



# **Sadakathullah Appa College**

*\*An Autonomous Institution, Re-Accredited by NAAC at an 'A' Grade, \* ISO 9001: 2015 Certified \**

## **CRITERION VII**

### **INSTITUTIONAL VALUES AND BEST PRACTICES**

#### **7.1.4**

#### **Water conservation facilities available in the Institution**

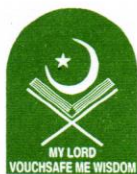
#### **Maintenance of Water Bodies and Water Distribution System on the Campus**

*Submitted to*

**THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)**

**August 2022**





# Sadakathullah Appa College

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## 7.1.4

### Water conservation facilities available in the Institution

#### MAINTENANCE OF WATER BODIES AND WATER DISTRIBUTION SYSTEM ON THE CAMPUS

##### 6. Water Audit

Water is one of the basic needs. Pure drinking water is a resource which needs to be preserved efficiently. Water audit helps to identify the sources of water consumption, the water requirement by the campus met by these sources. The points and effective usage of without any wastage. Understanding the techniques which are best suited to the site to increase water conservation in terms of awareness and practice.

##### 6.1 Water availability and consumption

##### 6.1.1 Sources of Primary water supply

The main source of water is through Bore well. The College requires only drinking water from the Local Municipality. The total water consumption through the tanks on site, these are available in a quantity of 5 tanks at various locations. The capacity of each is as follows:

| S. No. | Location              | Type    | Nos. | Capacity in litres |
|--------|-----------------------|---------|------|--------------------|
| 1      | Third Block East Side | Cement  | 1    | 28,000 litre       |
| 2      | Boys Hostel           | Cement  | 1    | 10,000 litre       |
| 3      | Girls Hostel          | Plastic | 2    | Each 2,000 litre   |
| 4      | Canteen               | Cement  | 1    | 2,000 litre        |
| Total  |                       |         | 5    | 44,000 litres      |

Table 7: Tanks and well in the premise

##### 6.1.2 Sources of Secondary water supply

- a) **Total Bore wells available on the site** as underground water facility is available near the playground and staff quarter with daily water being pumped for using submersible pump.

In summer season it is used for more hours, in rainy & winter season it is used comparatively for lesser duration depending on the quantity of water availability & requirement. The hygiene of this area is well maintained and there are no leakages. **There is an automatic ground water recharge, daily water is pumped for toilets, general usage.**



**b) Well (Rain Water Harvesting)** – There are Well In the premises, the system is designed to store and reuse rainwater. The water collected on the roofs of all the buildings in the college is discharged into the ground through appropriate piping system and sanitation system so that bore well benefit from this accumulated rainwater in the future. **The Rain water harvesting is done through the roof water being used for bore well recharging.**

There is no water scarcity during summer season and the water management, sanitation and supply scheme is well maintained.

## 6.2 Water requirement

The main areas of water requirement and type of usage is as follows

- **Drinking water** – Consumption of around 80,000 - 1,00,000 litres of water through Aquaguard like system available in the premise, the taps and water cooler.
- **Toilet blocks**– General usage by occupants in toilets, urinals, bathrooms, wash basins using approx. 35,000-40,000 litres of water daily
- **Cleaning of the premises** – The entire Institution is very well maintained with respect to hygiene and cleaning is one of the major uses of water requirement. The toilet areas are cleaned twice on a daily basis.
- **Garden and surrounding open space** – Cleaning, watering the plants requires approximately more than good amount of water, keeping in mind the scale of the open spaces there is supply system connected directly and the plants, trees are hardly watered regularly. Though, they are watered on alternate days in winter season and about 2-3 times a day in summer season on a regular climate day it is watered 3 days a week and in rainy season it is dependent on the monsoon showers. The regular pipe and tap system practiced at present.

### 6.3 Areas of water usage

Based on the inventory done and data shared by the staff it was found that the premise has the following facilities:

- Urinals – 124 Nos.
- Toilets – 287 Nos.
- Wash basins – 111 Nos.
- Taps (All) – 31 Nos.

As per the data shared by the College and on site observation, it was noted that there is no water wastage of water in the form of Cleanliness of toilets.

### 6.4 Site investigation about water management.

The college has an excellent management system which is very appreciable. We have observed the following points.

- There is **no water leakage in the entire premise;** the pipes are well maintained with adequate hygiene.
- **The premise has an efficient water management in terms of operations and maintenance.**
- The toilets are kept very tidy and are cleaned every day.
- The **waste water does not mix with ground water and gets directed to storm water drains.**
- **The college has natural rainwater harvesting system which is very useful.**
- There are sufficient numbers of taps in the premise.

## 6.5 Survey Results

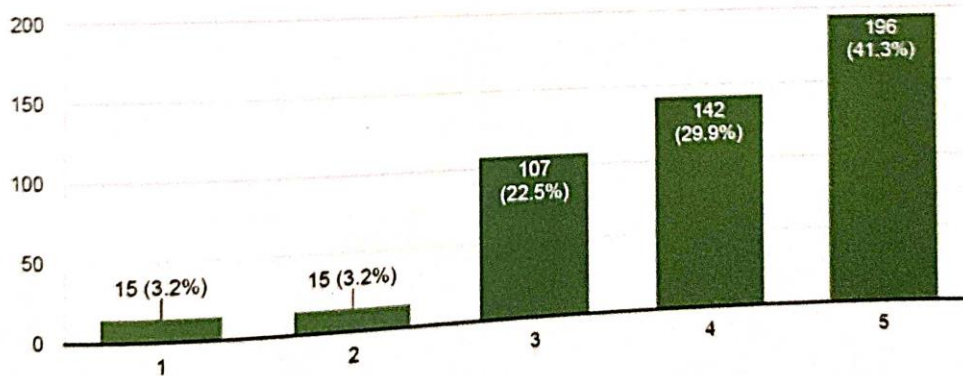
### Note about the review-rating survey

The Participants were asked to review (Through an online mode) the practice on a scale of 1-5 with scale components as follows:

- Scale 1 – Poor
- Scale 2 – Satisfactory
- Scale 3 – Good
- Scale 4 – Very good
- Scale 5 – Excellent

The figures in each of the columns of graph depict the Number of participants responses in numerical (Percentage of the participant response) – For example 101 responses (44.5%)

**Rating for the views regarding the Water management practices adopted in College, following is the result received.**



*Figure 7: Water management practices in College*

There were mixed responses received the highest was for **rating 5 (Excellent) at 41%** followed by **30% for rating 4 (Very Good)**.

## **6.6 Recommendations for a Sustainable Habitat**

*We have found that the current practices are very excellent and thus there are minimal recommendations suggested with respect to this section.*

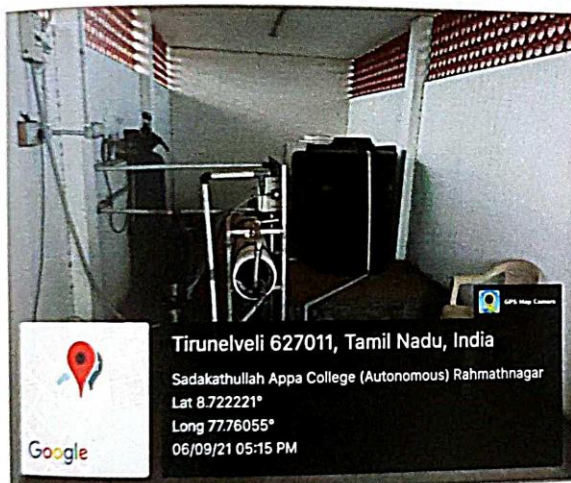
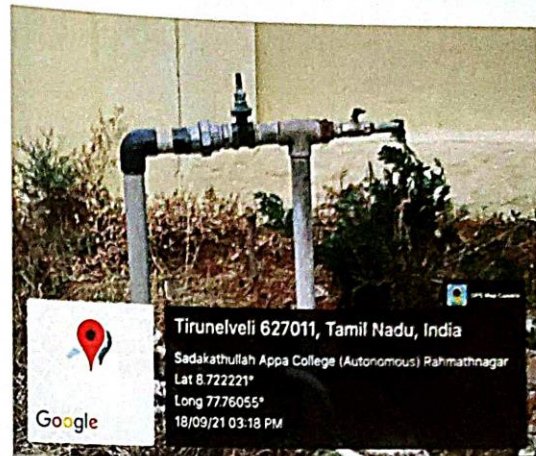
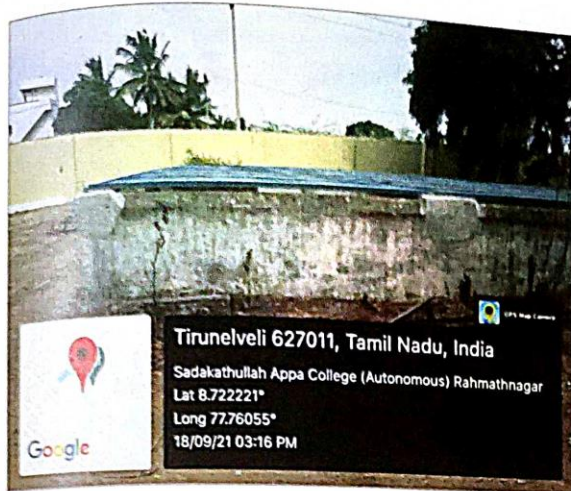
### **a) Waste water from toilets**

This should be collected and a waste water treatment plant can be installed in open space wherein this water can be treated and reused for gardening and toilet flushing.

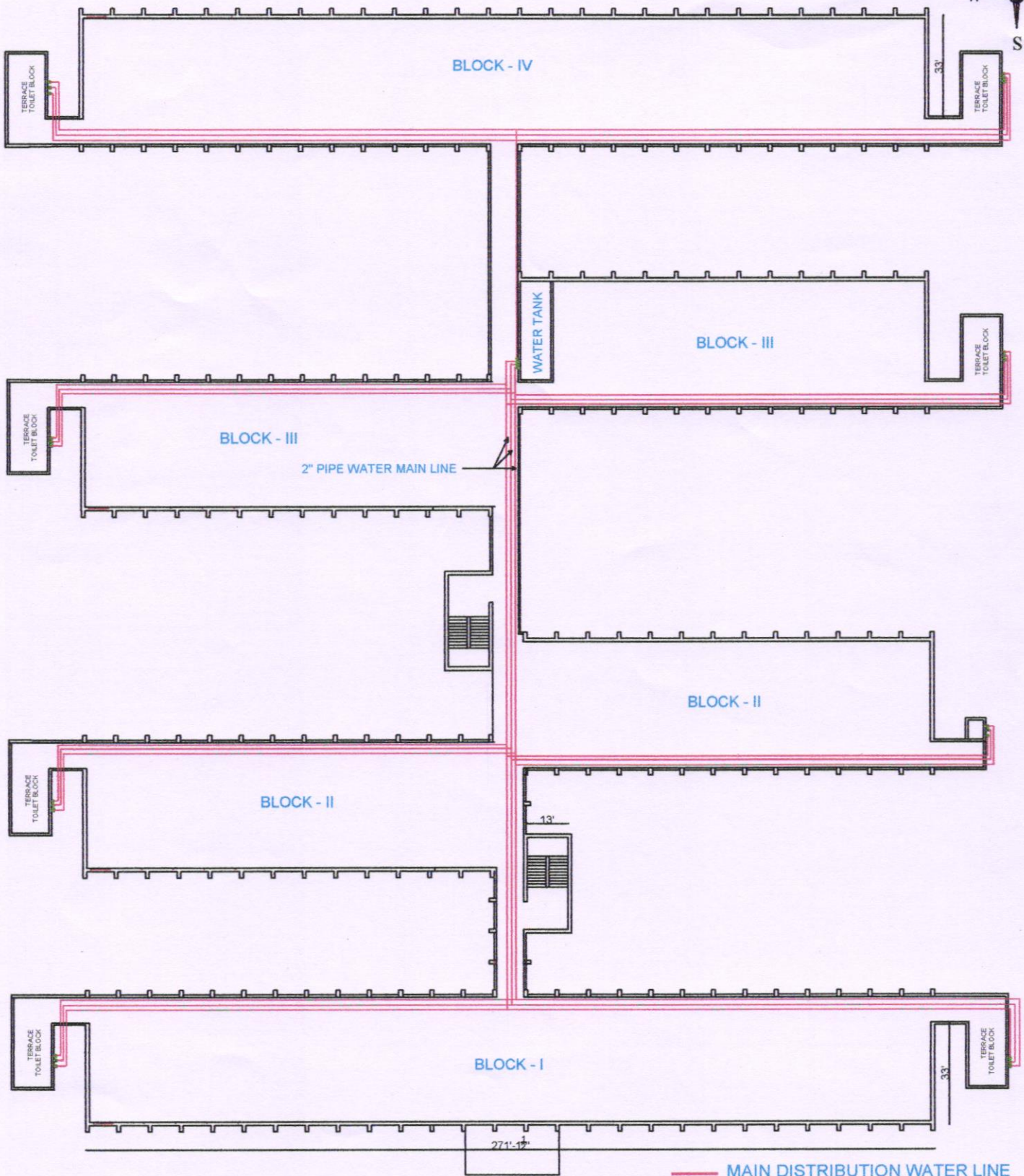
### **b) Waterless urinals**

There can be provision of waterless urinals as a Green Building initiative in the premise, either the existing ones can be replaced with such a facility or new toilets can be constructed in this manner.

**On-site investigation and physical verification**  
Facilities related to water consumption and usage in the premises

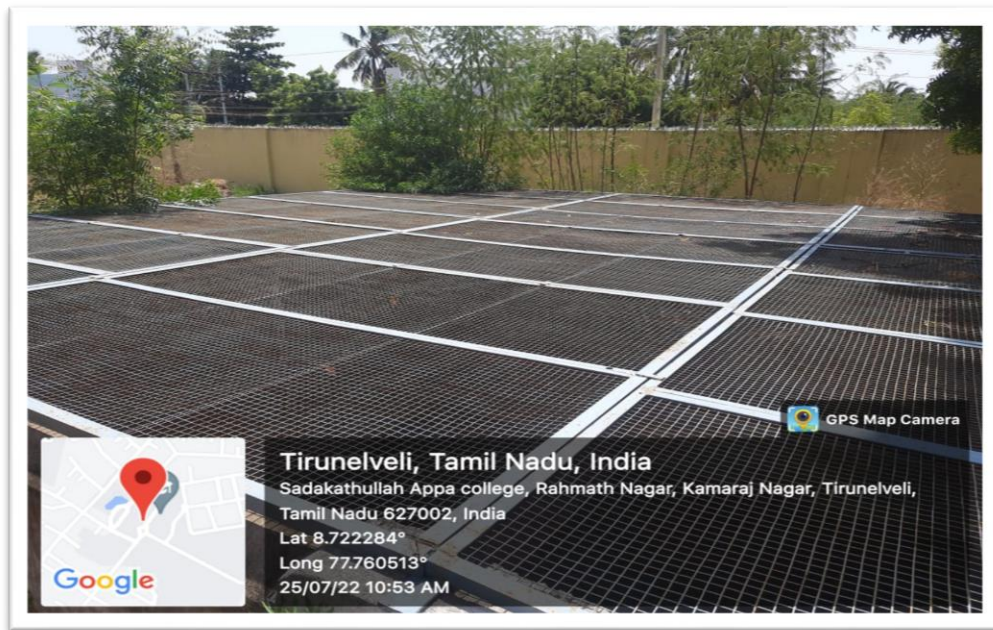


# PLAN SHOWING OF SADAKATHULAH APPA COLLEGE WATER LINE

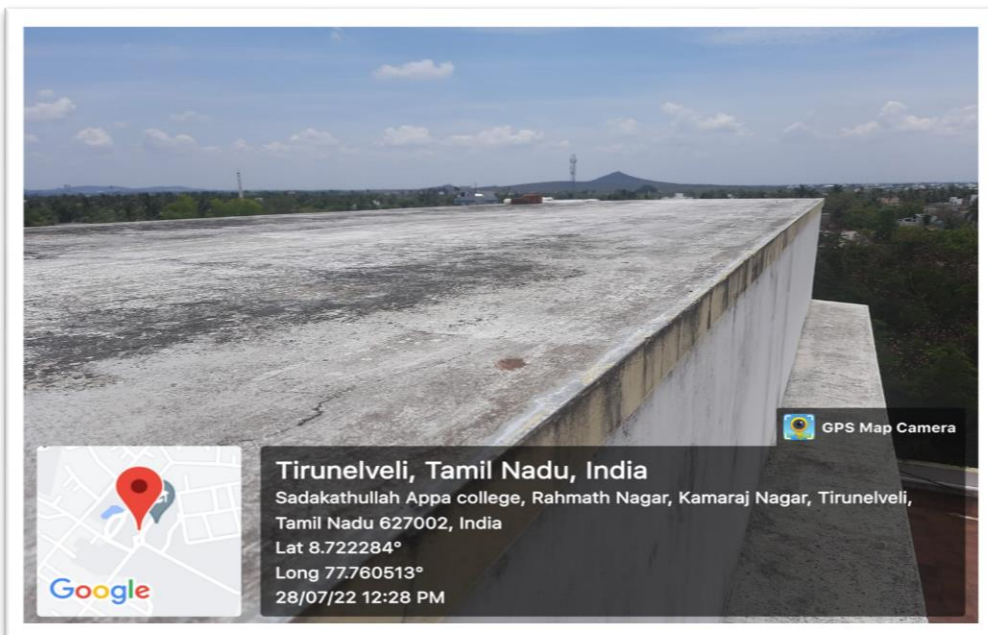


— MAIN DISTRIBUTION WATER LINE

## WATER DISTRIBUTION SYSTEM ON THE CAMPUS - OPEN WELL



## WATER DISTRIBUTION SYSTEM ON THE CAMPUS - TANKS





GPS Map Camera

**Tirunelveli, Tamil Nadu, India**  
Sadakathullah Appa college, Rahmath Nagar, Kamaraj Nagar, Tirunelveli,  
Tamil Nadu 627002, India  
Lat 8.722284°  
Long 77.760513°  
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