



Bridging the Gap

Your Connection to Engineering Services

April 2025

Survey With Photogrammetry and Preliminary Investigations



Photogrammetry remains one of the most powerful surveying tools available, even with the onset of more advanced processes. Photogrammetry is the science of collecting physical information from 2D photos, often aerial images captured by drones. By combining enough overlapping images of the same features, photogrammetry software can be used to generate photorealistic 3D representations of topographic surfaces.

The Division of Engineering Services Office of Photogrammetry (OPPI) and Preliminary Investigations provides photography and photographic reproductions, photogrammetric digital topographic maps, digital ortho-photographs, and photogrammetric digital terrain data.

Photogrammetric mapping and digital terrain mapping is best used for mapping areas that are large, dangerous for human occupation, or inaccessible. The OPPI collects supplemental site data for Bridge Design, like topography, and bathymetry (the study of beds or floors of water bodies) data for structure hydraulics of a bridge is over water.

According to Transportation Surveyor Tiffany Bean, “My work is a lot of fun. Utilizing aerial lidar point clouds, I download millions of points, manipulate them, and extract data to build a model that is delivered to design. Remote sensing is a powerful tool that has made lane surveying more efficient and safer. I really enjoy working in the virtual environment and contributing to great projects.”

