



A

Visit Report

on

“ Drip / Sprinkler Irrigation System Installed at Vidya Pratishthan Campus”

In the partial fulfillment of the requirement for Bachelor Degree in Civil Engineering

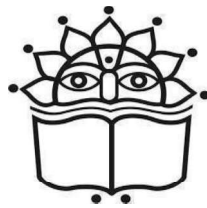
Submitted

By

Mr. Gaikwad Atharv Surendra 72293380M

Guide

Dr. N. T. Suryawanshi

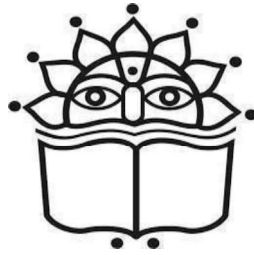


DEPARTMENT OF CIVIL ENGINEERING,

VIDYA PRATISHTHAN'S KAMALNAYAN BAJAJ INSTITUTE OF ENGINEERING
AND TECHNOLOGY, VIDYANAGRI, BARAMATI. SAVITRIBAI PHULE PUNE
UNIVERSITY, PUNE

2025-2026

DEPARTMENT OF CIVIL ENGINEERING (SAVITRIBAI PHULE PUNE UNIVERSITY,
PUNE)



This is to certify that the following student have satisfactorily carried out Visit of **“Irrigation And Drainage”** is being submitted for the award of degree of Bachelor of Civil Engineering. It is submitted in partial fulfilment of the prescribed syllabus of Savitribai Phule Pune University, Pune for the SEM II of academic year 2025-2026.

Mr. Gaikwad Atharv Surendra 72293380M

Dr. N. T. Suryawanshi
(Guide)

Dr. C. B. Nayak
(HOD, Civil Engg)

Dr. S. B. Lande
(Principal)

1. Introduction

The site visit was conducted as part of the Irrigation and Drainage Engineering subject to understand practical aspects of irrigation systems and drainage management. The visit helped in observing real field conditions, water distribution methods, and drainage arrangements.

Site Details

- **Name of site :** Nakshatra Garden / COE & Sharadchandra Pawar CoE in AI
- **Location:** Vidya Pratishthan Campus, MIDC, Baramati, Maharashtra
- **Date & Time:** 02 April 2026, 10:30 AM onwards.
- **Organized By :** Department of Civil Engineering
- **Type of Site:** Irrigation systems for Agricultural field / Gardening.
- **Sustainable Development Goals Observed at the time of visit addressed :**
 1. 4 [Quality education]
 2. 6 [Clean water & sanitation]
 3. 12 [Responsible consumption & production]
 4. 15 [Life on land]



Fig. No. 1. Group Photo with Faculty and site staff

2. Objectives of Site Visit

- To study different irrigation methods used at the site.
- To understand components of irrigation systems.
- To observe surface and subsurface drainage systems.
- To analyse water management practices.
- To relate theoretical knowledge with practical implementation.

3. Description of Irrigation System

During the visit, the following irrigation methods/components were observed:

3.1 Type of Irrigation

a) Basin Irrigation

- The field was divided into rectangular/square basins using earthen bunds.
- Water was supplied through field channels and controlled manually.
- Uniform distribution of water was observed in most basins.
- Some water losses due to seepage and evaporation were noticed.

b) Sprinkler irrigation

- Sprinklers were installed at regular spacing in the field.
- Water was supplied through pipelines using a pump.
- Uniform spraying of water like rainfall was observed.
- Some water loss due to wind drift and evaporation was noticed.

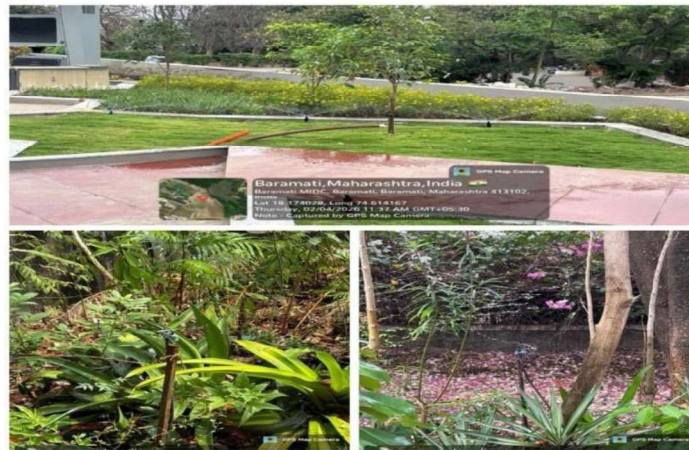


Fig. No. 3. 1. (b) Sprinkler irrigation

c) Drip irrigation

- A network of pipes was laid along the crop rows
- Drippers were placed near the root zone of each plant
- Water was supplied slowly in drops, minimizing wastage



Fig. No. 3.1.(c) Drip irrigation

3.2 Drip irrigation Components:



Fig. No. 3.2.1. Main Source of supply

- Water source (Well)
- Pumping system
- Storage
- Filtration by Rapid Sand Filters & Screens
- Distribution pipelines
- Control valves and outlets

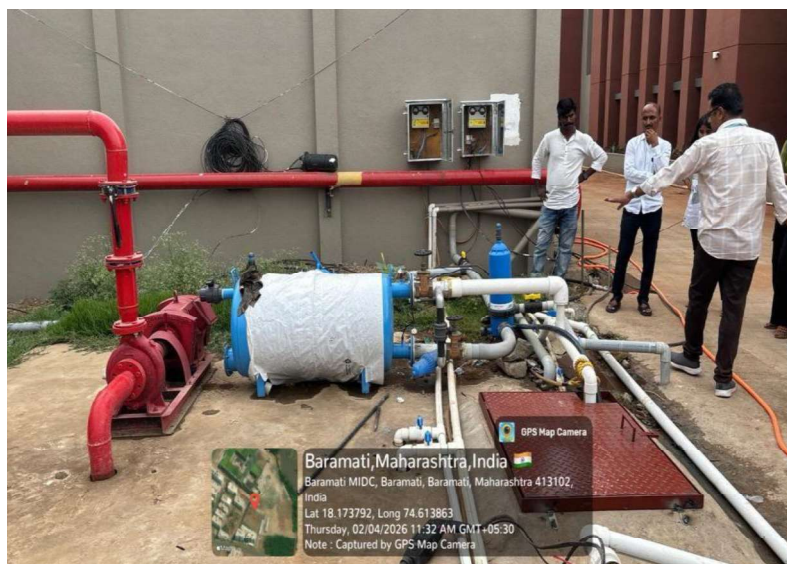


Fig. No. 3.2.2. General view of irrigation system

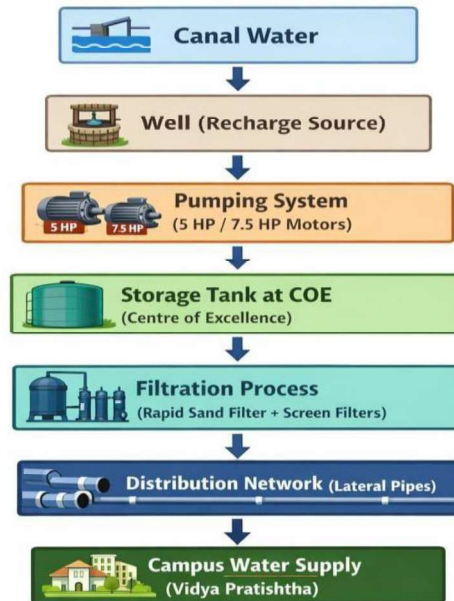


Fig.No.3.2.3. flow Chart

The water source for the system is a well, which is recharged by water from a nearby canal. This ensures a continuous and reliable availability of water.

Water from the well is pumped using a pumping system installed at the site. Two types of motors (centrifugal pumps) are used for this purpose, with capacities of 5 HP and 7.5 HP, depending on the water requirement.

After pumping, the water is conveyed to a storage tank located at the COE (Centre Sharadchandra Pawar centre of Excellence).excellence in Artificial intelligence). At this stage, the water undergoes filtration using a rapid sand filter and screen filters to remove impurities and suspended particles.

Finally, the filtered water is distributed throughout the campus of Vidya Pratishtha using a network of lateral pipes, ensuring efficient and uniform supply.

Finally, the filtered water is distributed throughout the campus of Vidya Pratishtha using a network of lateral pipes with drippers, ensuring efficient and uniform supply.

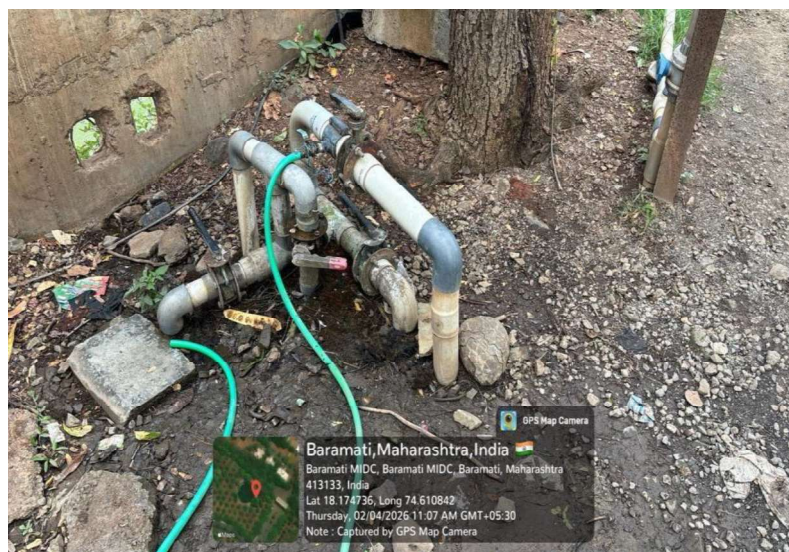


Fig. No. 3.2.4. General view of irrigation system

4. Drainage System Observations :

4.1 Surface Drainage -

- Open drains provided to remove excess water
- Proper slope maintained for flow of water
- Prevents waterlogging in fields



Fig. No. 4.1. Surface drainage system

8. Learning Outcomes :

- Gained practical knowledge of irrigation systems.
- Understood importance of drainage in agriculture.
- Learned about field challenges and solutions.
- Understood water management.

Conclusion :

The site visit was highly informative and provided a clear understanding of the practical application of irrigation and drainage systems. Efficient water management practices were observed, including proper distribution of water, controlled irrigation to minimize wastage, and scheduling based on crop requirements. Additionally, suitable measures were taken to reduce water losses due to seepage and evaporation.

Overall, the visit enhanced knowledge about the importance of efficient water use and proper drainage techniques, which are essential for sustainable agriculture and optimum utilization of water resources.