Faculty of Engineering & Technology

"Wastewater Treatment Project"

Under the aegis of "SVSP"

Type of Event: Outreach Activity

Date: 20 April 2024

<u>Organizer:</u>

- Mr. Kaushal Sharma, Assistant Professor, Department of Civil Engineering, FEAT
- Ms. Monika Deshwal, Assistant Professor, Department of Mechanical Engineering, FEAT

Objectives:

1. To engage with the community of Makrola Village and educate them about the importance of wastewater treatment.
2. To conduct a detailed survey and contour mapping of the village to identify the lowest elevated point suitable for the construction of a wastewater treatment plant.
3. To propose a sustainable and efficient solution for wastewater management in Makrola Village.

About the Surveyor:

Ms. Monika Deshwal (Assistant Professor-ME), Mr. Kaushal Sharma (Assistant Professor-CE)

Brief Report:

The team proceeded with a detailed survey of the village. The steps involved were:

Topographic Survey: Using modern surveying equipment, the team conducted a topographic survey to gather elevation data across the village. This included using tools like GPS devices, theodolites, and total stations.

Contour Mapping: The collected elevation data was used to create a contour map of Makrola Village. Contours are lines on a map that connect points of equal elevation, helping to visualize the topography of the area.
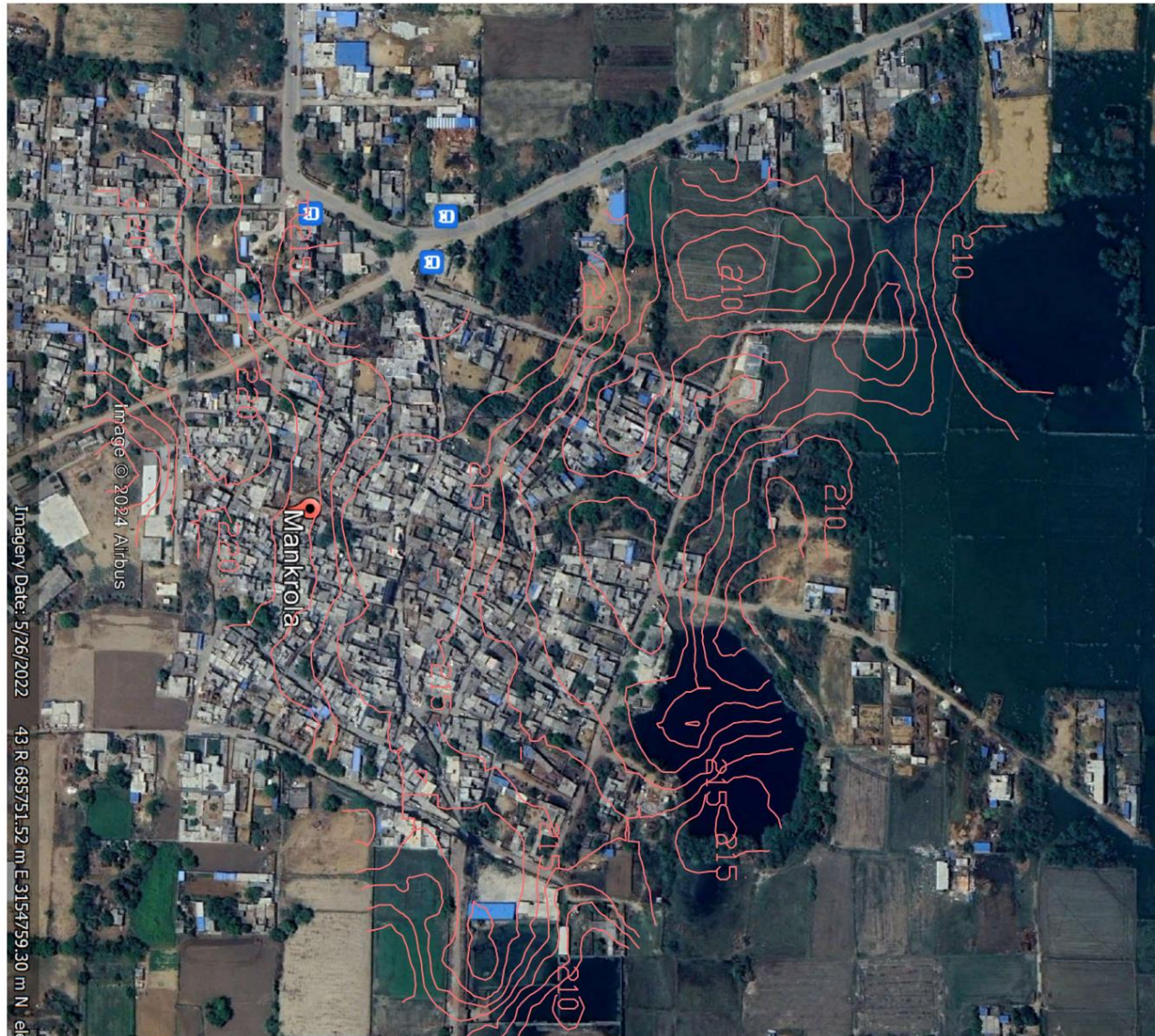
Outcomes:

Identification of Lowest Elevated Point

Once the contour map was created, the team analysed it to identify the lowest elevated point in the village. This point is crucial for the following reasons:

Gravity Flow: Placing the wastewater treatment plant at the lowest point allows for the natural flow of wastewater due to gravity, reducing the need for pumping and thereby lowering operational costs.

Flood Risk: Ensuring the site is not prone to flooding during the rainy season, which could compromise the treatment process.

Contour Map with Google Earth Image of Mankrola Village

List of students

1. 231301016 Shubham Saini

2. 231301017 Amit Kumar

3. 221303004 Yatin Kumar

4. 221303002 Tanish