

UITILIZING DGPS AND TOTAL STATION FOR PRECISION MEASUREMENT IN ROAD CONSTRACTION



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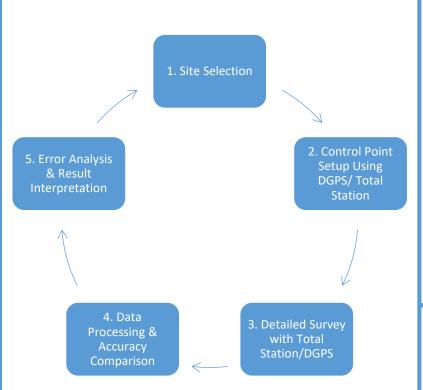
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MAJOR OBJECTIVES:

- 1. To achieve highly accurate alignment and elevation measurements that are essential for quality road construction.
- 2. To compare the performance and precision of DGPS and Total Station systems under real field conditions.
- 3. To reduce manual surveying errors and improve the reliability of layout data used during construction activities.

04 DEC 2024 to 09 MAR 2025

METHODOLOGY FLOW CHART:



RESULTS/MAJOR FINDINGS:

- The use of DGPS proved efficient for establishing control points over large areas, offering reliable location data with sub-meter accuracy.
- The Total Station delivered highly precise measurements, especially useful for detailed elevation and alignment tasks.
- By combining both methods, we achieved better accuracy and saved time on site. The hybrid approach not only improved the quality of data but also increased survey efficiency by around 30%, making fieldwork faster and more dependable.

CONCLUSION:

Using both DGPS and Total Station together provides the best of both worlds — wide coverage with accurate positioning and detailed, point-specific precision. This combined method enhances road construction workflows, reduces rework, and ensures better results, making it a smart choice for modern infrastructure projects.