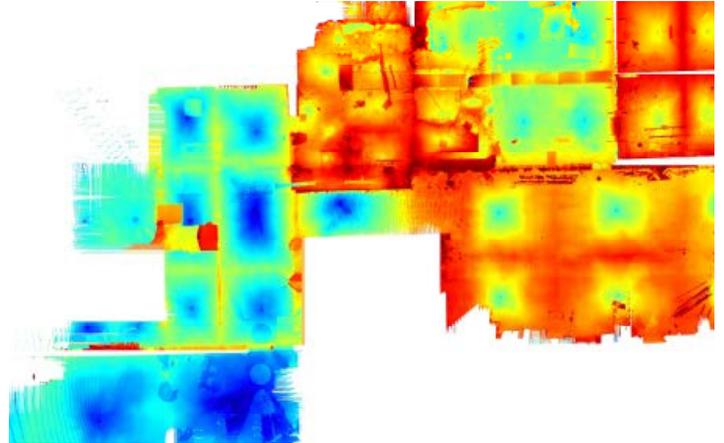
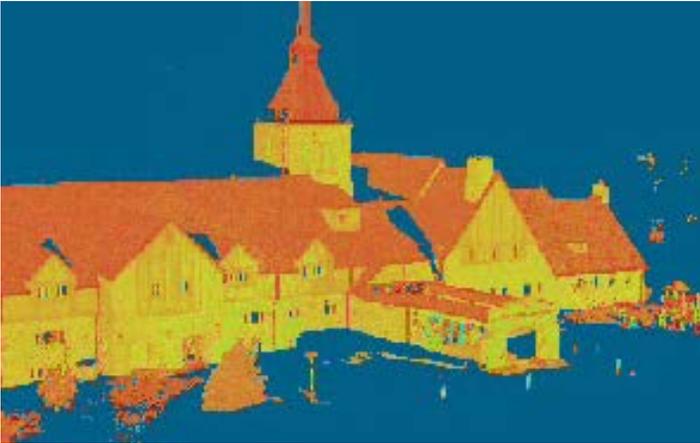


3D Laser Scanning



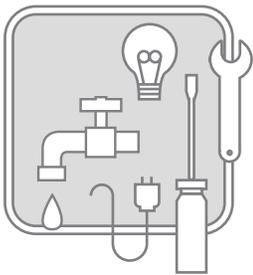
THE DIGITAL TOOLBOX

A good tool helps make work possible. A great tool makes that same work easier and safer while driving innovative results.

When it comes to surveying and site evaluation, traditional tools, like the tape measure, offer status quo comfort and predictability. However, the continued use of these manual methods leaves troublesome gaps for technicians, designers, and construction professionals as they work to convert hand-recorded data collected into the digital models that have emerged as an industry standard in the twenty-first century.

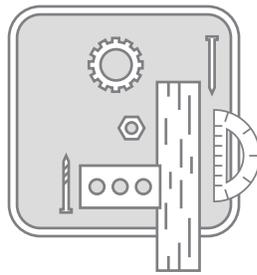
Using laser light technology, 3D scanning captures existing conditions of structures and formations directly into a digital file, successfully integrating these two processes and streamlining ISG services. Moreover, the equipment is light and easy to transport, providing unparalleled speed and safety when compared to traditional existing condition verification procedures.

SO WHAT CAN IT DO?



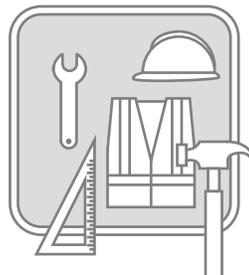
COMPLEX PROCESS MAPPING

Effectively captures data detailing intricate piping, utility systems, ceiling structures, bridges, busy intersections, and more without disrupting activity on site.



GENERAL ARCHITECTURE

Efficiently verifies existing conditions of interior, exterior, and surrounding building structures.



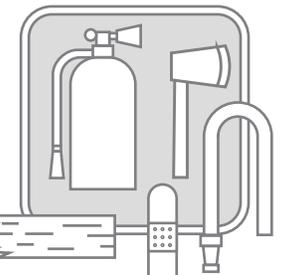
CONSTRUCTION MONITORING

Easily creates detailed time-lapse measurements during construction to evaluate progress in real-time.



HISTORIC PRESERVATION

Conveniently maps and models ornate building features and antiquated materials without damaging fragile structures.



EMERGENCY RESPONSE

Safely collects data from hazardous or unstable sites in instances of building failure, fire, sudden accidents, or natural disaster.

Laser Scanning Applications

ARCHITECTURE

2D + 3D BUILDING FACADES
2D PLANS
BUILDING INFORMATION MODELING
BUILDING ELEVATIONS
ROOF SURFACES
INTERIOR SURFACE SCANNING
HISTORICAL PRESERVATION

CONSTRUCTION

SITE MODELING
VOLUME CALCULATION
FOUNDATION CERTIFICATIONS
CONSTRUCTION VERIFICATIONS
STOCKPILE SURVEYS
ON-GOING AS-BUILT MONITORING

ENGINEERING

TOPOGRAPHIC SCANNING
BRIDGES, TUNNELS, AND CULVERTS
RENOVATION PROJECTS
WATER + WASTEWATER PLANTS
ROADWAYS + INTERCHANGES

FACILITIES

AS-BUILT CONDITIONS
AS-EXISTING CONDITIONS
PIPING SYSTEMS
LOW-LIGHT SURVEYS
CONFINED SPACE SURVEYS
MEP SURVEYS
STRUCTURAL SURVEYS
REVERSE ENGINEERING

WHY USE LASER SCANNERS?



MORE THAN MEETS THE EYE

Captures a complete digital file of site data including behind the scenes details



INCREASES ACCESSIBILITY

Retrieves data from restricted, unsafe, or hard-to-reach areas



COMPENSATES FOR MISSING RECORDS

Creates as-built records for clients who lack adequate site documents



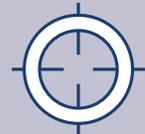
OVER-COLLECTS BY NATURE

Eliminates the need for future site visits to gather additional information



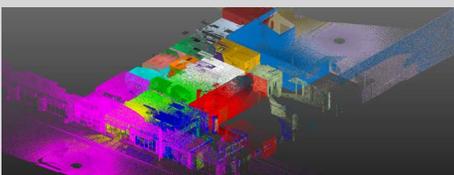
INCREASES SAFETY

Bypasses ladder/lift use and work near moving equipment or hazardous areas



INCREASES ACCURACY

Reduces potential for human error with hyper-detailed, multi-angled data collection



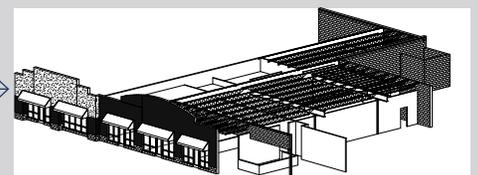
Initial Data Import

Scanning information from each vantage point cataloged by color and displayed in one comprehensive facility image.



Dynamic Revit Images

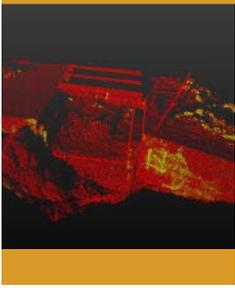
Walls, windows, and other building component specifications generated in realistic detail.



Multi-Value Project Resource

Hyper-accurate 3D model used as basis for construction documents and reference demonstrating design progression.

ISG 3D SCANNING IN ACTION



ACCIDENT SCENE

Rural Site, IA

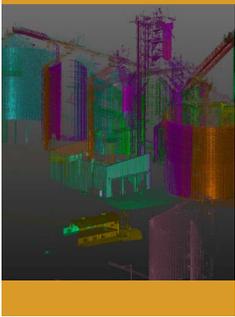
A prosecuting attorney contacted ISG to document a sensitive automobile accident scene. Using the data, investigative attorneys re-created site conditions at the time of the crash quickly without compromising material evidence.



HORIZON MILL

Mankato, MN

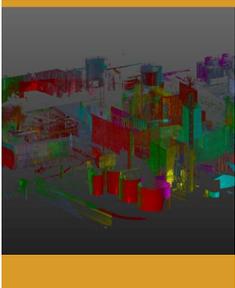
ISG's team evaluated the building, performed a scan of the exterior walls to detect structural deficiencies, and used the data to propose solutions for improvements - all while saving the client time and money.



INTERSTATE MILLS

Randolph, MN

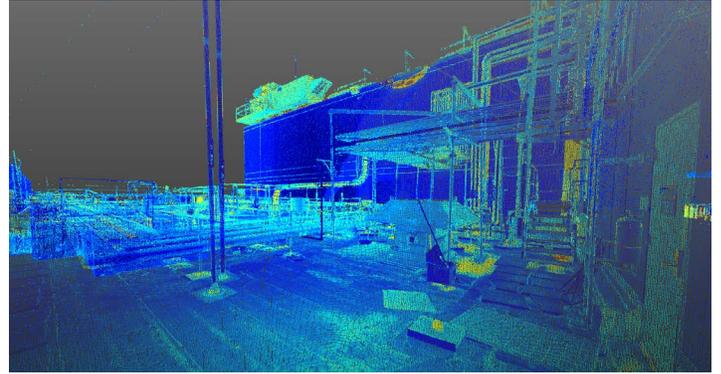
With complex as-built structures at dangerous heights, 3D scanning was required to collect accurate data for this multi-structured grain terminal. The client received a comprehensive data report for their future needs in detail, far exceeding capabilities of manual methods.



CORN PLUS

Winnebago, MN

Following the dryer building's explosion, 3D scans determined specific locations at fault for its structural failure without jeopardizing human safety around hazardous debris. The data was later used to identify effective repair solutions.



NATIONAL CLIENT EXPANSION

Challenge



A national client approached ISG seeking design consulting services for a large cooler expansion project at their Iowa facility. Understanding that time is money, ISG sought to provide the most cost-effective and time-efficient design solutions.

Solution



Over a course of 15 hours, two ISG surveyors piloted more than 100 scans of the building's interior, exterior, and outdoor surroundings, capturing a multi-angled collection of data that was later converted into design software.

Result



In less than half of the time, and without impacting production activity on-site, ISG's client received building models presenting the intricate system of piping, external structures, and comprehensive as-built interior with striking accuracy.



DID YOU KNOW?

ISG also provides in-house drone technology for a wide array of applications which can support 3D capabilities.