



See building scan video here:
<https://vimeo.com/244052471>

stahlsheaffer.com

Survey & Reality Capture

Stahl Sheaffer provides comprehensive survey and imaging services, including:

- Boundary and topographic surveys
- 360° scanning / 3D terrestrial scanning
- Utility mapping and coordination
- ALTA/ACSM surveys
- Flood elevation surveys
- Right of way documentation
- Base plan preparation
- Construction stakeout



Technology used to augment these services includes:

- **Mobile Survey-grade LiDAR Scanning** – Our newest system (Leica Pegasus:Two) produces survey grade data suitable for design work. The resolution and detail of the system is nearly 10X the operating rate of the MX2, which allows us to collect much more detailed data at higher (safer) speeds. The faster speed allows us to perform long range/high end mapping projects such as interstate corridor mapping and state highway survey contracts. Over 30 state DOTs (including Pennsylvania and Ohio) accept and approve the Pegasus:Two system as a design tool on highway projects.
- **Mobile LiDAR Scanning (Trimble MX2)** – Geo-referenced 3-D point cloud data useful for road infrastructure analysis, overhead utility location, bridge and overhead structure clearances, and asset inventory mapping.
- **Mobile Imaging Scanning (Trimble MX7)** – VISION technology allows for the collection of georeferenced high-resolution panoramic photos for road infrastructure analysis, change detection, asset inventory, and well site monitoring.
- **Ground-Based LiDAR (FARO Focus 3D HDR System)** – Survey-grade ground-based laser scanning used to collect high resolution LiDAR data and panoramic imagery to extract topography, traditional survey data, and 3D modeling information. This data can be used for stockpile volumetrics, plant process modeling, Building Information Modeling [BIM], underground tunnel and quarry mapping, road surface modeling, overhead clearance modeling, and bridge inspection and modeling.
- **Aerial Inspection (Matrice 200 Series Mid-Sized Drone)** - Our FAA Part 107 certified sUAS pilot, combined hardware technologies, and expertise allow us to collect data information over large distances and typically inaccessible locations. We can support structural engineering projects with the ability to perform aerial survey for bridges or buildings in tight locations. The end product is video or high res photos of the areas of concern, and since the work is done entirely from a secure location on the ground or within the building, we can compile that data while significantly reducing or eliminating the risks associated with a high-reach, boson swing, or swing-stage access.

Stahl Sheaffer is able to perform feature extraction on LiDAR and survey data to create AutoCAD and MicroStation base mapping and planimetric files, allowing engineers to make well-informed design decisions to tailor modification and construction plans to fit the situation at hand. Stahl Sheaffer can also create “intelligent” 3D models of the survey data. Project data can be imported directly into AutoDesk, Bentley, and ESRI packages as an industry standard .LAS format for clients to use directly as if on site to pull measurements, locations, and clearance information, saving time and money.