PROFESSIONAL SERVICES

TERRESTRIAL LIDAR SCANNING

Terrestrial LiDAR (TL) scanning is an effective solution for measuring and documenting existing conditions of any environment. MBI is a regional leading provider of TL scanning services, helping our clients successfully complete the most complex architectural, engineering, and construction projects with accurate as-built documentation.

We measure your project with a full range of geospatial data and mapping services that enables us to collect data faster, safer, and more accurately than ever before.

DRONE

MBI has FAA certified pilots to provide aerial video, building surveys, property surveys, and photogrammetry services. We utilize DJI brand drones equipped with HD video, photo cameras, and real time GPS.

We fly your project with a full range of geospatial data, mapping and aerial photography services that enables us to collect data faster, safer, and produce high quality images for client use.

HOW DOES IT WORK?

3D laser scanning uses LIDAR technology to collect measurements that can be used to create 3D models and maps of environments. MBI technicians place "targets" in multiple locations around a site and take individual scans from various viewpoints. The laser sweeps the environment to create millions of data points called a "point cloud" which is used to extrapolate the shape, location, and color of the environment creating an accurate data set of the structure or site.

Using technology with a drone to collect measurements through aerial imagery, MBI creates 3D clouds of job sites to be coordinated with LIDAR clouds. This allows us to place drone data into real world coordinates and elevations.
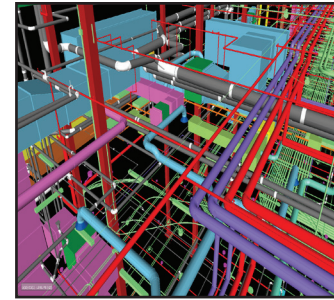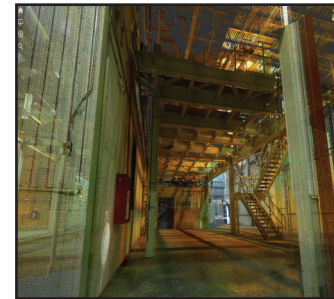
WHAT ARE THE BENEFITS?

- Complete documentation of as-built conditions in high resolution in less time
- Accurate spatial reconstruction
- Measurable and shareable data sets
- Increased visibility and understanding
- Decreased need for site revisits & field time
- Safe solution for inaccessible or hazardous locations
- Reduction in change orders, delays, and costs
- Enhance coordination of systems and utilities

- Collect data for up to 300 acres per day
- Measurable and shareable data sets
- Increased visibility and marketing aids
- Decreased need for site revisits & field time
- Safe solution for inaccessible or hazardous locations
- Merge with LIDAR for real world point cloud
- Fast turnaround of deliverables
- Volume calculations

As-Built Documentation
Detailed, quantitative, and sharable data is invaluable in design, construction, renovation, and facility modifications.

BIM Modeling
Point cloud data is used to develop intelligent BIM models, giving A/E/C professionals the ability to adequately plan, design, construct, and manage projects.
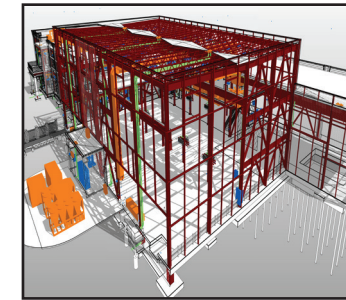
Building Laser Scanning
Complete documentation of an existing building and MEP features accomplished with laser precision, accelerating timelines and decreasing change orders and costs.

Industrial & Manufacturing
Correctly document and develop intelligent BIM models of existing structures, equipment, utilities, MEP, and processes to plan for new construction, relocation, modernization and/or improvements.

Assets & Facility Management
Develop a detailed 3D model of power components, machinery, pipe work, and other assets for useful building management, retrofits, and other facility design tasks

Historical Documentation
Creating accurate as-built models offers a hands-off means of cataloging important, and often rare historical structures.

MBI

SERVICES

As-Built Documentation
Architectural Documentation
Commercial Sites
Construction
Healthcare
Historical Documentation
Industrial Facilities
Manufacturing & Assembly Facilities
Office Buildings
Oil & Gas
Overhead Clearances
Process Plants
Power Plants
Pharmaceutical
Projection Mapping
Residential Sites
Schools & Universities
Stadiums, Arenas, & Theatres
Water & Wastewater Treatment Plants
3D Gaming & Software Development
3D Projection Mapping

CUSTOM DELIVERABLES

Point Cloud Data (Raw Data)
2D CAD Drawings
3D Non-Intelligent Models
3D BIM Models
Fly-Thru's – 3D Virtual Tour of Model
Template Modeling
Reconciliation of 2D Design Drawings
Reconciliation of 3D Design Model
Comparative Analysis
Deformation Analysis
Floor Flatness Analysis
Contour Mapping
Volume Calculations
Structural Steel Probability Analysis
Wall Plumb Analysis
Aerial Photogrammetry
New Construction Accuracy Analysis
Digital Drawings of GPR Markings