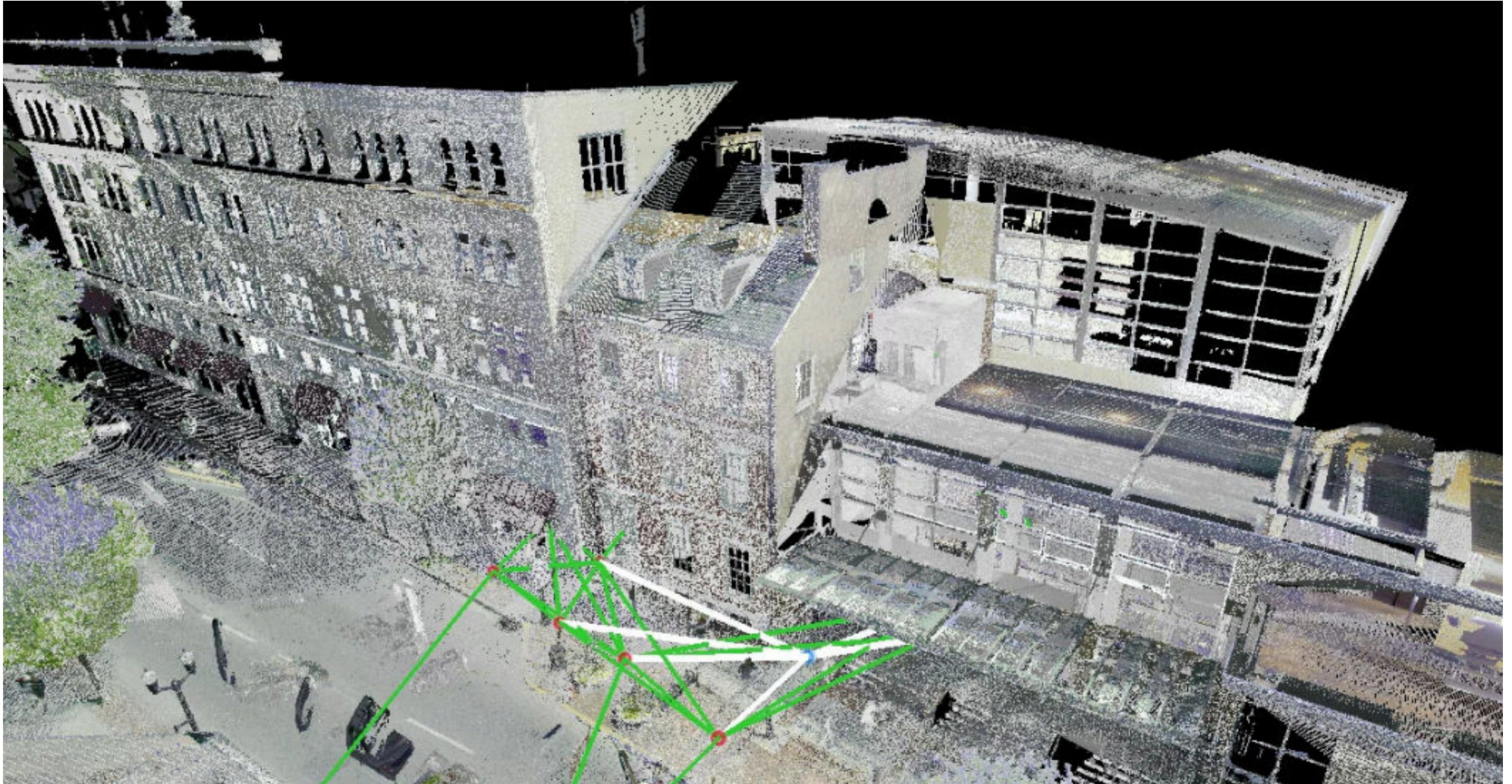


CASE STUDY:

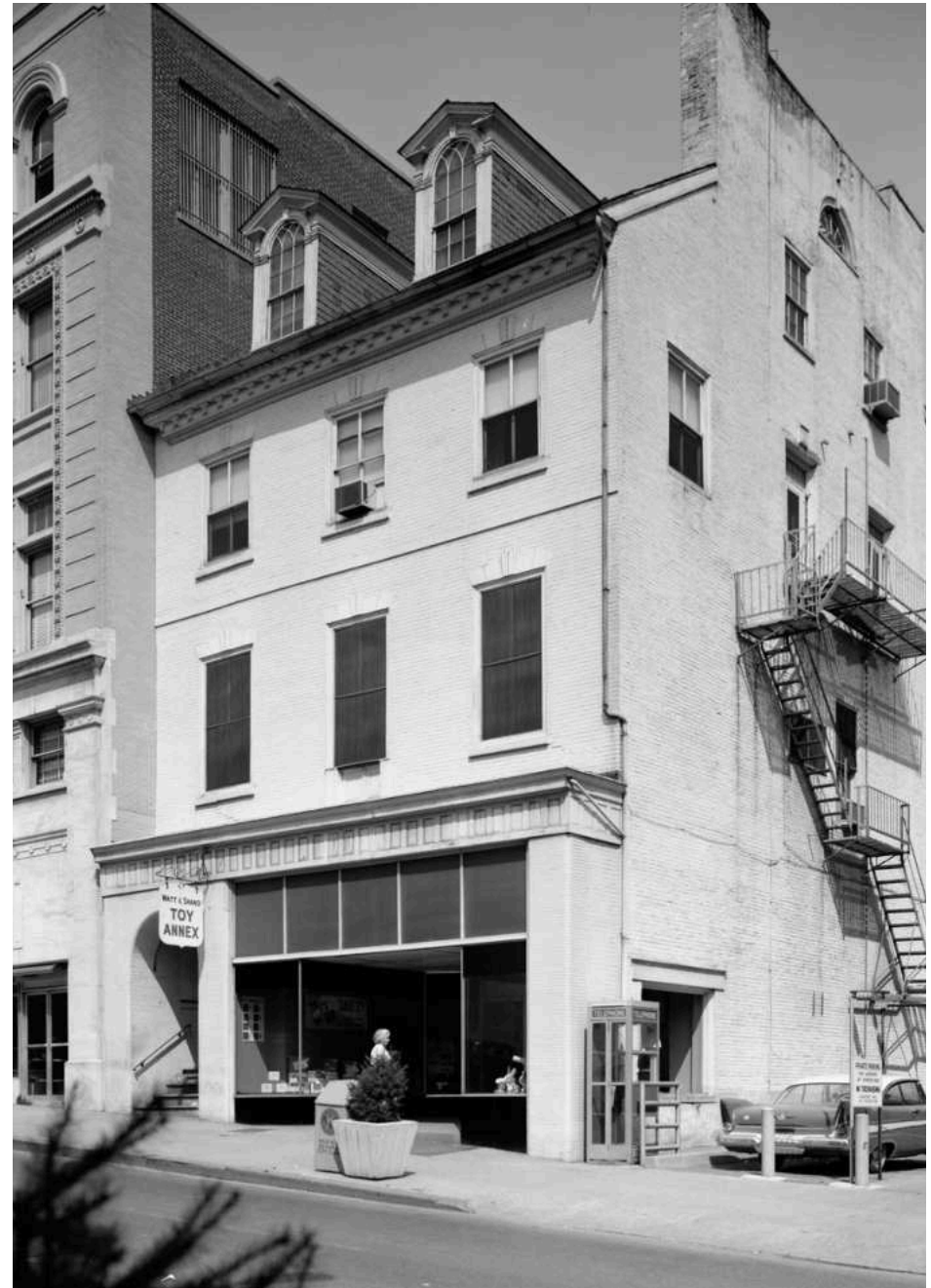
THE WILLIAM MONTGOMERY HOUSE



Using a 220-year-old building in Lancaster as a case study, subject matter experts from Existing Conditions illustrates how 3D laser scanning, point clouds, and BIM can be used to mitigate risk around site conditions and add value to projects in the building industry.

History

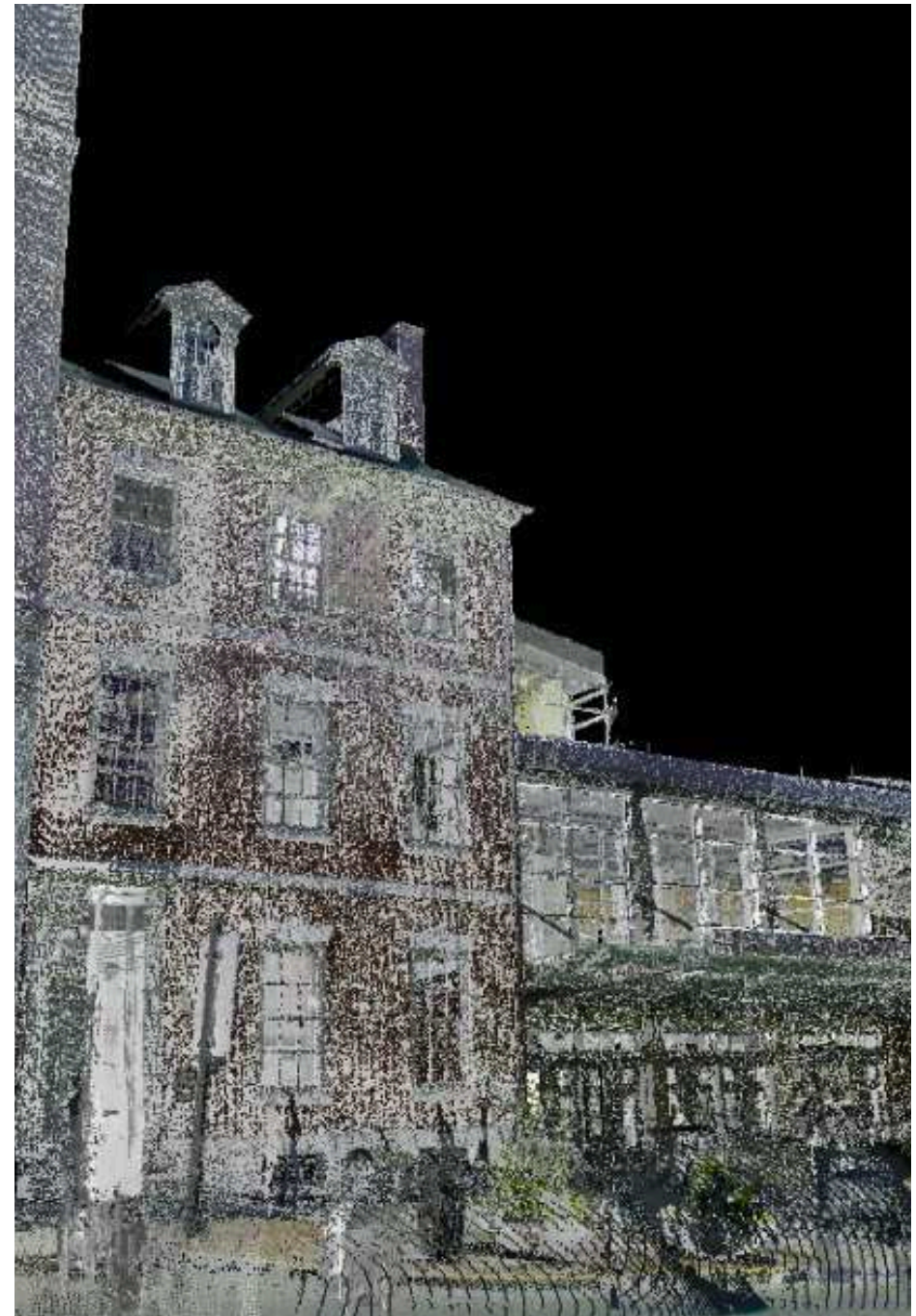
The Montgomery House, built by General William Montgomery in the late 1700s, was occupied by his descendants until his great-granddaughter passed away in 1939. It served as a residence for several generations of the Montgomery family and other local families before being used as the first Lancaster YWCA, a hardware store, a barbershop, and rental units.



3D Laser Scanning

Existing Conditions documented approximately 5,000 square feet of the exterior, as well as the interior of the State Room at The William Montgomery House. We utilized the cutting-edge Leica RTC360 3D laser scanner to 3D laser scan in color.

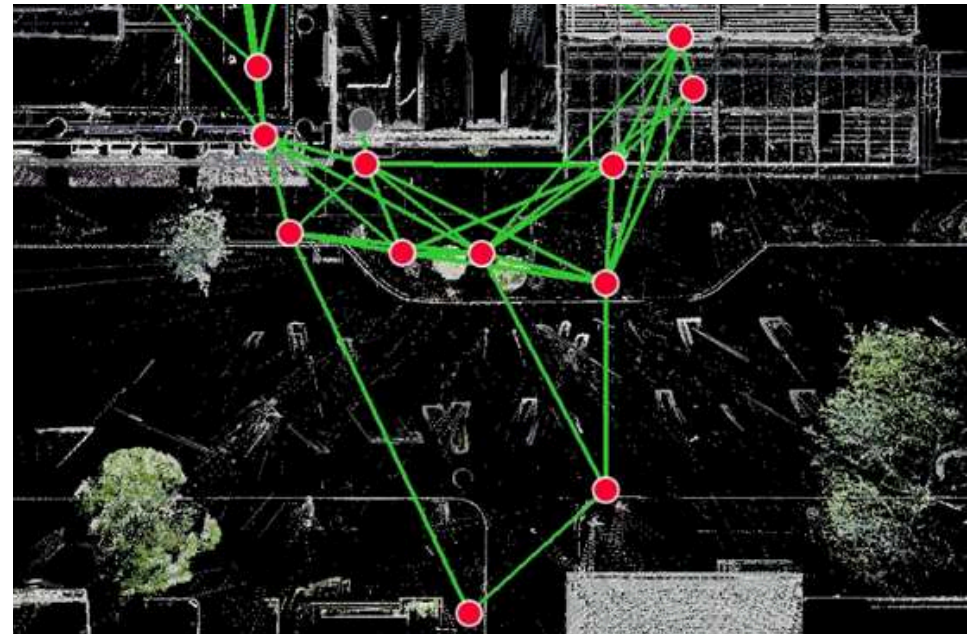
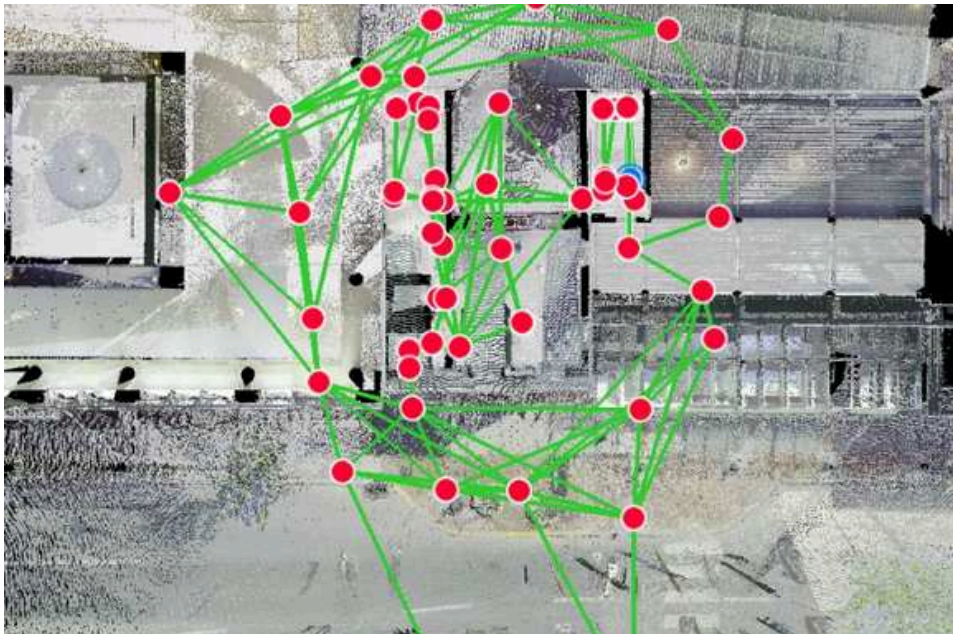
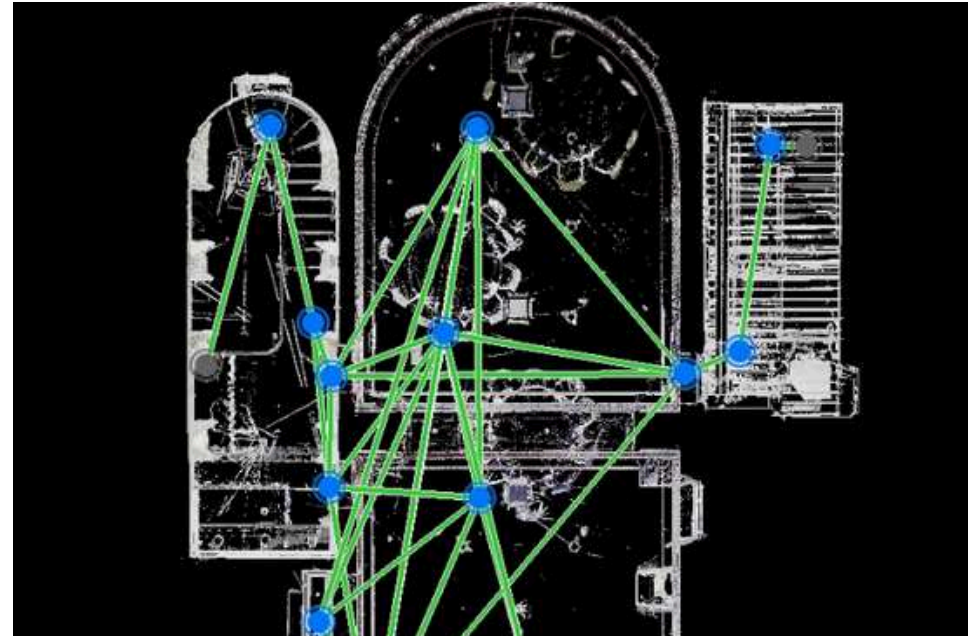
3D laser scanning captures spatial data about physical environments using a precisely directed laser beam. This non-contact and non-destructive technology is widely used in various fields. The scanners project a line of laser light onto surfaces to collect data points, forming a detailed digital representation called a "point cloud."



Processing

The point cloud data was processed on April 24th, 2024. The transition to the product phase occurred on April 25th, 2024, leading to the project's completion on April 29th, 2024.

Processing is where multiple scan locations are tied together, or what's called 'registered' into a cohesive point cloud. We have multiple scanners and a tripod, and we must connect each of those scan points together. These can be registered in a variety of ways.



Drone Imagery

On Thursday, June 13th, 2024, Existing Conditions conducted a drone flight at The William Montgomery House.

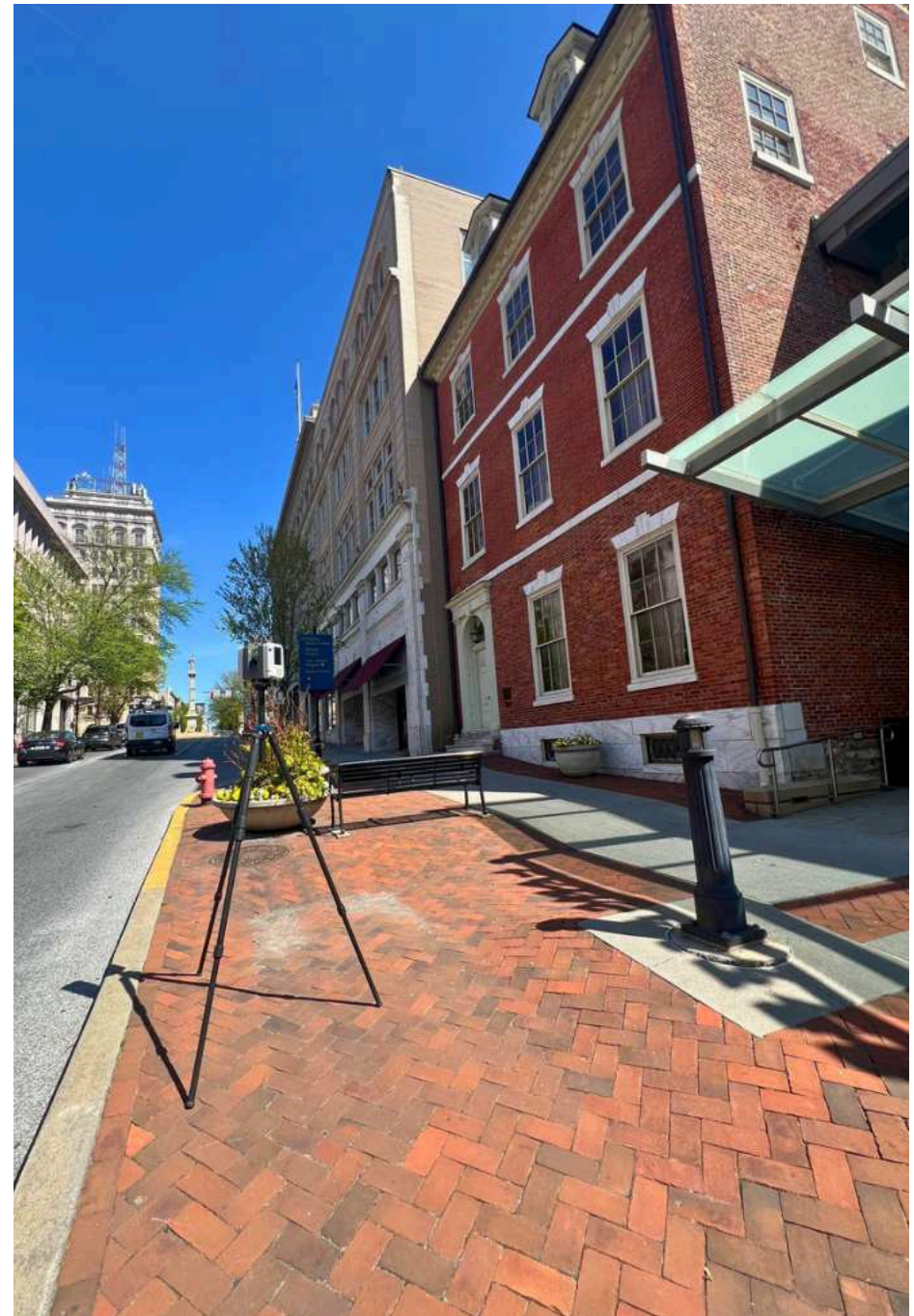
Our FAA-certified pilots can help you leverage drones to the fullest. When combined with an exterior building scan using terrestrial laser scanning, clients often find our **visual drone media** to be a great alternative to a full 3D Revit model or CAD exterior elevations.



Historic Landmarks

Historic landmarks hold a unique place in our cultural tapestry. We approach each project with the utmost reverence for preserving the rich heritage these landmarks represent. Our methods blend advanced technology with a deep appreciation for historical significance.

Documenting historic landmarks involves more than just data collection; it requires a commitment to heritage conservation. We take great care to ensure that our documentation not only captures the essence of these landmarks but also aids in their preservation for future generations.



Thanks for Joining Us!

Thank you for joining us for the live demonstration of 3D laser scanning and a drone survey at the historic William Montgomery House. We appreciate your engagement and enthusiasm in exploring how the latest technology and equipment can enhance safety and add value to projects in the building industry.

We look forward to seeing you at future events and continuing our journey toward safer, cutting-edge, and more effective building practices.



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