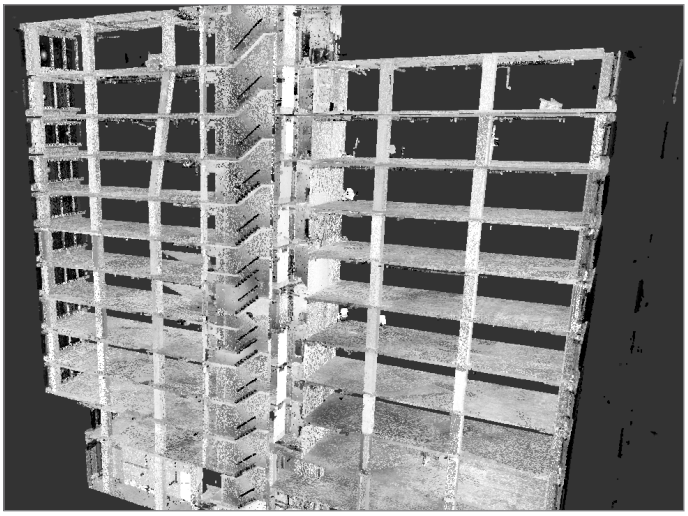


LASER SCANNING

WHAT IS IT?

Laser scanning provides a realistic virtual 3D point cloud of any space. This point cloud can be used for a number of different applications including the generation of a 3D model. Our point clouds provide accuracy up to +/- 1 mm, allowing you to take accurate measurements of anything in the captured space.

We are adaptable to your schedule and changing conditions. Our laser scanning process uses eye-safe lasers so scanning can occur in any occupied space.



Section cut of 12 story core & shell point cloud.

OUR PROCESS

Planning
Scanning experts are available at any time to generate a plan for your scanning needs at any phase in the building life cycle

Scanning
- Can occur while people are in the space
- One team member can capture 30 scans per day (if necessary, this process can be expedited)
- Can mobilize by next day if urgent needs arise

Analysis
- Point cloud available within 1-2 days after scanning
- Models and other analysis can be provided with varying timelines



Point cloud of a retail maintenance room.

WHEN TO SCAN

Laser scanning can be useful before, during and after the construction process. We have worked with owners, designers and project teams to efficiently solve problems by utilizing laser scanning technology.

The examples on the next page are applications where laser scanning has proved to be beneficial. We are continuing to find creative uses for laser scanning and are excited to help you in any way we can!



FARO Focus S350 Laser Scanner.

FOR MORE INFORMATION CALL 410-337-2300 OR EMAIL VDCSERVICES@WHITING-TURNER.COM

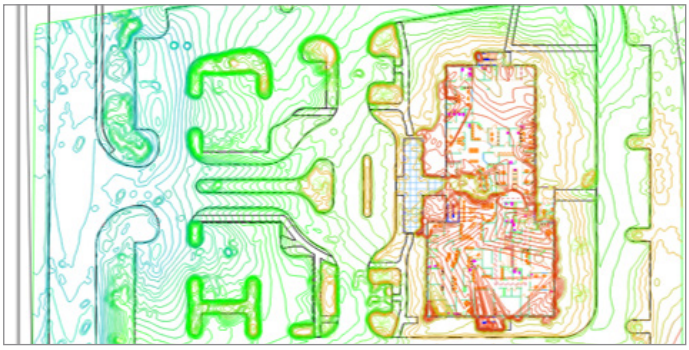
LET US HELP!

Coordination
Laser scanning captures existing conditions. This can be utilized in the coordination process. Scanning can also be used to QC the installation location of architecture, structure or MEP throughout your projects duration. Visible control points are very helpful in this process to certify that the point cloud and model align properly.



3D model of existing conditions.

Elevation Analysis
Floor flatness analysis utilizes a point cloud to clearly show where the high and low points of your floor are located. This is very useful for concrete slabs that must be leveled to a specific tolerance. These deliverables are provided as a contour and/or heat map which highlights any changes in elevation as low as 1/8". This analysis can be performed on any surface, not just floors. One interesting application of this software is calculating volume of dirt in an excavation.



Landscaping plan.

Existing Conditions/As-Built
Existing conditions point clouds can be used to determine potential issues and aid in the design process.

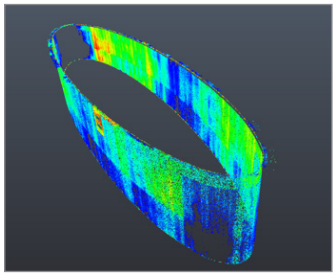
These point clouds are also great tools for real estate professionals, such as property managers, to share with their potential tenants. They can virtually visualize and plan their space with this information.

As-built point clouds provide a 3D virtual record of the space. This will document the final installation location of all equipment and architecture. This provides the information needed for applications such as future furniture/equipment planning, staff training/virtual walks, day to day processes, etc.



Point cloud identifying potential future issues on the project.

Creative Solutions
- Confined spaces/crawl spaces
- Utility infrastructure improvements
- Pre-pour rebar location documentation
- Cast in place concrete verification
- Shaft dimensions
- Landscape/hardscape aesthetic verification
- Site Logistics



Wall plumb verification.



Utility infrastructure improvements.