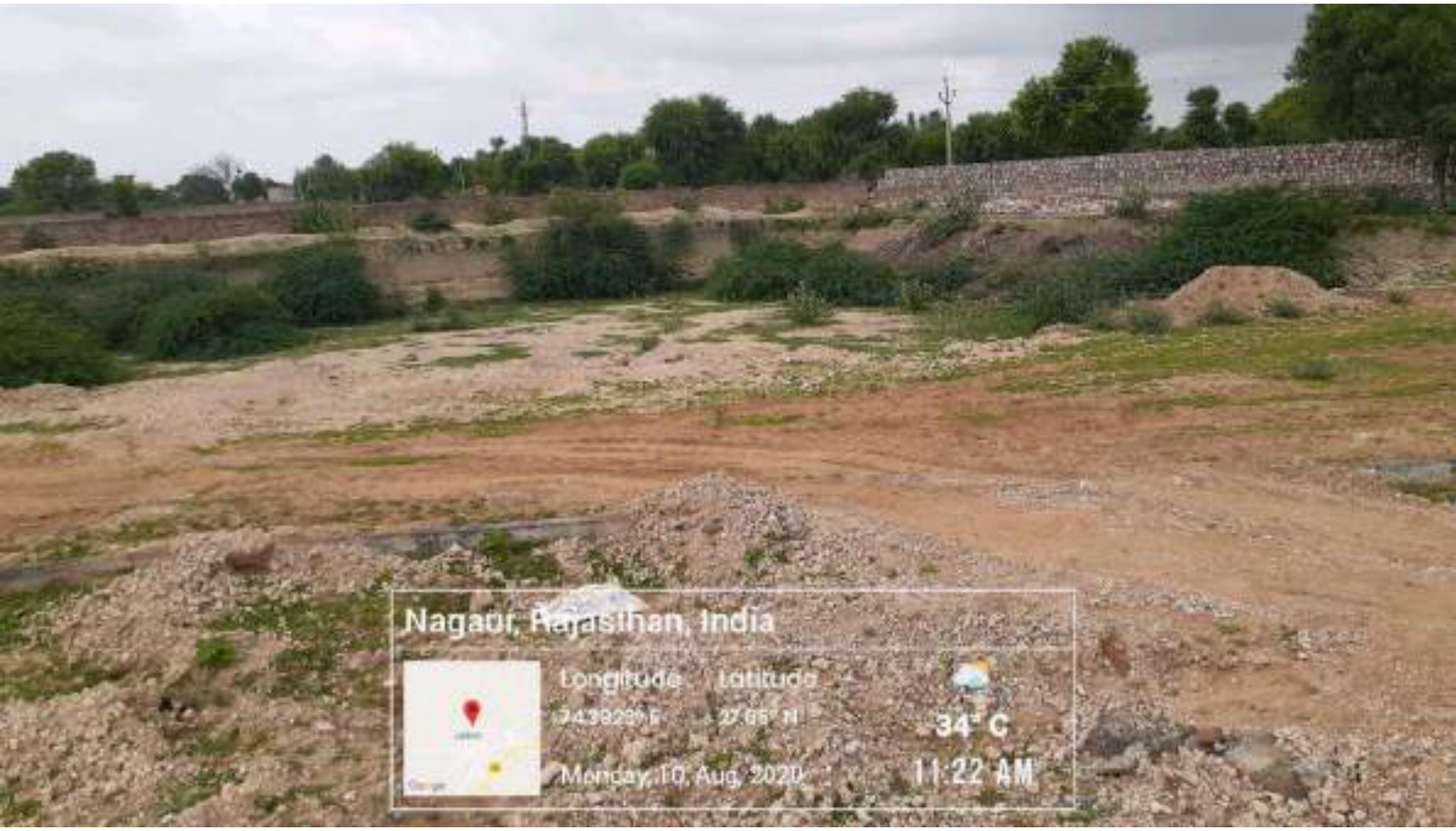


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Open well recharge and tanks


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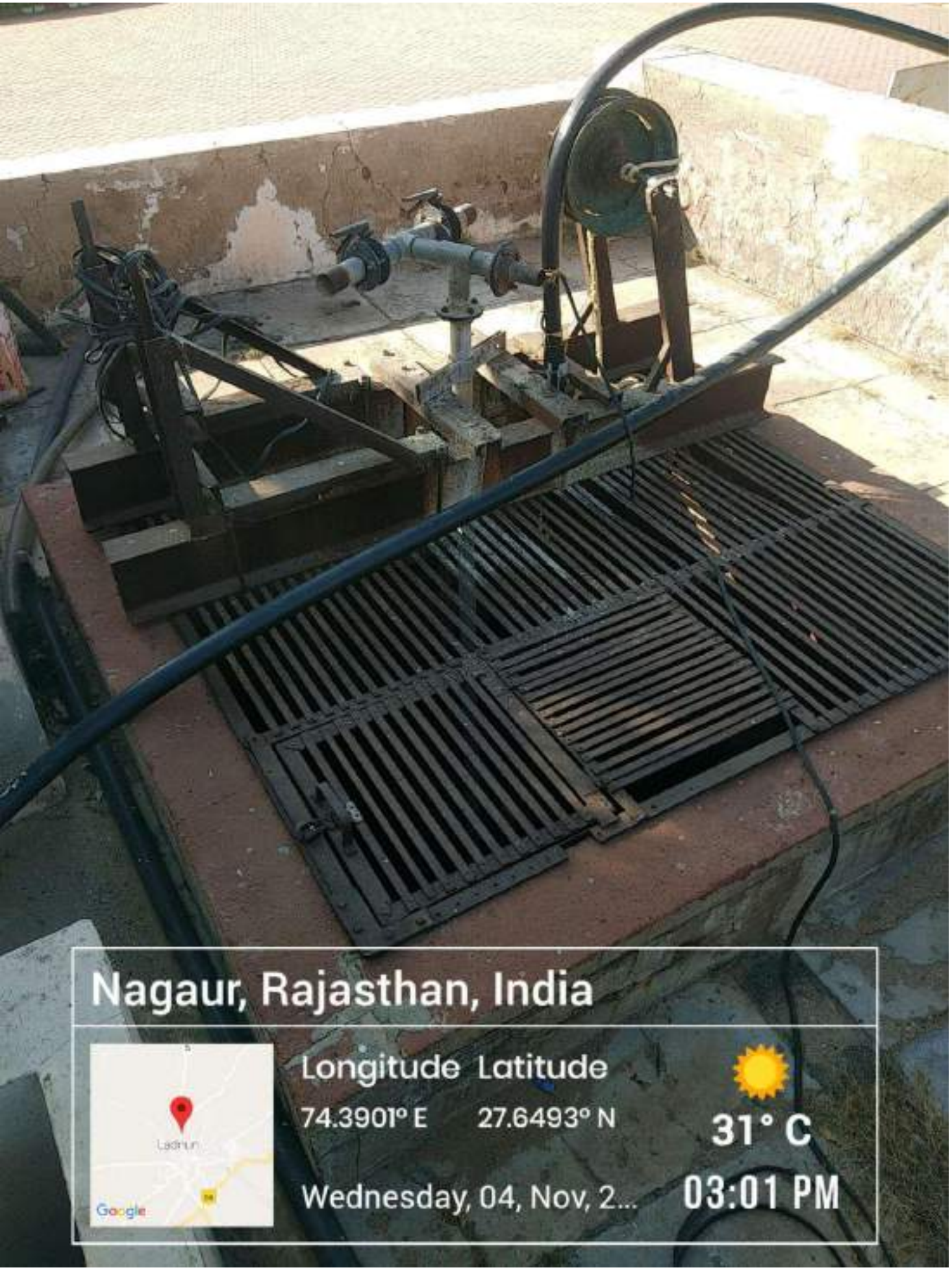
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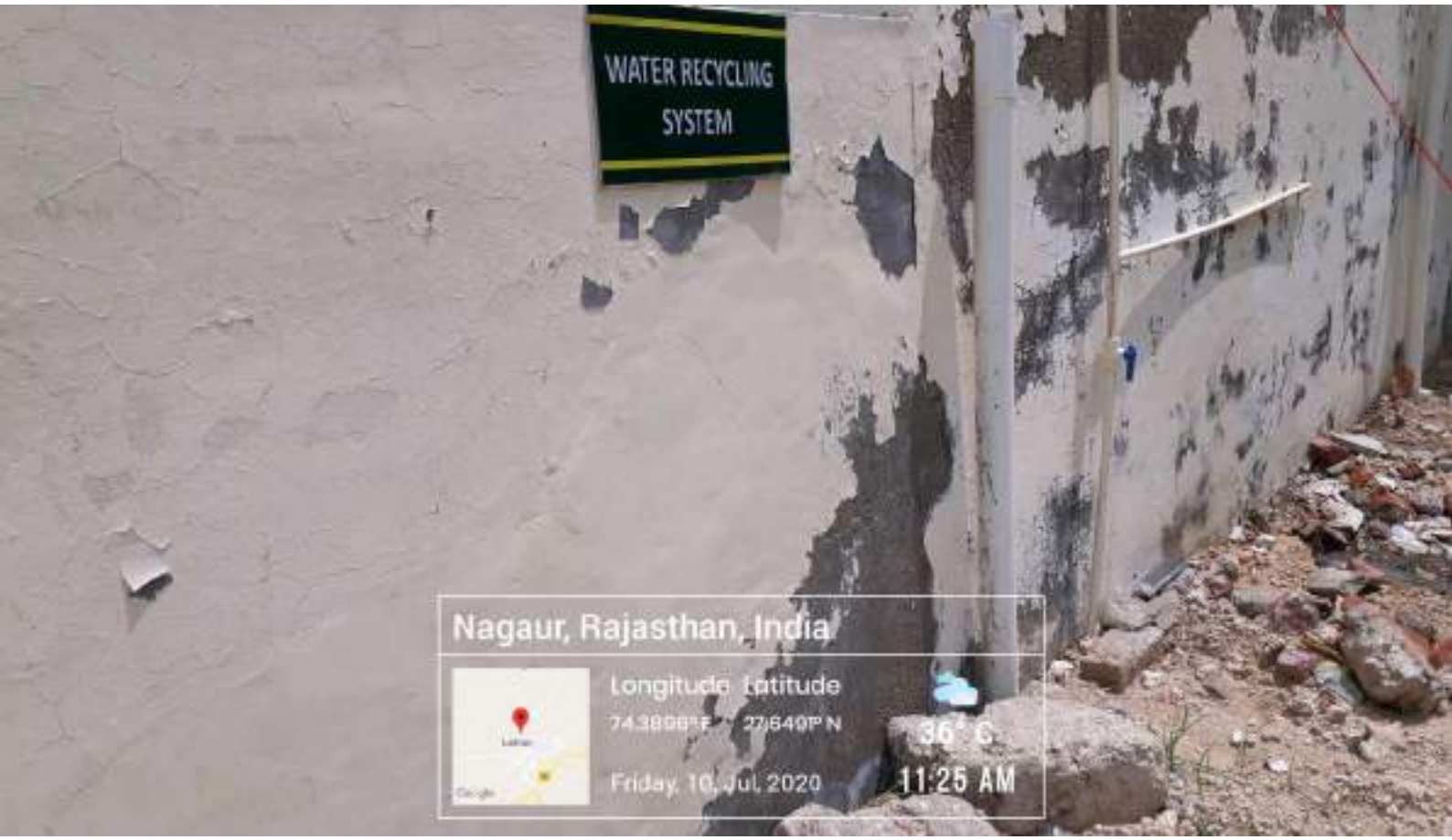
Waste Water recycling facilities




LIQUID WASTE MANAGEMENT
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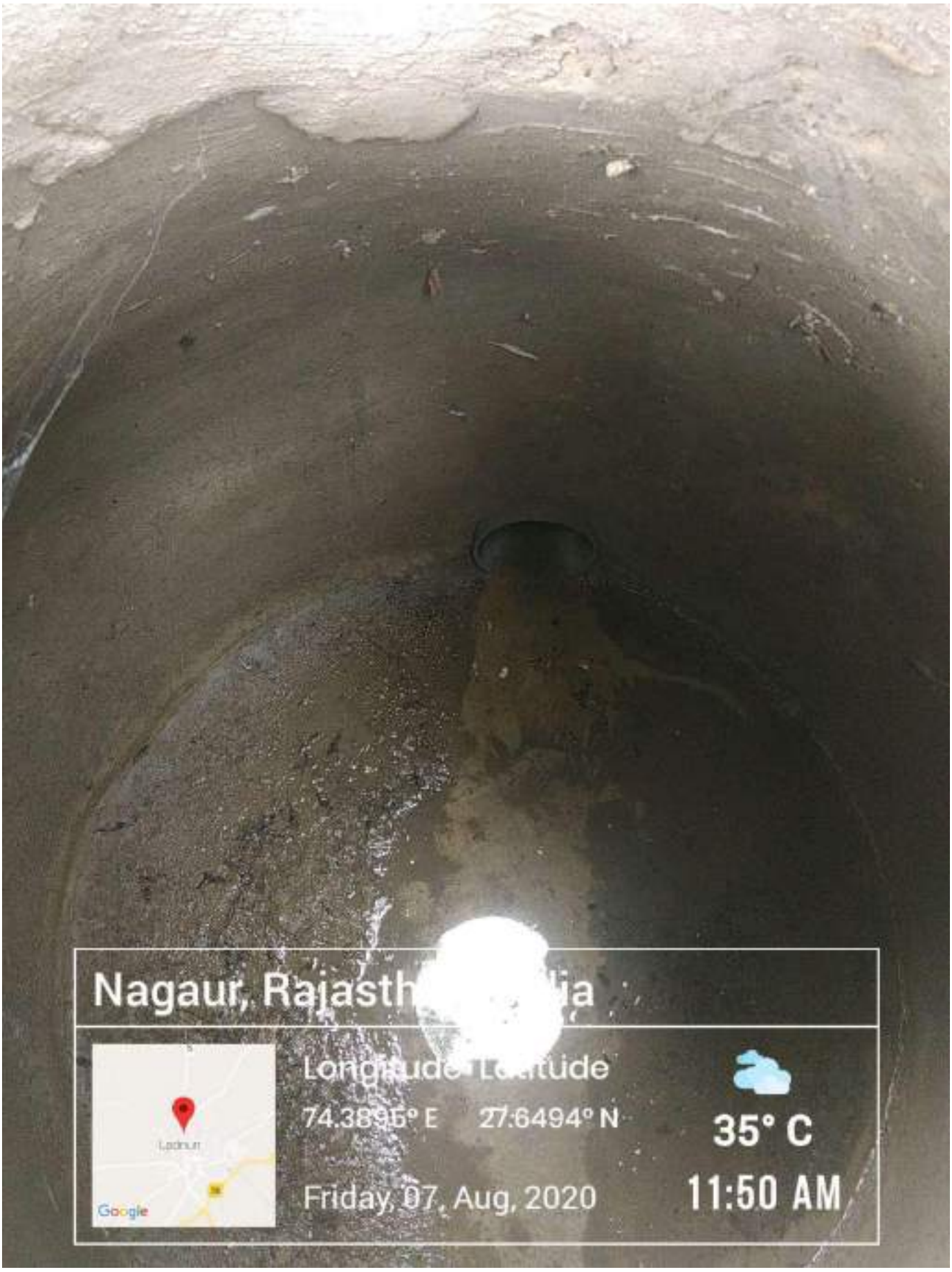
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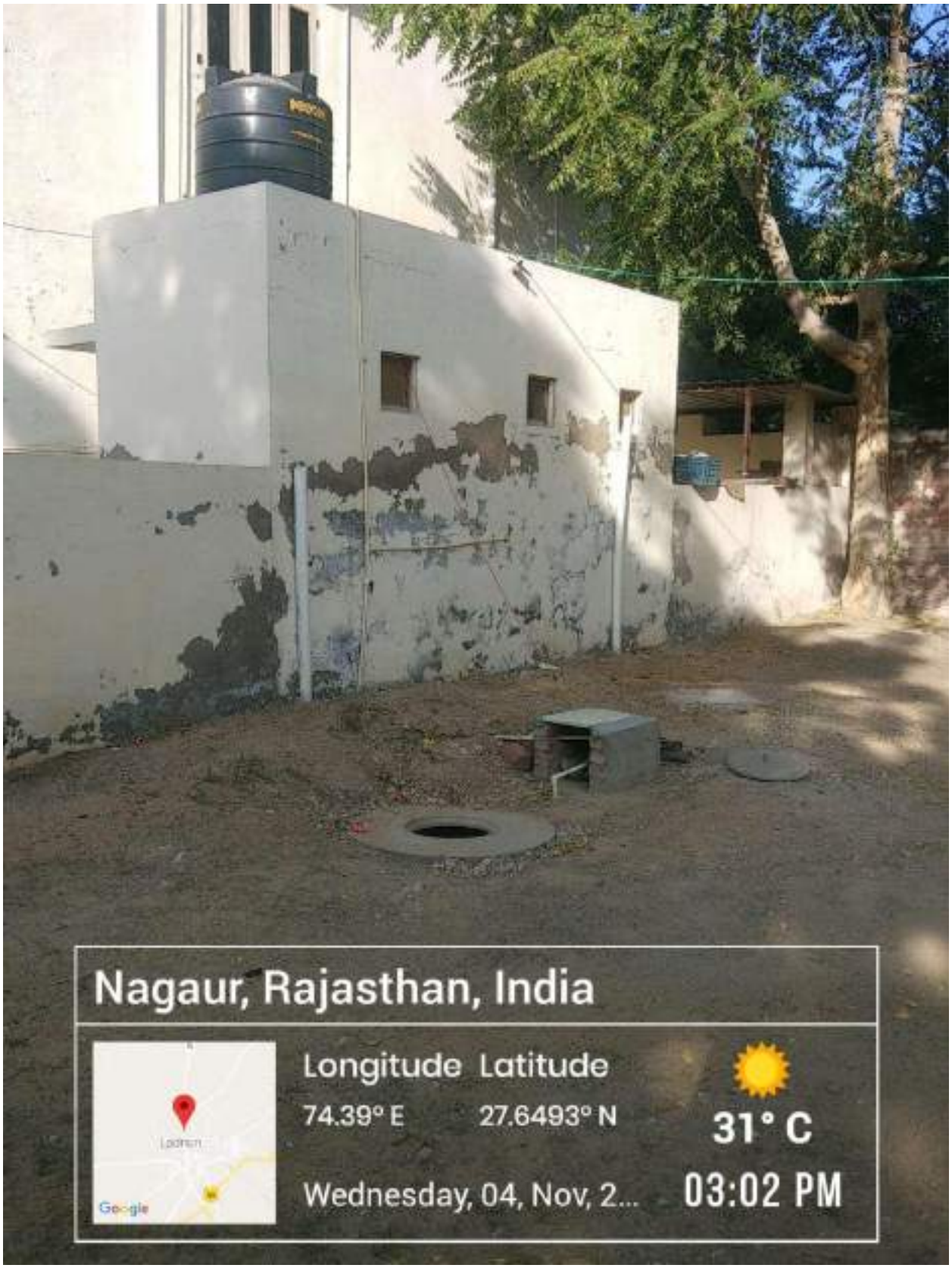
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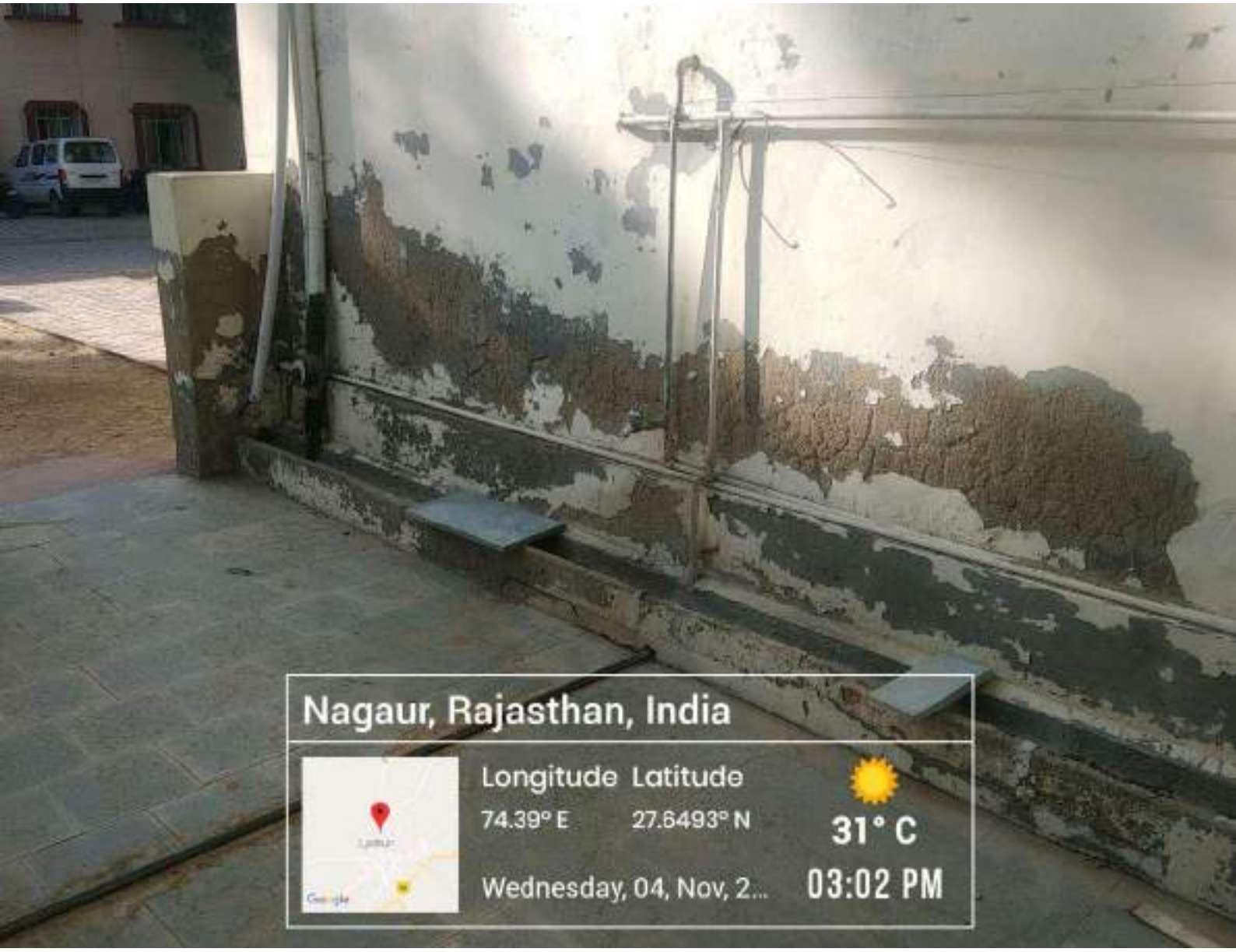
Water Distribution System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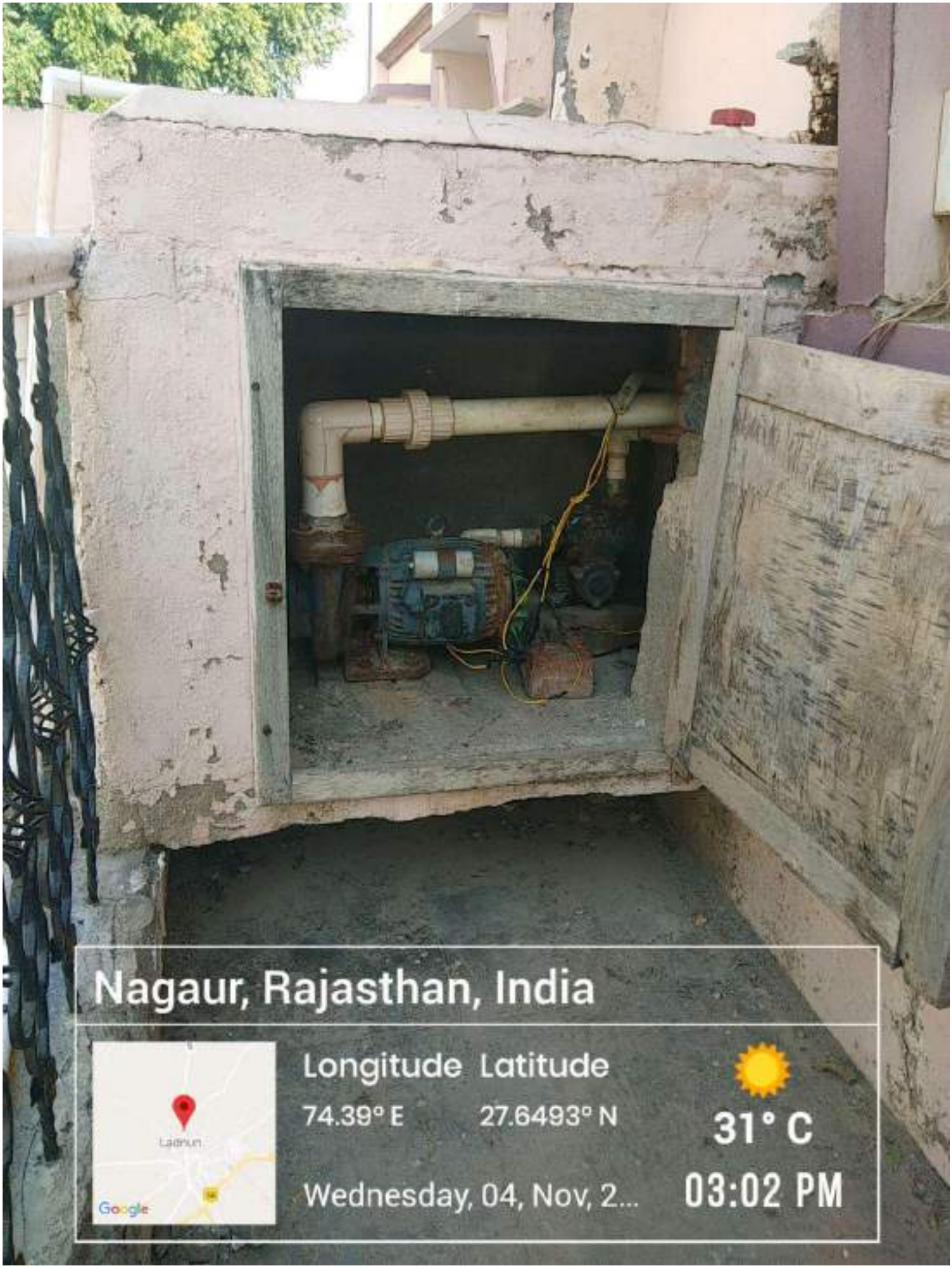
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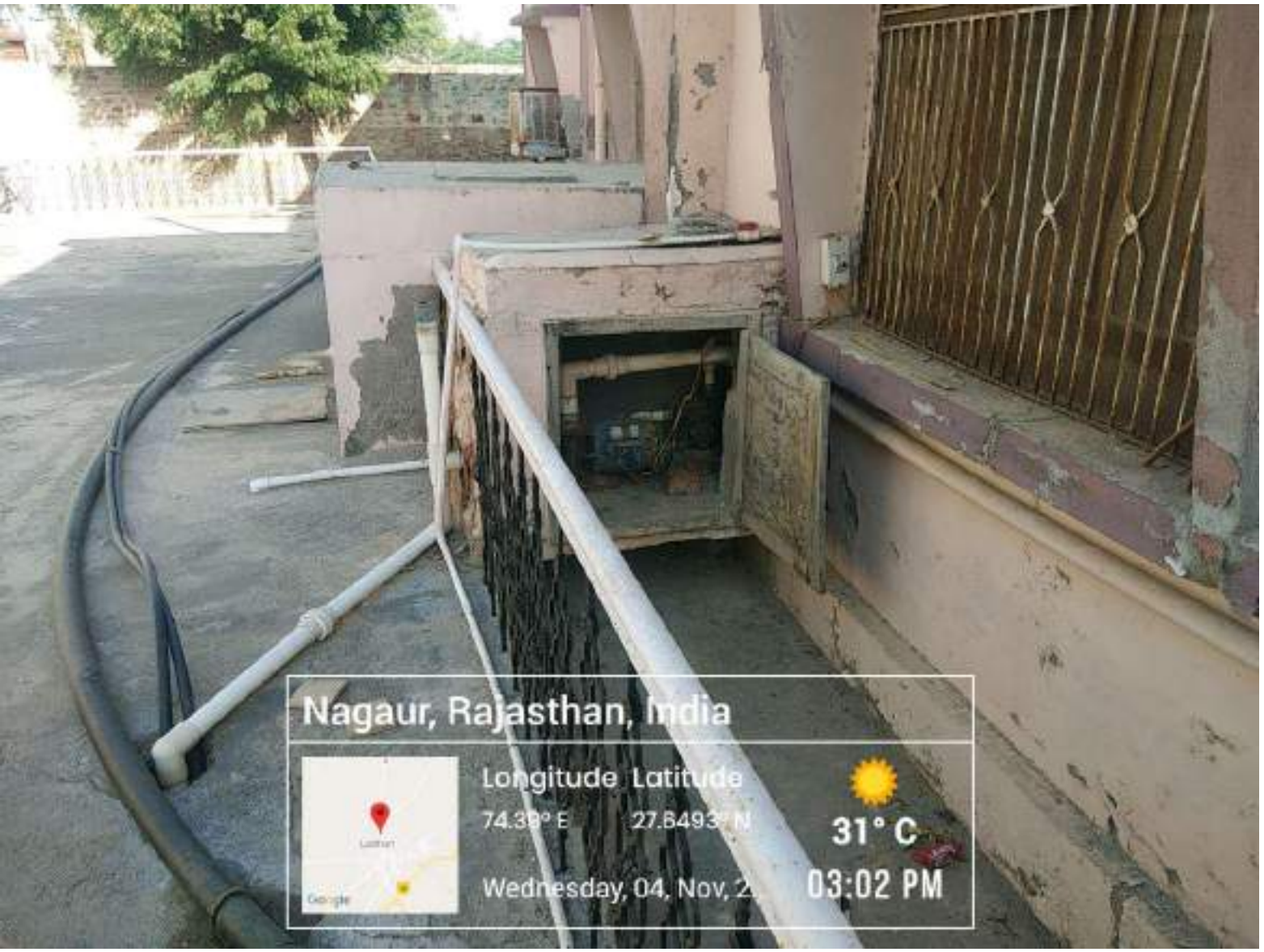
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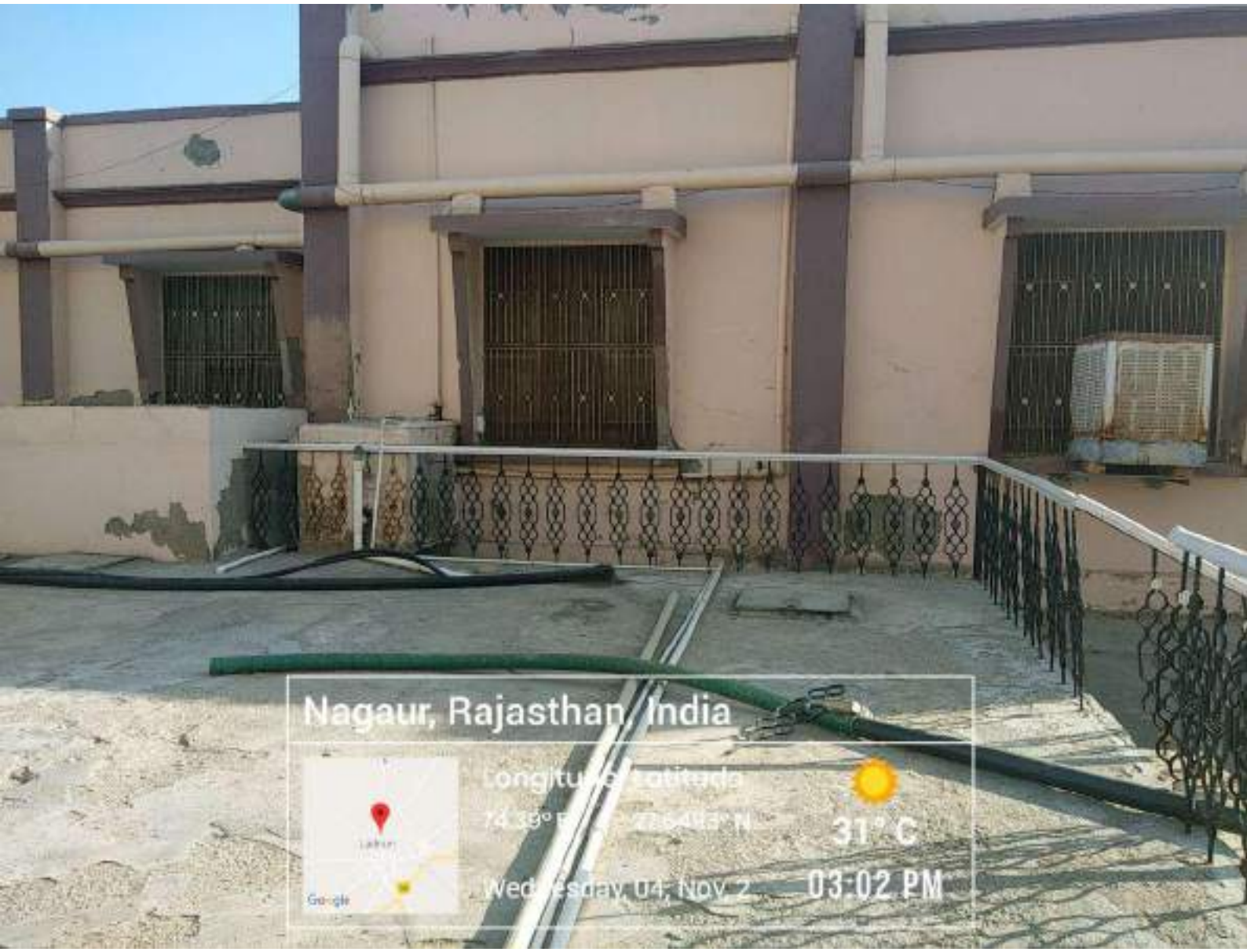
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Journal Voucher

No. : 277

Dated : 17-Oct-2014

Particulars		Debit	Credit
Water Tank (Staff Qtr, UGC)	Dr	6,87,202.00	
To Security Bakshu Silawat			68,720.00
To TDS ON Contractor			6,880.00
To Bakshu Silawat			6,11,602.00
		Rs. 6,87,202.00	Rs. 6,87,202.00

Jain Vishva Bharati Univ... (059...310)
Fo...adnu...
Contact 015...
E-Mail jvb...

On Account of :

Journal Voucher

Being amt credited full and final for construction of Under Ground Water tank in staff quarter premises as per bill attached.

Dat... 17-Oct-2014

...(staff qtr. UGC) ...,87,202.00
...Bakshu Silawat 68,720.00
...ON Contractor ...,880.00
... Silawat ...,11,602.00

Authorised Signatory

Contractor "C" Class (Permanent)
P.W.D. LADNUN
Regt. No. Civil/"C"/02

M/s. Bakshu Silawat
S/o Sakhi Mohd. Silawat
9th Patty, Jawa Bass
Ladnun-341306 (Raj.)
Mob.: 9414469120

(For contractors & suppliers only for payments for work or supplies actually measured)

1st amd. Running/Final Account Bill

Name of work..... Const. of Underground Water Tank at Residential Campus of IVEI, Ladnun.

Serial No. of this Bill..... 1st Running Bill Date 15.07.2014

No. and date of his last Bill..... —

Reference to work order of Agreement 2014-15/1225 Dated - 31-05-2014

Date of written order to commence work 02.06.2014

Stipulated date of completion 01-08-2014

Date of actual completion of work ..... Work in Progress Completed.

1-ACCOUNT OF WORK OR SUPPLIES

Unit	Quantity Excited (or supplied) since last certificate	Quantity excited (or supplied) up-to date as per Measurement Book	Items of works or supplies (grouped under "sbu-head" and "sub-works" of estimate)	Rate	Up-to date	Amount	Remarks
						Since previous bill (Total sub-head)	
1	2	3	4	5	6	7	8
			①				
Cum	104.937	104.937	Earthwork in excavation by mechanical means (hydraulic excavator) manual means in foundation trenches or drains (not exceeding 1.50 mtr. In width or 10 Sqm. On plan) including dressing or sides and ramming of bottoms, lift up to 1.50 mtr including tacking and the excavated soil and depositing & refilling of soil watering & ramming and disposed of surplus excavated soil as directed within a lead of 50 meters in all kinds of soil 13.15 X 5.25 ? 104.937	151.00	15845.49	15845.49	
			②				
cum	104.937	104.937	____do____add extra for excavation trench in all kinds of soil for depth exceeding 1.50 mtr. But not exceeding 3.0 mtr. 13.15 X 5.25 ? 104.937	200.83	21074.50	21074.50	

194.537	194.537	___ do ___ for depth exceeding 3.0 mtr. But not exceeding 4.50 mtr. 13.15 X 5.25 194.537	549.55	[illegible]	[illegible]
20.711	20.711	④ Providing and laying in position Cement Concrete including curing Compaction etc. Complete in specified grade excluding the cost of Centering and shuttering. All work up to plinth level m10 grade nominal misc 1:3:6 (1 Cement : 3 Coarse Sand : 6 graded stone aggregated 40 mm nominal size. 13.15 X 5.25 X 0.30 20.711	2645	54780.60	54780.60
113.917	113.917	⑤ Random rubble stone masonry for foundation and plinth in cement sand mortar above 30 cm thick walls in cement mortar 1:4 (1 Cement : 4 Sand) 2 X 13.15 X 0.61 X 4.57 = 73.316 2 X 4.02 X 0.61 X 4.57 = 22.413 3 X 4.02 X 0.33 X 4.57 = 18.188 113.917	2715	309284.65	309284.65
69.038	69.038	⑥ Providing stone slab covering over drains including filling of joints in cement sand mortar 1:3 with 35 mm thick cement concrete flooring 1:2:4 mix complete with good finish with stone slab 100 to 150 mm thick average. 13.15 X 5.25 69.038	774.00	53435.41	53435.41
BSR-2013 / B-35/6(7)		Extra Lintels 12.57 X 0.25 X 0.10 = ~~.314~~ 0.3? 4 X 3.30	6574.00	~~2064.24~~ 1354.38	~~2064.24~~ 1354.38
262.387 ~~269.767~~	262.387 ~~269.767~~	⑦ Plaster on new surface on walls in cement mortar 1:4 including racking of joints etc. complete fine finished 25 mm thick. 4 X 2 (2.70 + 4.02) X ~~4.57~~ 4.47 = ~~245.683~~ 240.307 2 (13.15 X 5.25) X 0.60 = 22.08 ~~269.767~~ 262.387	191.00	~~51142.73~~ 50115.92	~~51142.73~~ 50115.92

11.246	11.246	(8) Providing and Laying in position cement concrete including curing Compaction etc. complete in specified grade excluding the cost of centering and shuttering, all work up to plinth level m.20 grade nominal misc 1:1.5:3 (1 Cement 1.5 Coarse sand : 3 grade stone aggregate 20 mm nominal size) 4X2.70X4.02X0.10 = 4.342 1X13.15X2.25X0.10 = 6.904 11.246	3670.00	41272.82 41272.82
137.80 R.mtr	137.80 R.mtr	(9) Providing and fixing unplasticized polyvinyl chloride (UPVC) SWR pipes type B for rain water pipe (ISI 3592 : 1992 marked) of approved quality make. 110 mm dia.	303/-	54634.40 54634.40
29	29	(10) ____do____Band 87.5 Degree. 110 mm dia.	132/-	3828.00 3828.00
15	15	(11) ____do____ lee 100 mm. dia	165/-	2475.00 2475.00
20	20	(12) ____do____ Socket/plug 110 mm. dia	66/-	1320.00 1320.00
~~179.80~~ 16 Nos	~~179.80~~ 16 Nos	(13) Construction of manhole in all types of Soil inner size 90x60 cm, 300mm thick masonry in c.m. 1:6, thick cement Contrete 1:5:10 in foundation, 20 mm thick inside plaster in c.m. 1:6, finished with floating neat cement slurry 50 mm thick m. 15grade c.c. flooring, making channels, 80 mm thick stone slab covering with 40 mm thick m-15 grade c.c. flooring, cement cover with frame of 450 mm dia. Earth work etc. Complete as per design including disposed of surplus earth within 50 mtr. Lead up to 0.60 m. depth	3582/-	5732.00 5732.00
~~18 kg~~	~~18 kg~~	(14) Providing & fixing aluminum doors as per specification	367/-	6606.00 6606.00
18 Kg.	18 Kg.			

599.99

733806.25

733806.25

1	2	3	4	5		6		7		8
			B/F	Rs.	P.	Rs.	P.	Rs.	P.	
						732806-26				
			Deduct 6.30% below as per Negotiate Rate of Contractor			(-) 46166-80				
			Payable Amount			= 686639-42				
						Say Rs 686639/-				

Passed For Payment/Adjustment
Amount ₹ 6,87,202/-
Rs. Six Lac Eighty Seven thousand two hundred & two only
Charge ... water tank

Checked ... Registrar ... V.C.

Total value or work done or supplies made to date ....
Less - Security 10% ₹ 68,720/-
Deduct value of work or supplies shown in previous bill ₹ 6,880/-
Amt Payable ₹ 6,11,602/-

Net value of work or supplies since previous bill figures in words

(a)

II - Certificate And Signature

1. The Measurement were made by .... on .... and recorded at page 51 to 54 of Measurement Book No. 01 and were checked by name .... on ....
2. The connection measurement have been crossed of against this bill.

Left-hand thumb impression of

Dated signature of Officer preparing the bill

Rank ....
Sub division ....
Division ....

Dated signature of contractor

Dated signature of Officer Authorizing Payment

Rank ....

This signature is necessary only when the officer who prepares the bill is not the officer who authorizes the Payment in such case to signature essential.

जैन विश्वभारती संस्थान

लाडनूं-341306 (राजस्थान)

Name of work – Construction of under-ground water Tank in Staff Quarter Premises of JVBI, Ladnun.

W/o. No. – JVBI/Acct./2014-15/1225 Dt. 31.05.2014

Agency/Contractor – M/s. Baksu Sitawat S/o. Sakri Mohd. Sitawat
9th Patty, Jawa Bass,
Ladnun (Raj.)

S.No	Item Description	U.O.Q	Qty.	Rate	Amount	
1	Earthwork in Excavation by mechanical means (Hydraulic Excavator) Manual means in foundation trenches or drains (not exceeding 1.5 mtr in width or 10 sqm on Plan) including dressing of sides and ramming of bottoms, Lift up to 1.5 mtr. including taking out the excavated soil and depositing & Refilling of Soil watering & ramming and disposal of surplus excavated soil as directed within a lead of 50 mtrs. in all kind of soil.	Cum.	0.585	151/-	88	94
3	—Do— Add extra for excavating trench in all Kinded Soil for Depth exceeding 3 mtr. but not exceeding 4.5 mtr.	Cum.	0.585	569.27	335	30
2	—Do— Add Extra for excavating trench in all kind of Soil for Depth exceeding 1.5 mtr. but not exceeding 3.0 mtr	Cum.	0.585	200.83	118	29
6	Providing Stone Slab Covering over drains including Filling of Joints in Cement Sand mortar 1:3 with 35 mm Thick Cement Concrete Flooring 1:2:4 mix complete with Dressed finish with Stone Slabs to 150 mm thick average	Sqm	0.568	774/-	439	63
14	Providing and Fixing Aluminium doors as per specific. mtrm 3×3 kg.	kg.	09	367/-	3303	00
					4285	16
B	Extra work Supplying and Fixing Stone lintels of approved quality Rough dressed in cement mortar 1:4 up to 15 cm. thick	Cum	0.27	6574/-	1774.	32
					6060	14
					6060	—

Applicant with the Rajasthan ji university Engg. Surv
There is Notional Excess from the order. it A Cancelling
it may be Considered.
Submitted for approval Sir.

17/10/14

Registrar 17/10/14

V.C
S Chandra
17/10/14