Field Visit Report on

33/11 kV, Market Yard & Jalochi Substation, Baramati, Dist. Pune

Date: 24th Sep 2025

IITB UMA (CITARA)Internship Student & Teacher with 33/11 kV, Market Yard & Jalochi ,Baramati Substation Incharge

Field Visit Report: 33/11 kV, , Market Yard & Jalochi Substation Baramati, Dist. Pune

Date of Visit: 24th Sep 2025
Organized By: Department of Electrical Engineering, IITB UMA (CITARA)
Location: Market Yard area, Baramati city, Dist. Pune – 413102.
Co-ordinator: Mr.S. K. Raskar, Mrs. Mrs. J. S. Kulkarni
Number of Students Participated: 12

---

1. Introduction:

As part of the UMA (CITARA) Internship Program of IIT Bombay, a field visit was conducted to the 33/11 kV Market Yard and Jalochi Substations in Baramati, Dist. Pune. The aim was to gain practical knowledge of electrical power distribution systems, understand the functioning of substation equipment, and observe safety measures in a real-time operational environment.

2. Objectives of the Visit:

The main objective of the field visit to the 33/11 kV Market Yard and Jalochi substations at Baramati was to enhance our practical understanding of electrical power distribution systems. The visit aimed to provide exposure to the layout and working of substations, including the operation of key equipment such as transformers, circuit breakers, isolators, CTs, PTs, bus bars, and protective devices. Another important objective was to understand how power is stepped down from 33 kV to 11 kV and further distributed to consumers in both urban and rural areas. The visit also focused on learning about the role of protection systems, load management, and the importance of reliability in power supply. Additionally, safety protocols followed in high-voltage environments were observed, emphasizing the significance of proper earthing, restricted access, and protective measures. Overall, the visit was designed to bridge the gap between theoretical learning and practical application in the field of power systems..

Visit Overview:

As part of the IITB UMA (CITARA) Internship program, a field visit was conducted to the 33/11 kV Market Yard and Jalochi substations in Baramati, Dist. Pune. The purpose of this visit was to gain practical exposure to the functioning of distribution substations and to understand their role in ensuring reliable power supply to urban and rural areas. During the visit, we observed the step-down process from 33 kV to 11 kV, studied the arrangement of major equipment such as transformers, circuit breakers, isolators, CTs, PTs, bus bars, and lightning arresters, and learned about the operation of feeders. The visit also highlighted the importance of protective systems, load management, and strict safety practices followed in high-voltage environments. By directly observing the equipment and processes, the visit provided us with valuable insights into the application of theoretical knowledge and enhanced our understanding of real-world power system operations.

Topics Covered

During the field visit to the 33/11 kV Market Yard and Jalochi substations, the following topics were covered:

1. Introduction to the structure and layout of a 33/11 kV distribution substation.
2. Step-down process of voltage transformation from 33 kV to 11 kV.

3. Study of major equipment including transformers, circuit breakers, isolators, CTs, PTs, bus bars, and lightning arresters.
4. Protection systems and relays used for fault detection and system reliability.
5. Distribution of power through feeders to urban and rural consumers.
6. Control room operations and monitoring practices.
7. Earthing system and its role in ensuring safety.
8. Safety measures and emergency protocols followed in substations.
9. Load management and the importance of reliable supply.
10. Practical exposure to the application of theoretical concepts in electrical power systems.
11. Taking all season Load Reading.

Some Photo During Visit