



# 3DS Technologies Inc.

High Resolution 3D Laser Scanning

[www.3dstechnologies.com](http://www.3dstechnologies.com)



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- About us
- What is 3D Laser Scanning
- Why use 3D Laser Scanning
- Benefits of 3D Laser Scanning
- Case studies and examples





- when it has to be **right**

*Leica*  
Geosystems



Using the most up to date equipment and technology, 3DS primary focus is 3D Laser Scanning and helping customers use that data effectively.

With a background in industrial manufacturing, construction and engineering, 3DS is committed to providing the most detailed and accurate information available to ensure your project is a success.

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# WHAT IS 3D LASER SCANNING?

- 3D laser scanning captures 3-dimensional data in a 360 degree rotation. The Laser, or LiDAR scanner measures up to two million “points” per second. Each point is assigned an X, Y, and Z coordinate in space. Together, these points create a “point cloud” and exact measurements can be determined from any 2 points.
- Basically, Laser scanning is a method to convert the physical to the digital with speed and precision.
- **3D Laser Scanning** is a non-contact, non-destructive technology that digitally captures the shape of physical objects using a line of **laser** light. **3D laser scanners** create “point clouds” of data from the surface of an object.

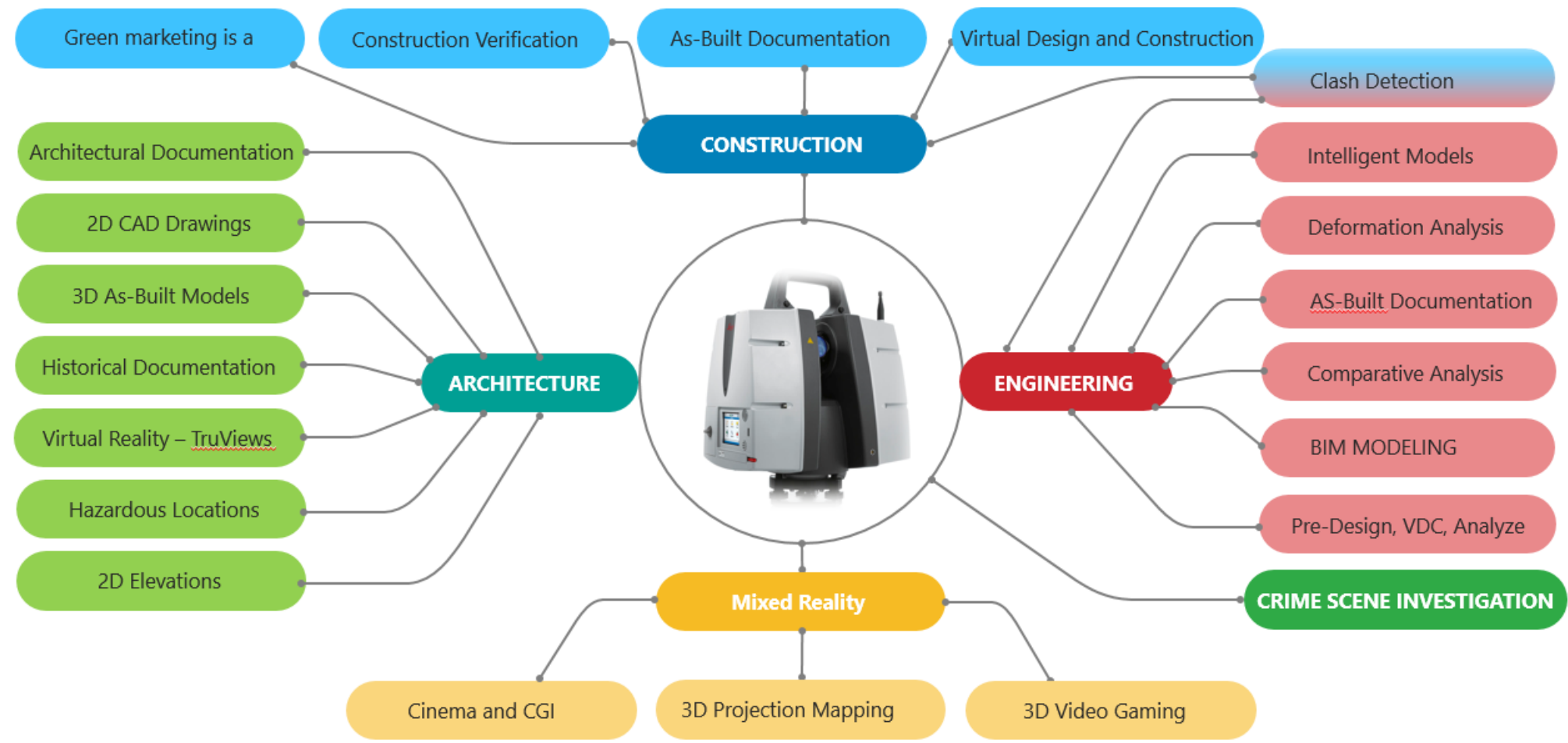


# How does it work?

- A laser scanner is placed on a tripod and a scan is taken in a 360 rotation measuring 2 million points per second followed by a 360 panoramic image. The scanner is then moved to another location where the process is repeated. These scans are then “stitched” together, creating a 3D virtual copy of the physical space.



# WHY USE 3D LASER SCANNING?

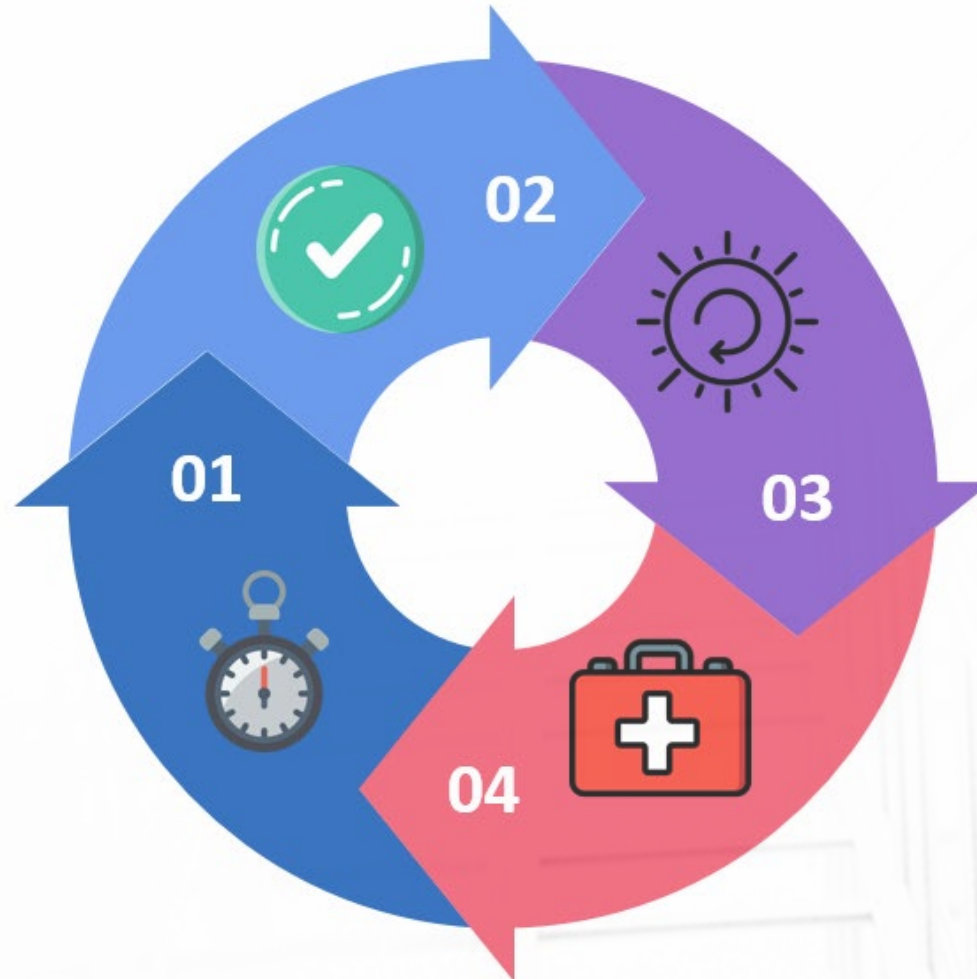


# BENEFITS OF 3D LASER SCANNING



## ACCURATE

- Measure 2 million points per second at 1.2mm accuracy.



## FAST

- A typical scan with images can occur in less than 2 minutes.

## EFFICIENT

- A quick scan can eliminate errors, reduce costs associated with change orders or errors.
- Operational downtime is not required to access measurements.

## SAFE

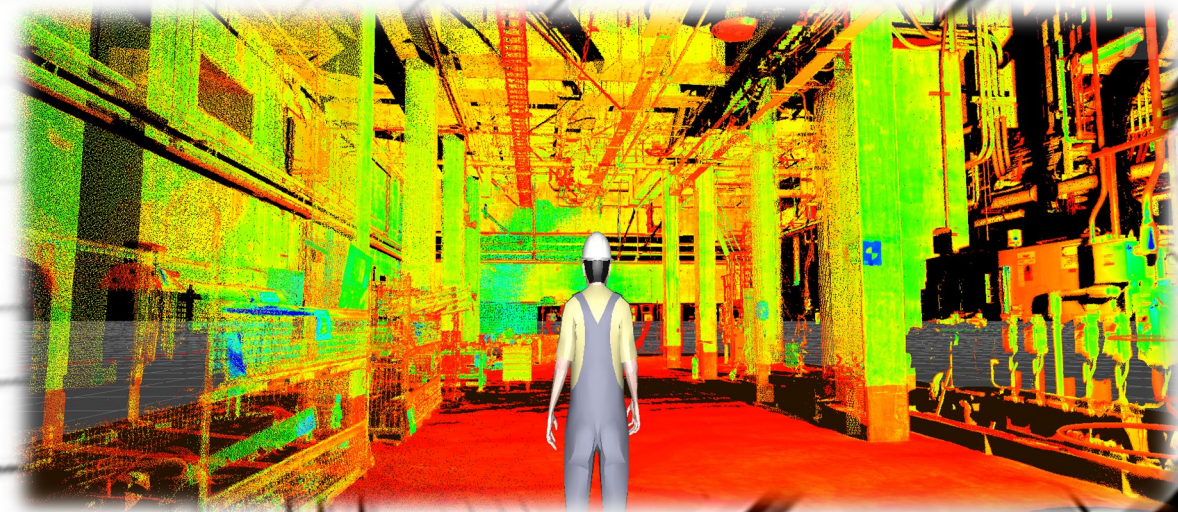
- Class 1 Laser invisible to naked eye
- Range of up to 1000m. Access hard to reach or hazardous measurements.



# SCAN DELIVERABLES

Before you begin with any laser scanning project, 3DS will assist you with the outcome or deliverable. Examples are:

- 2D CAD Drawings
- 3D CAD or Revit model, Solidworks, Civil 3D, MicroStation
- Virtual Walkthroughs, fly throughs, etc
- Reports on structural analysis, 3D Comparisons, Floor Flatness reports etc.







# iGuide DELIVERABLES

Accurate Floor Plans and Square Footage

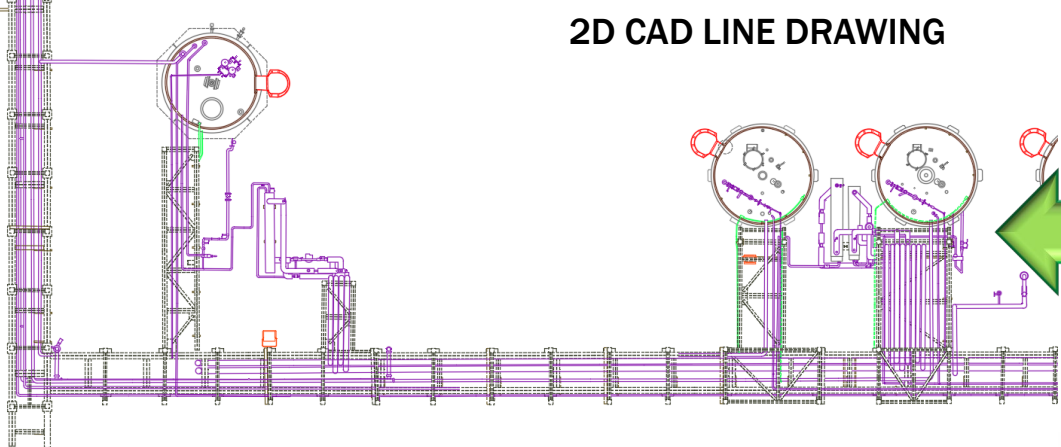
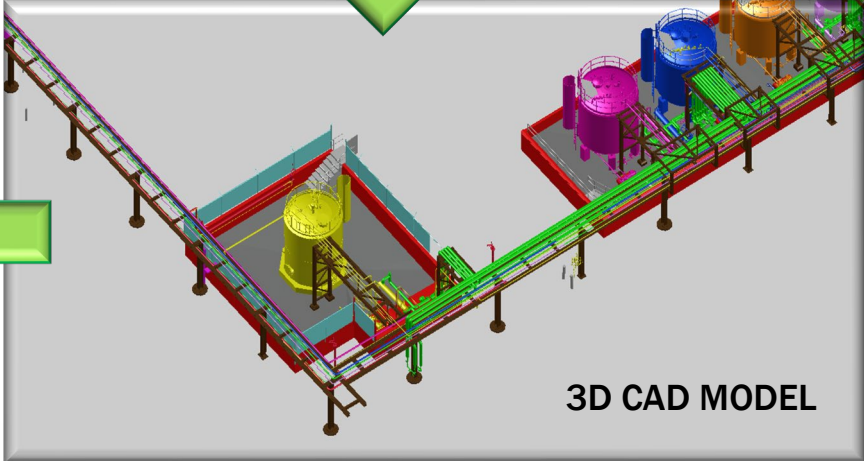
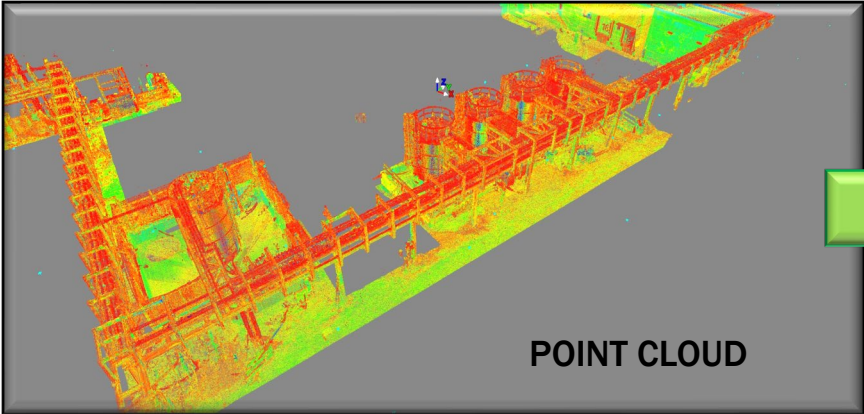
3D Virtual Tours

No Subscription. Host on iguide pay as you go or download and host yourself.

Fully editable panoramic images.



# Point Cloud to Cad 2D

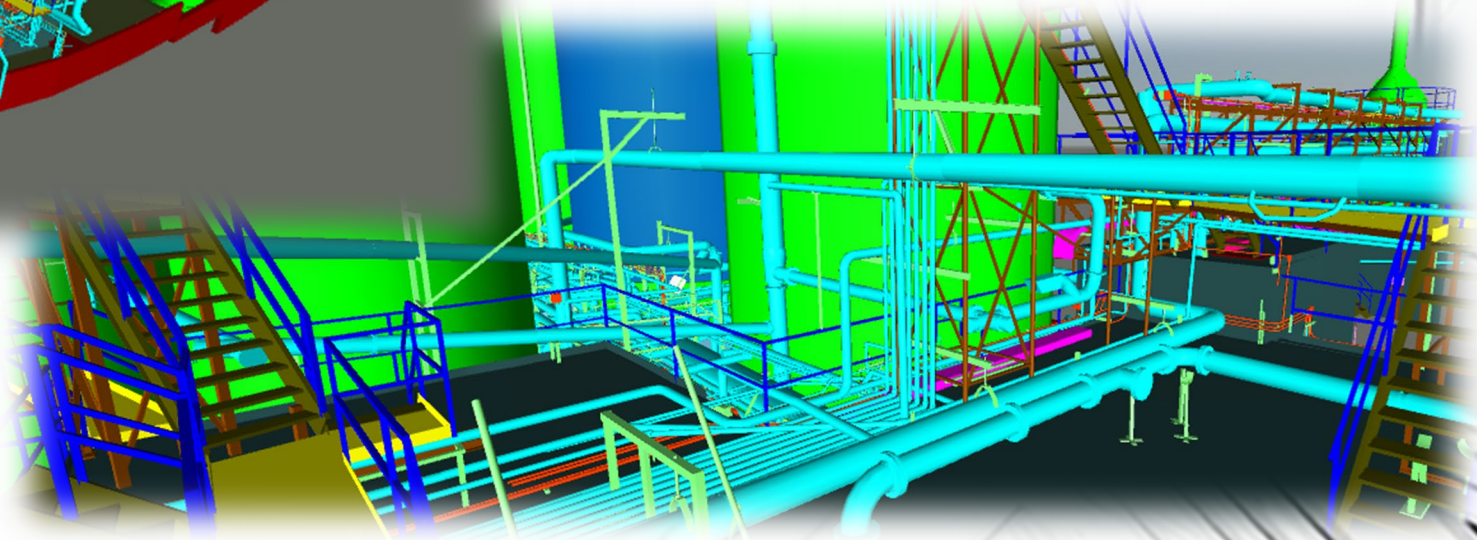
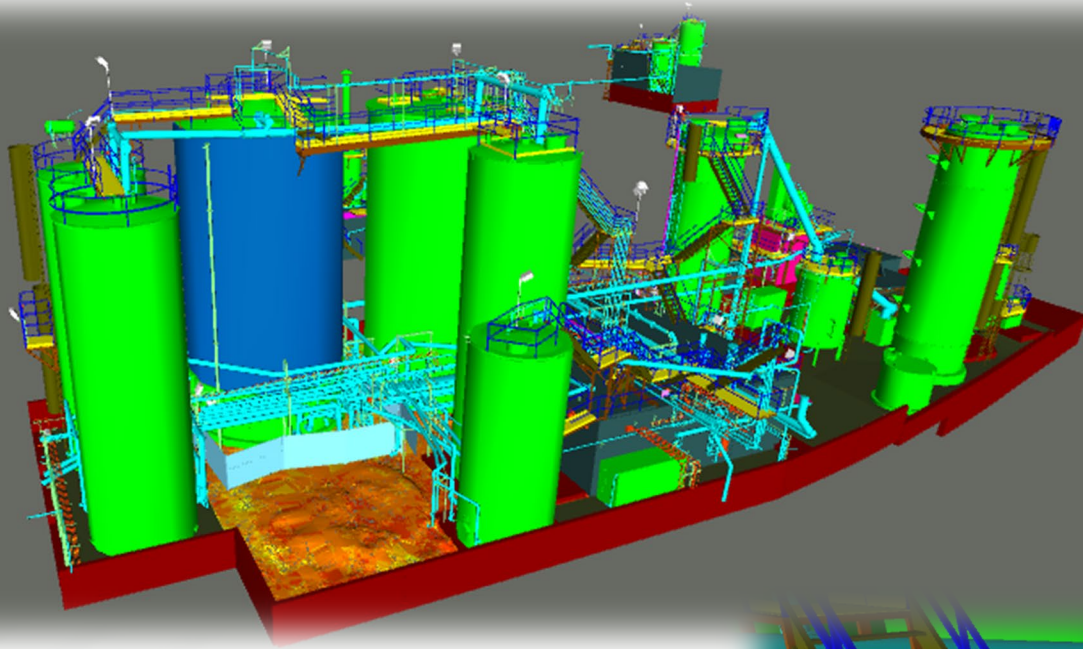


# CASE STUDIES



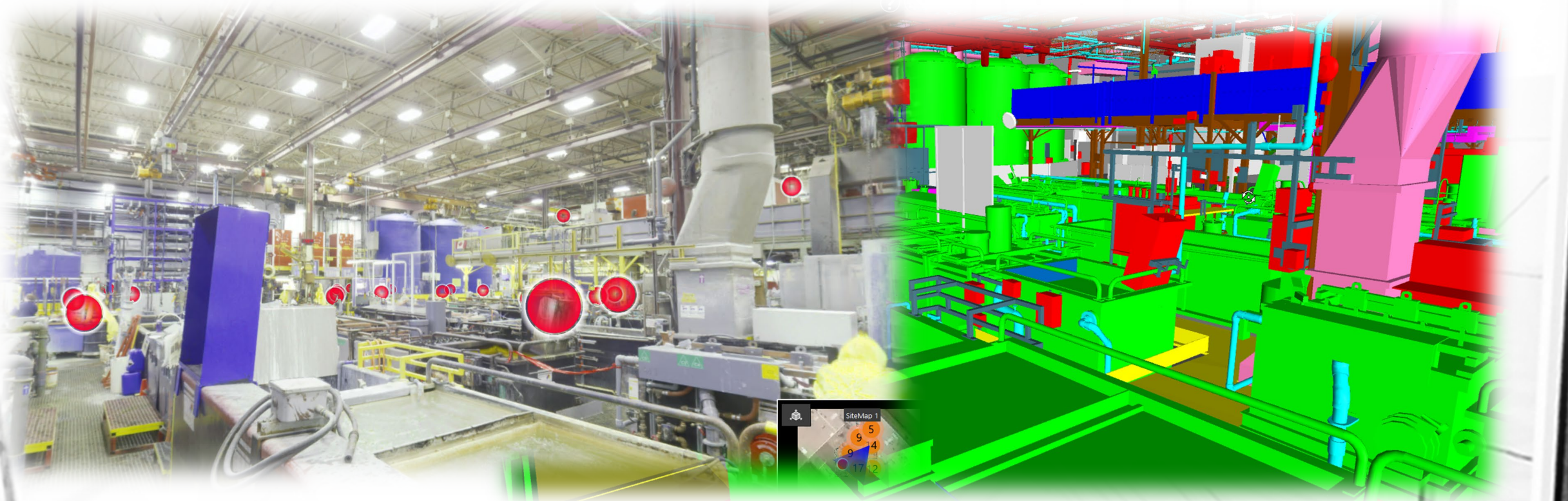


# As-built Data Capture and Modeling



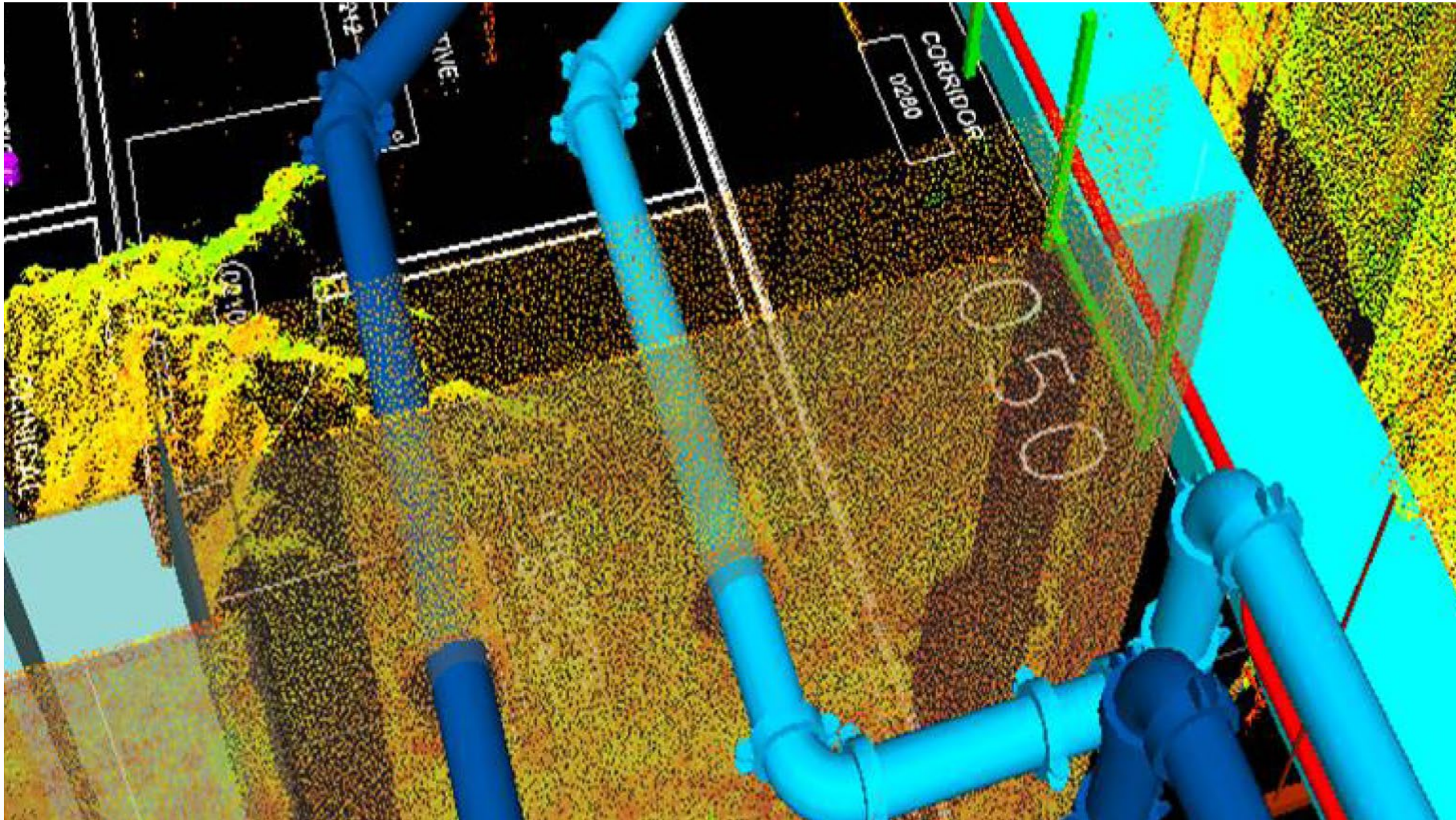


# 3D Virtual Truspace - Digital Twins

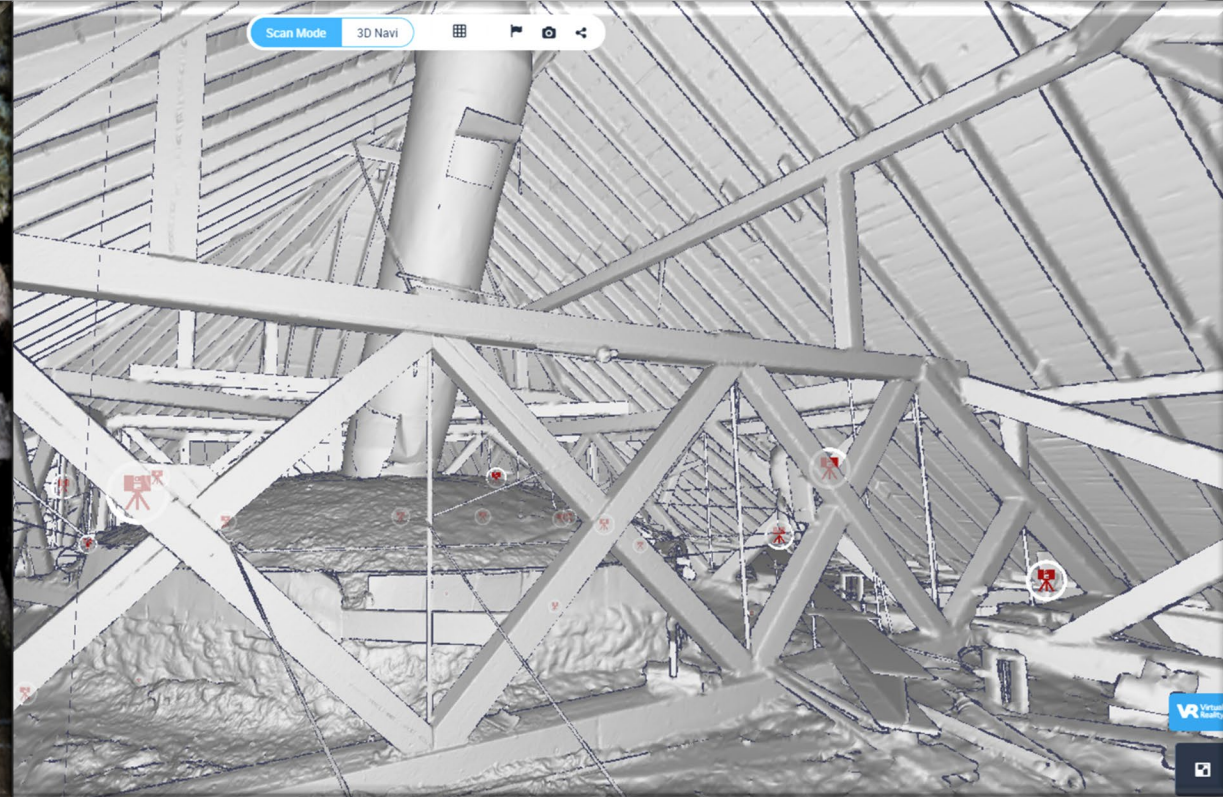
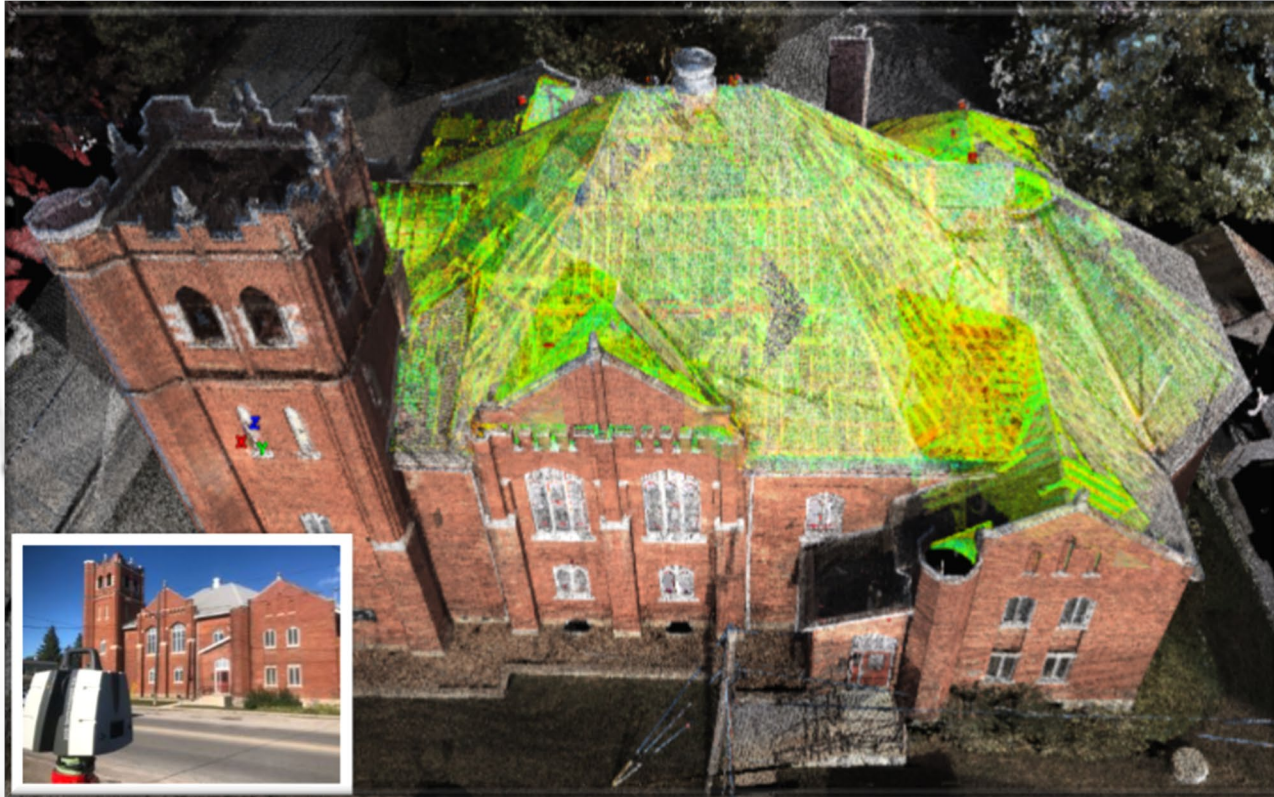




# Combine Laser Scan – Model - CAD Drawings

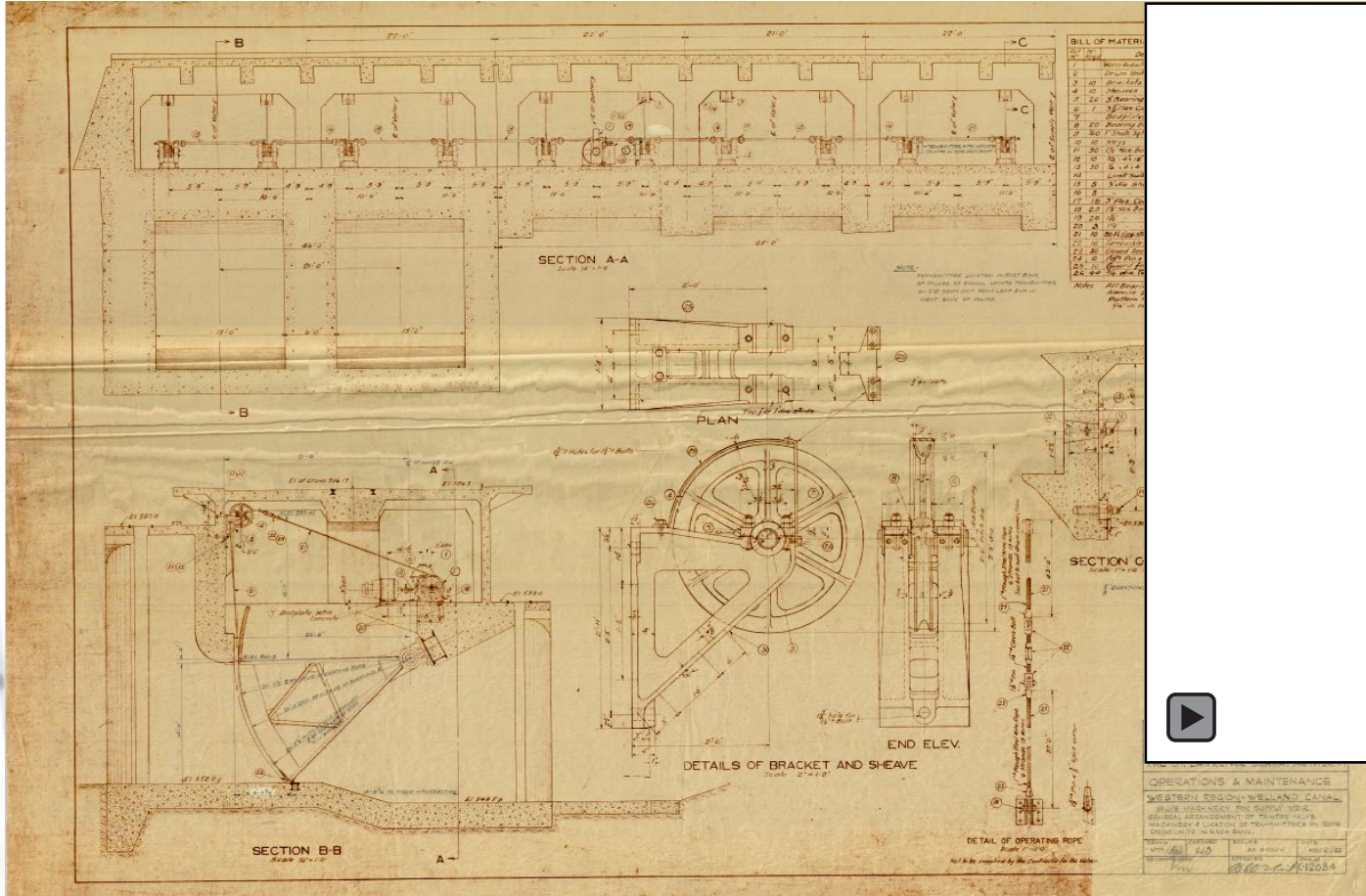


# Dark and Hard to Reach Locations



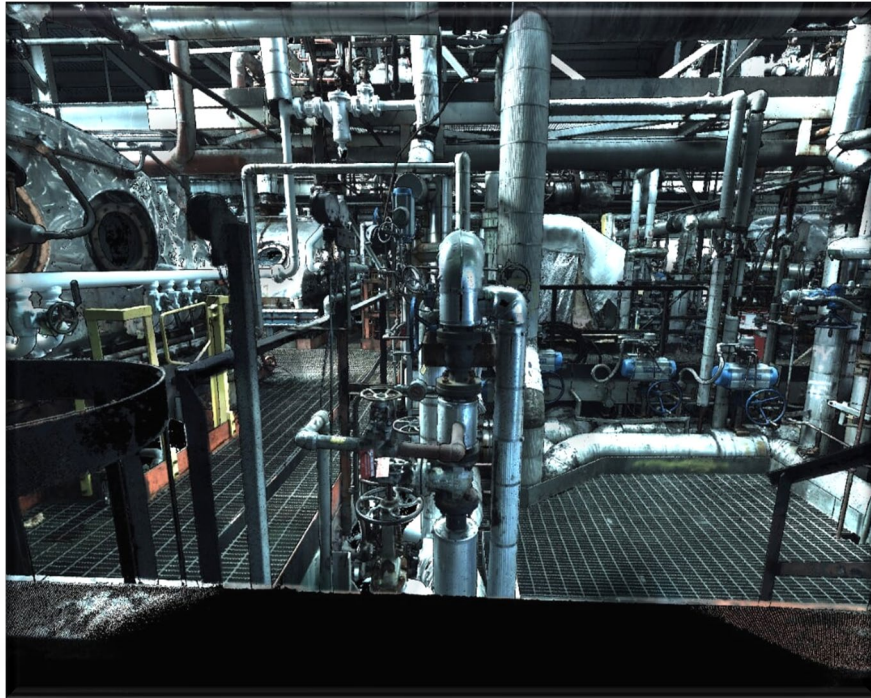


# Update Historical Drawings

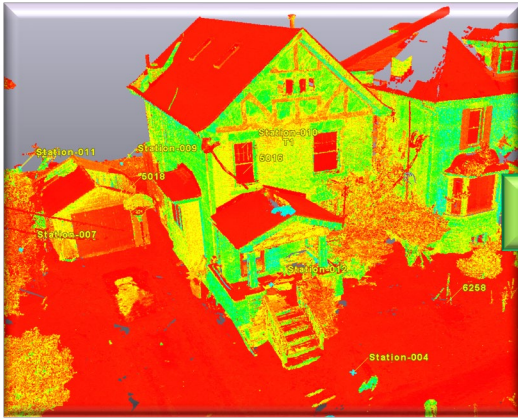




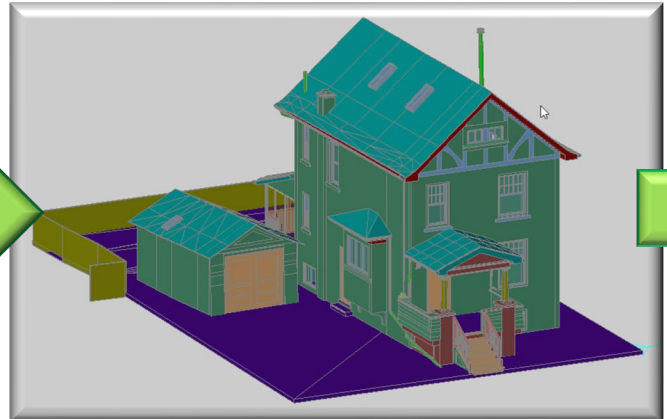
# Petrochemical Piping



# Model for Renovation



SCAN



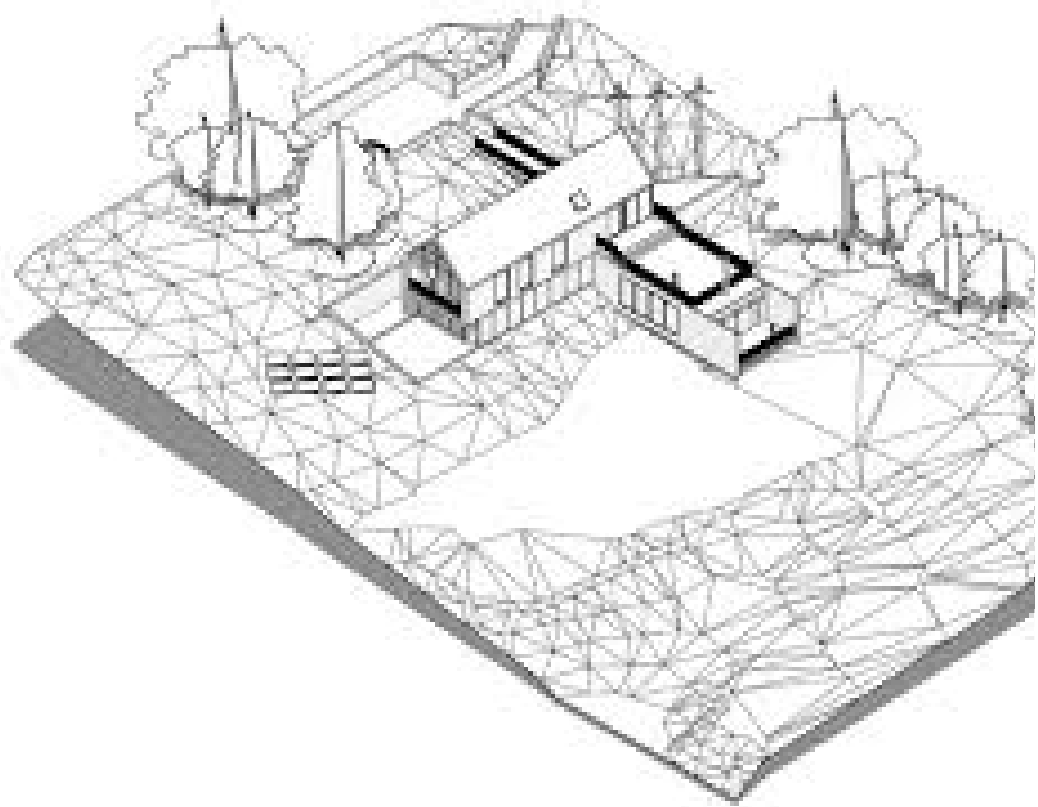
AutoCAD 3D



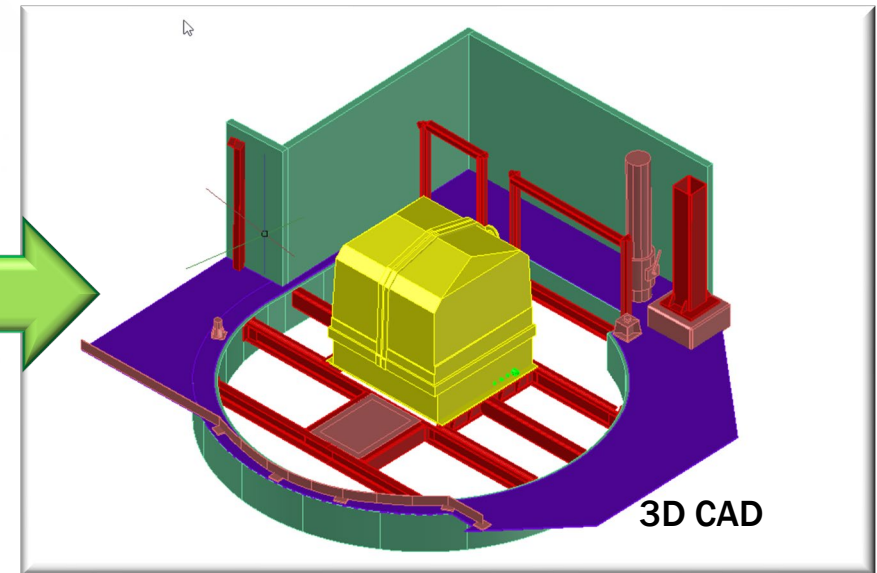
Google SketchUp



# Map complex site

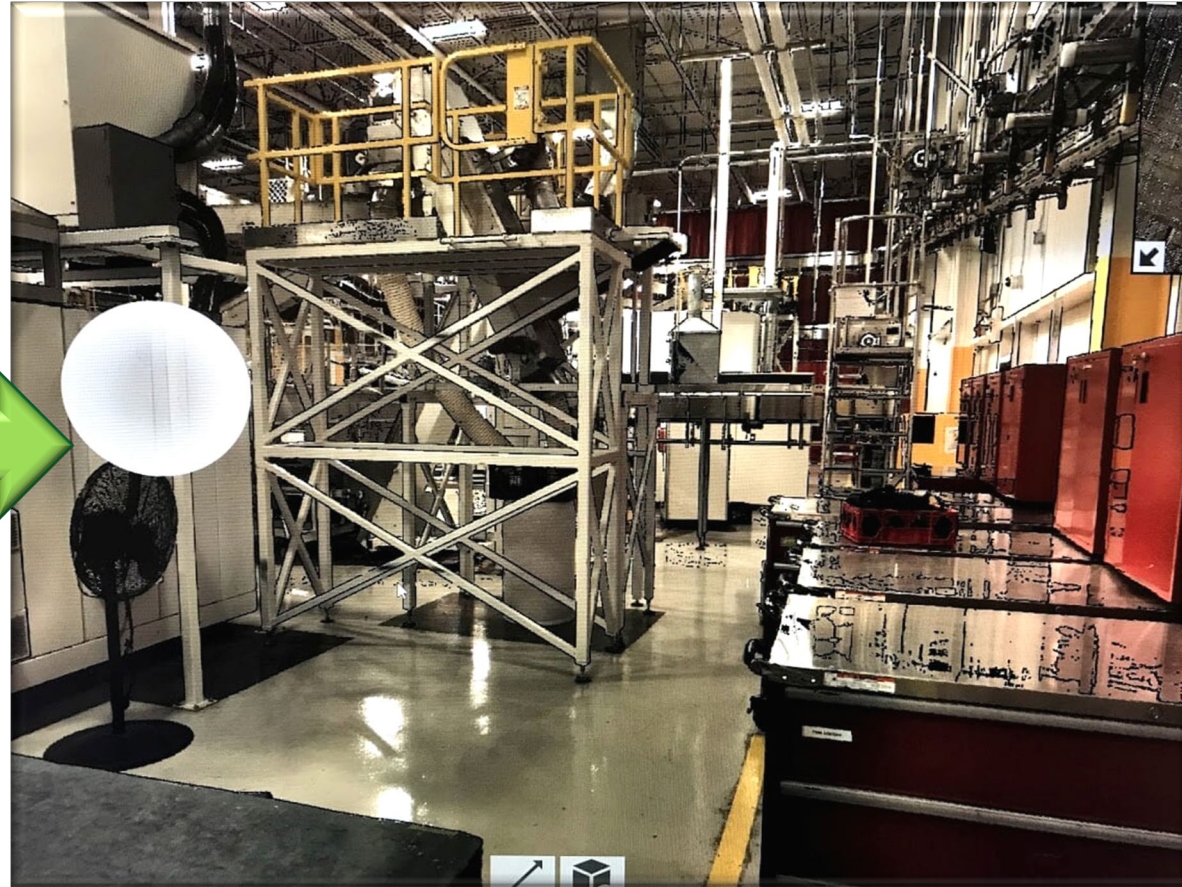


# 3D Model requested to design grating over open pit



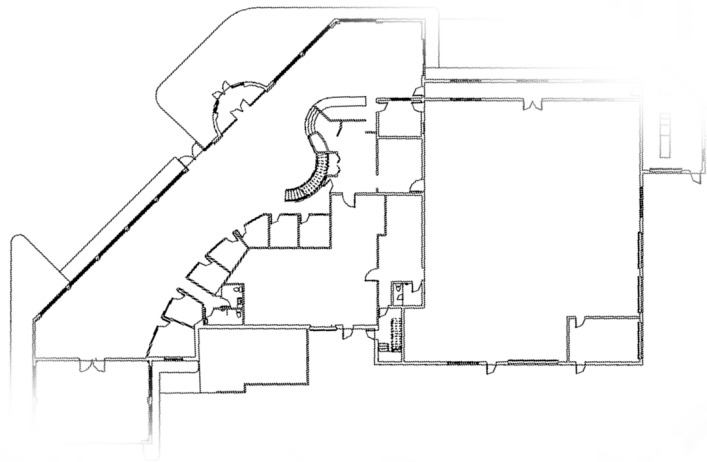
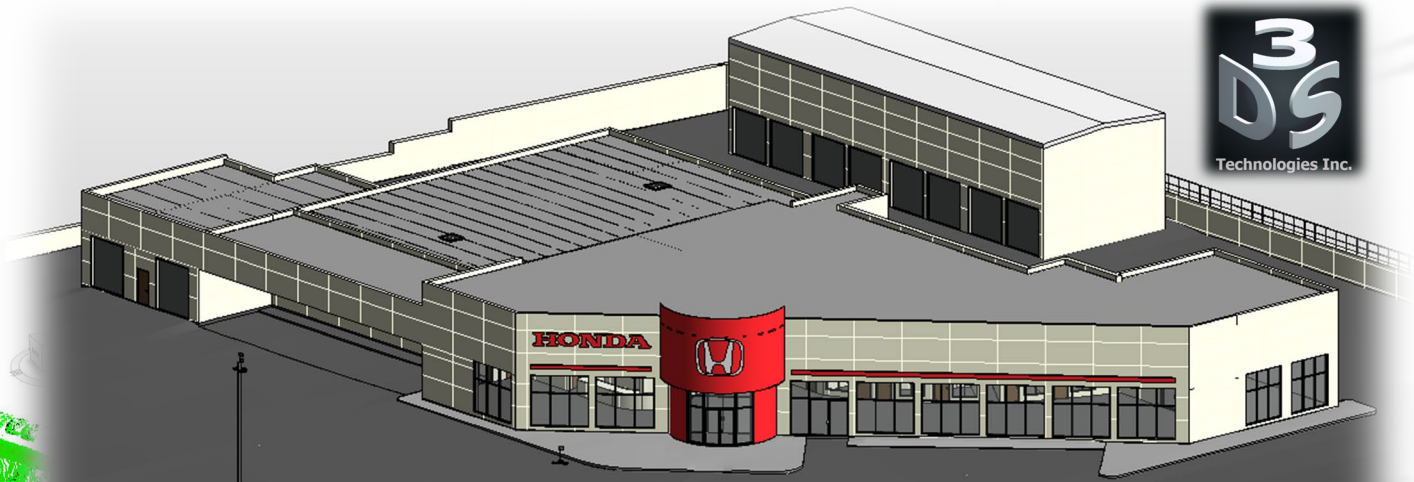
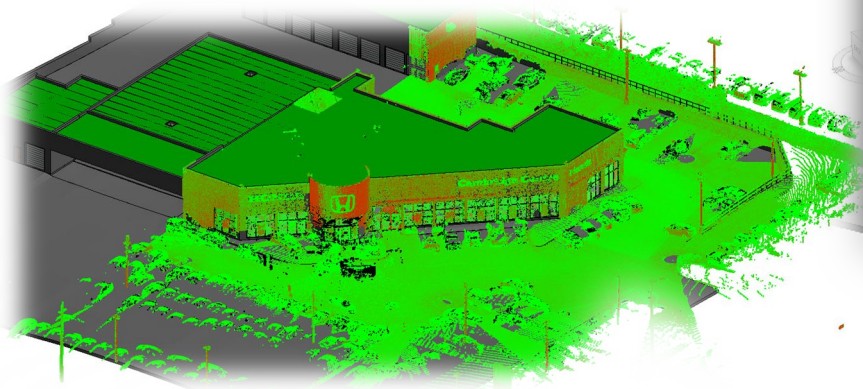


# Platform Design

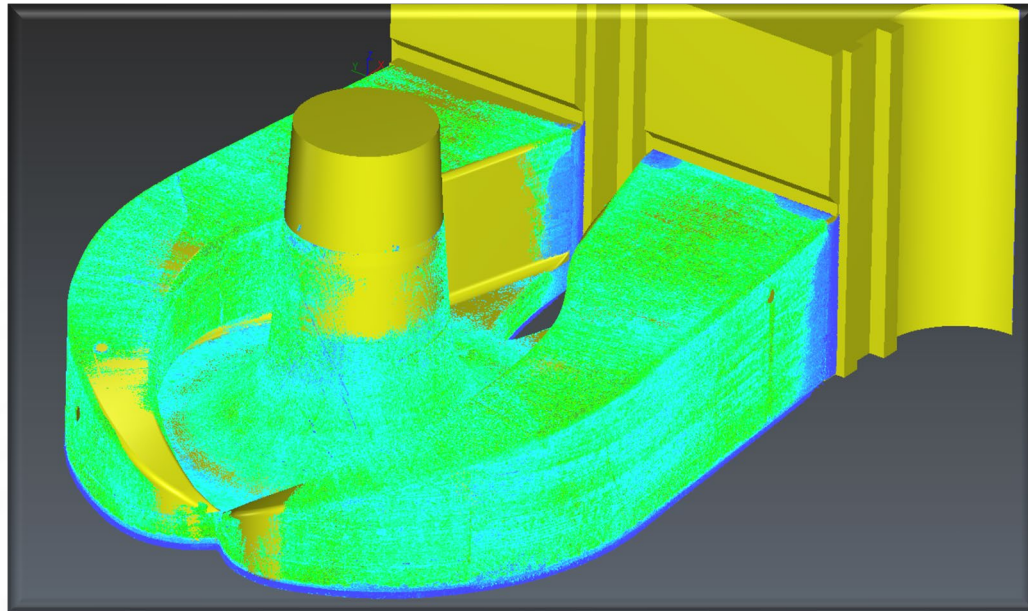


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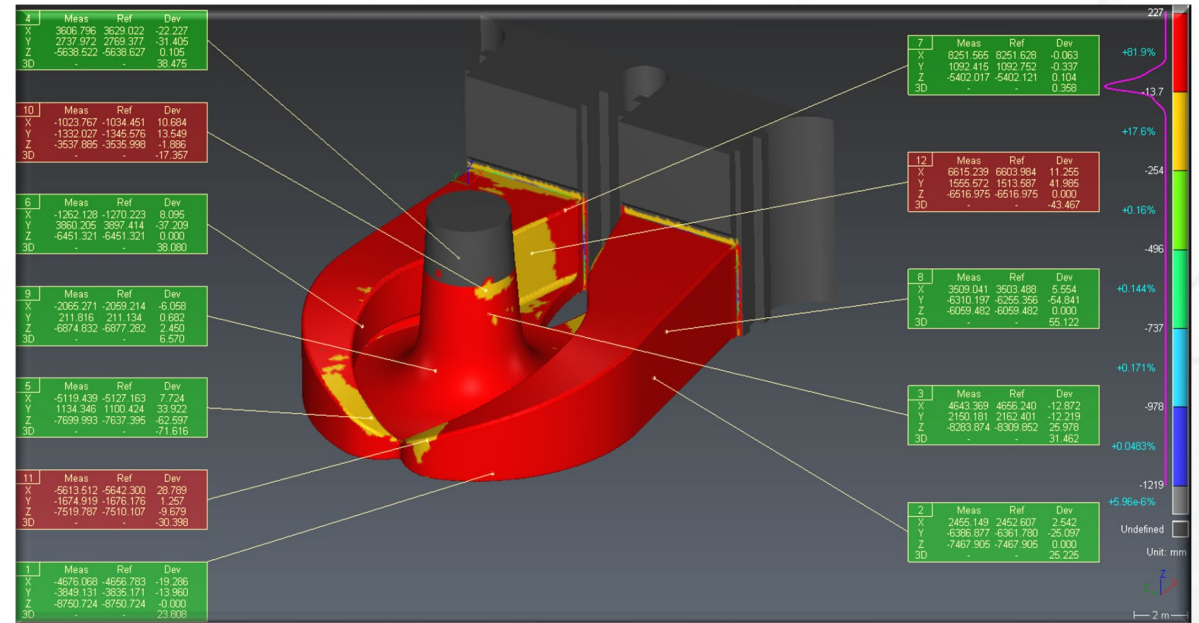
# Scan to Revit



# 3D Comparison



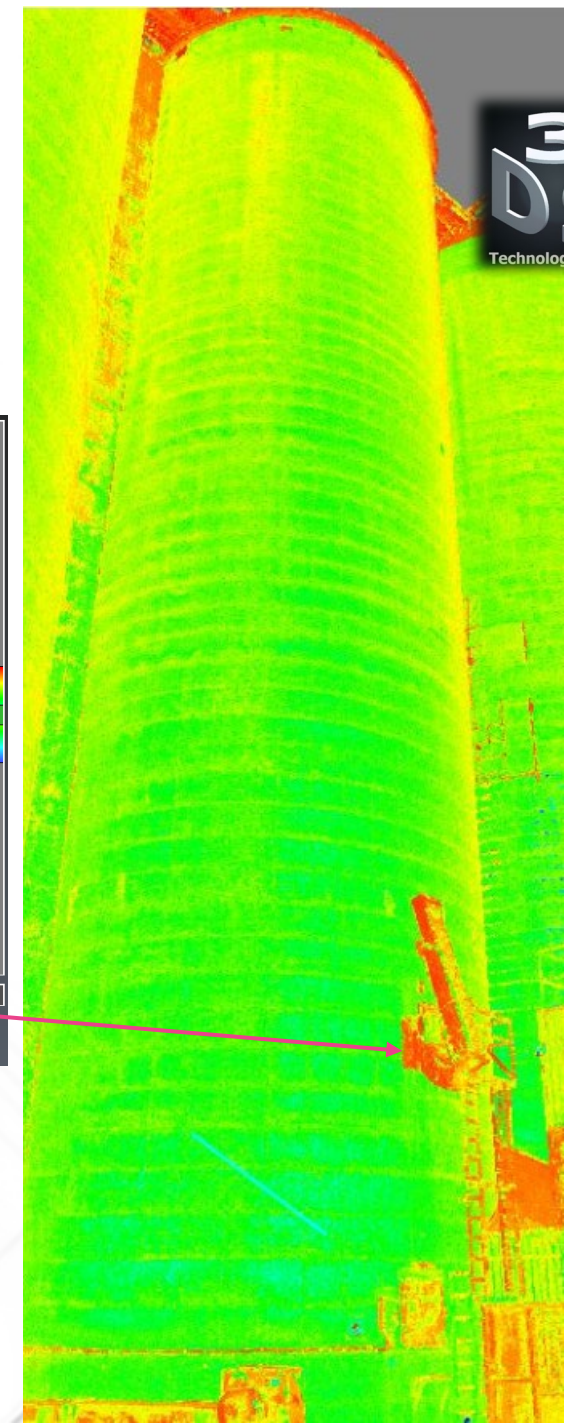
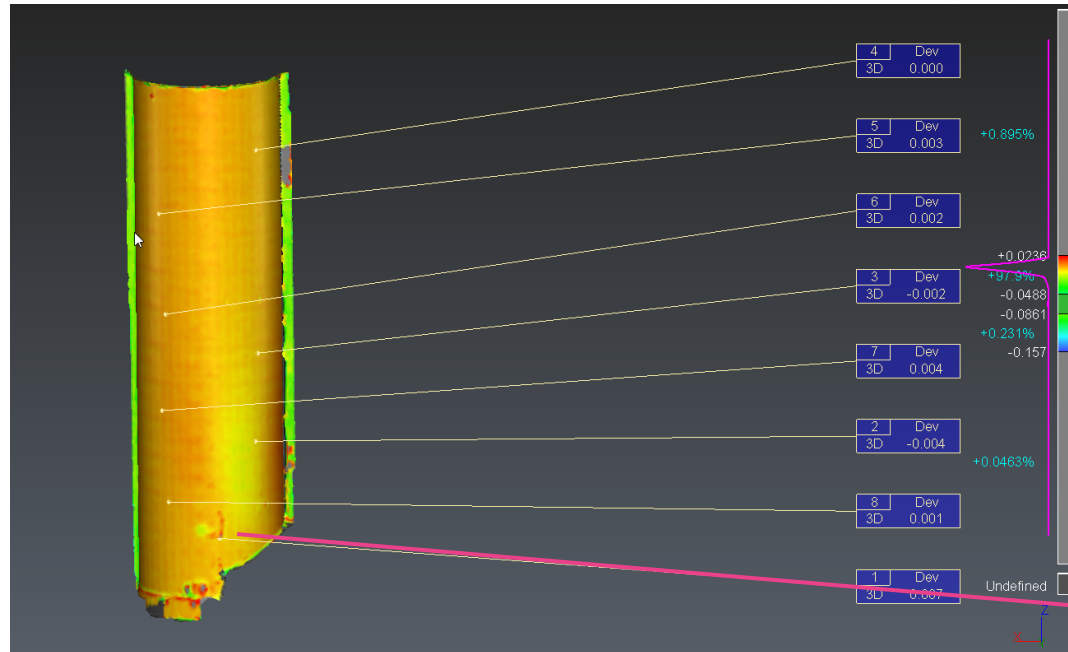
Scan Data Over Model



Comparison



# 3D Comparison



# 3DS Technologies

Capturing Every Detail

## Crane Rail Surveys



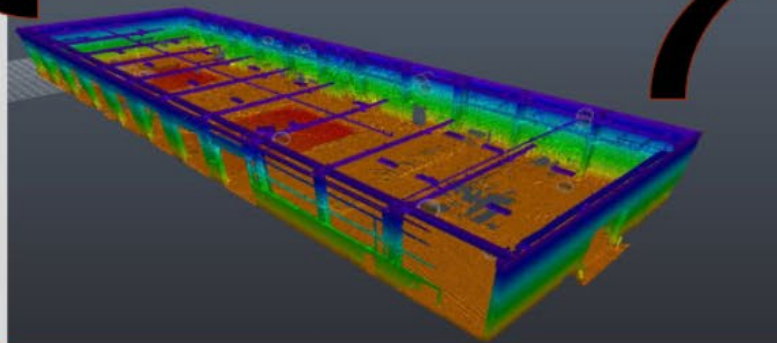
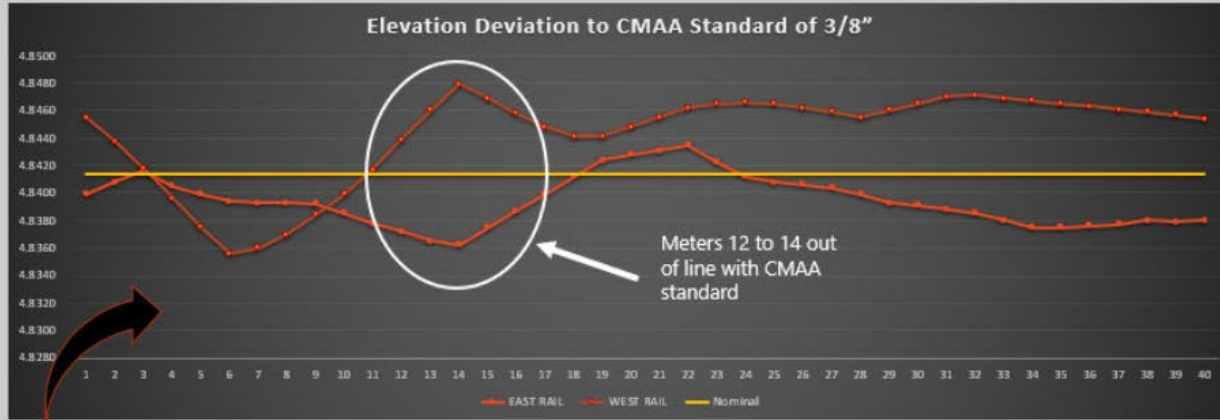
### Get a Quote:

Email: [info@3dstechnologies.com](mailto:info@3dstechnologies.com)

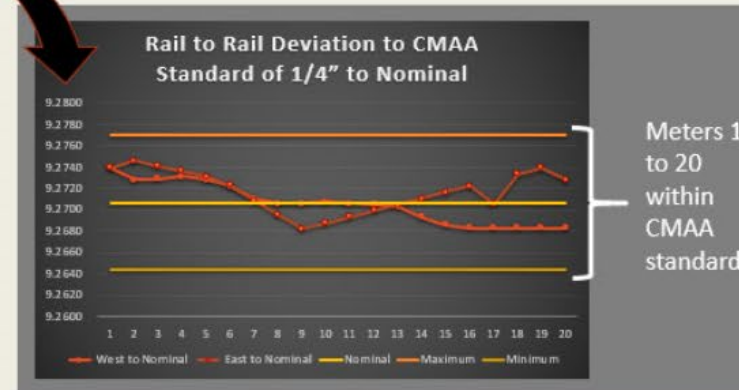
Phone: 519-766-5885

### Survey Includes

- Informative Easy to Read Graphs
- Survey Report
- Scan Data (easily utilized for future projects)
- Option for ongoing tracking of rail alignment



3D Lidar Scanning Point Cloud at 1.2mm Accuracy



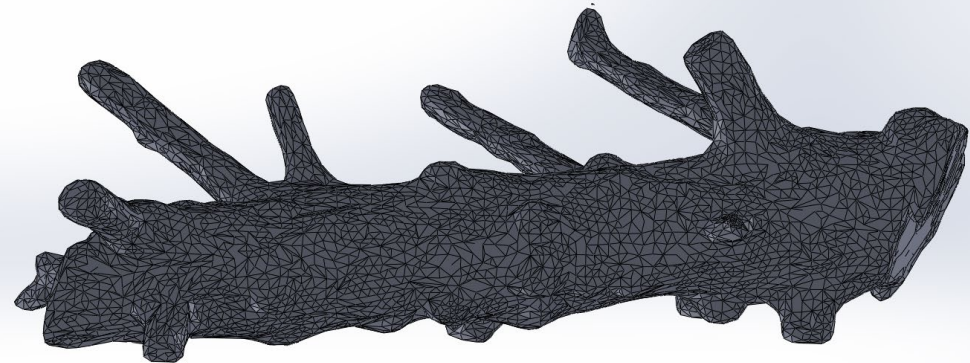
# Reverse Engineer



Trees for Children's Playground



STL File for Solidworks



# Pre-Installation Verification and Planning



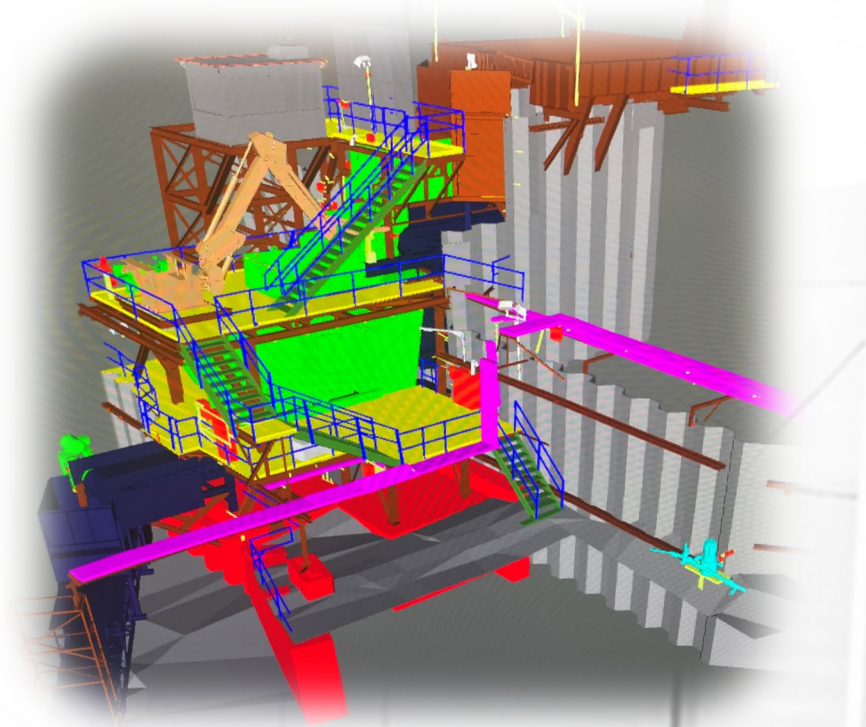
# Reality Capture to 3D CAD



Capture

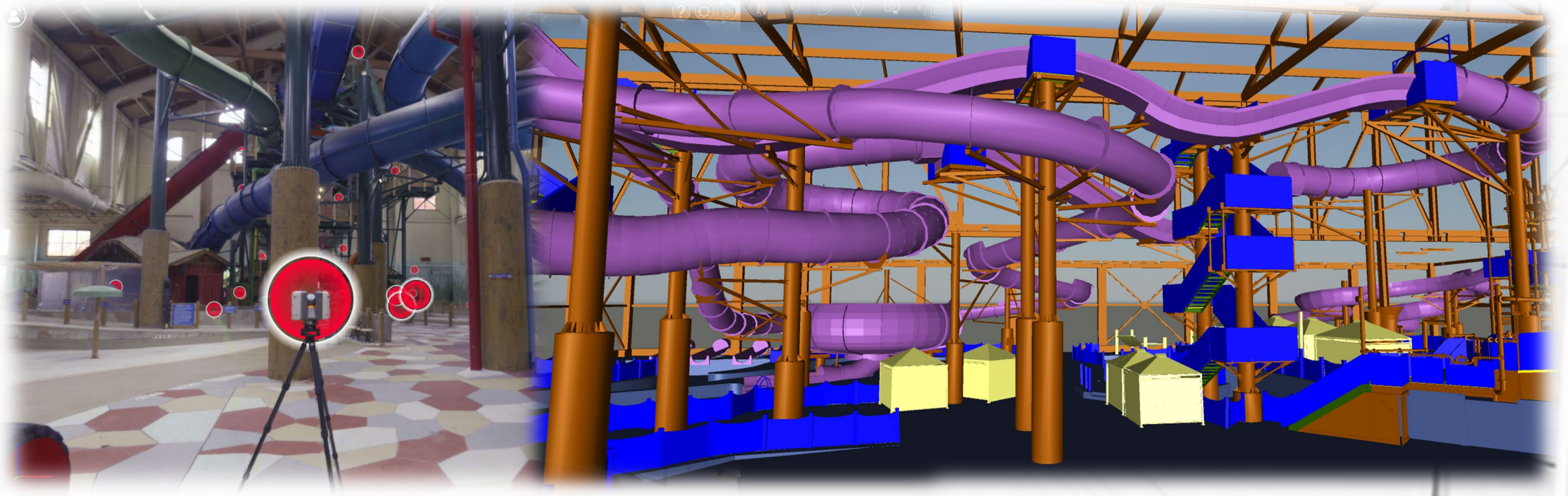


Register and  
Quality Assurance



CAD Model

# Water and Amusement Park Design



# Capture Every Detail



# Cases



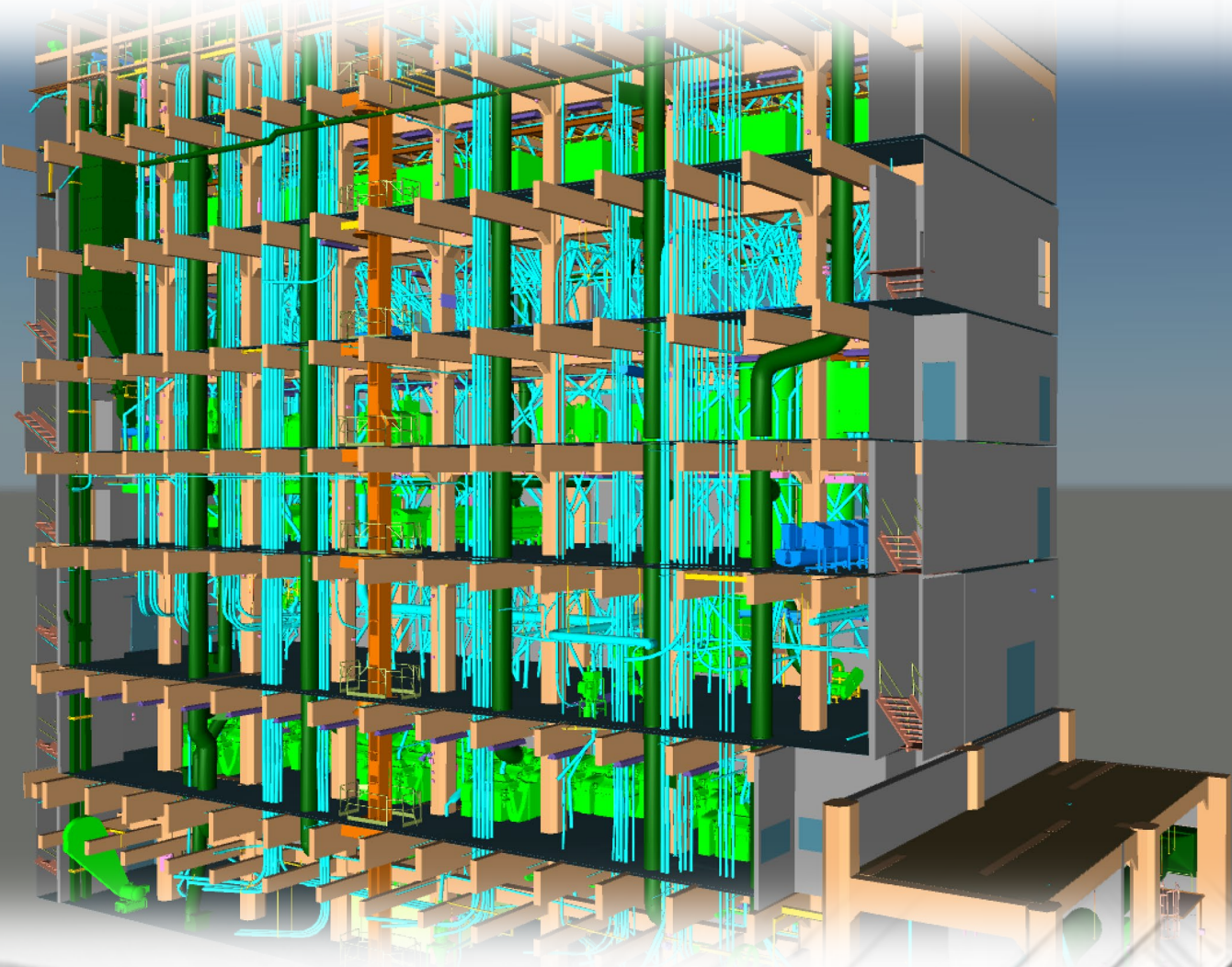
## Bridges, EA Assessments

## Historical Documentation



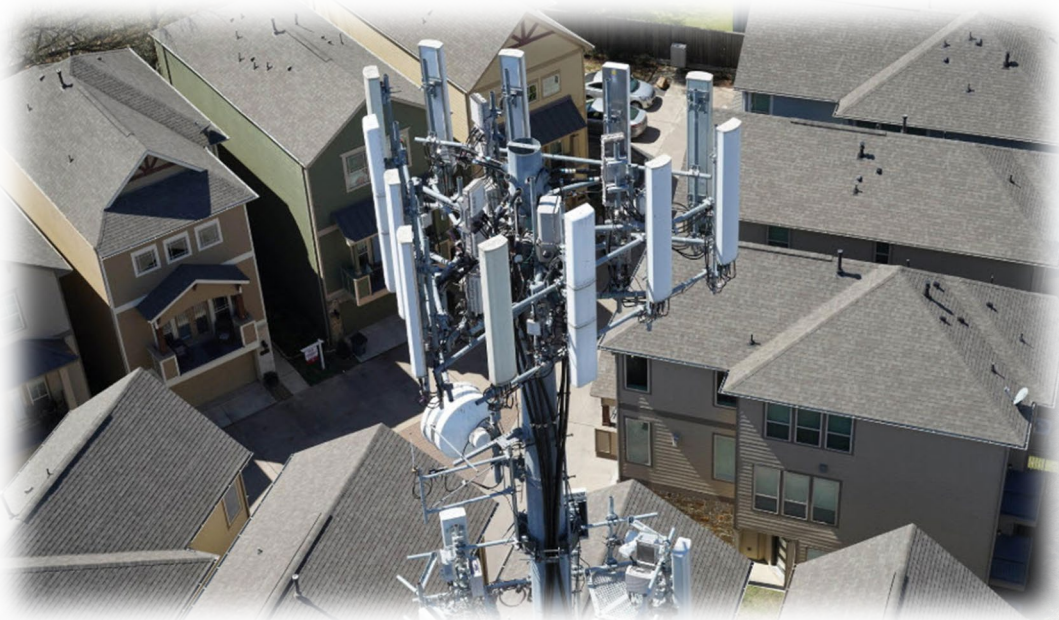


# Easily Visualize and Track Complex Piping





# Drone Services



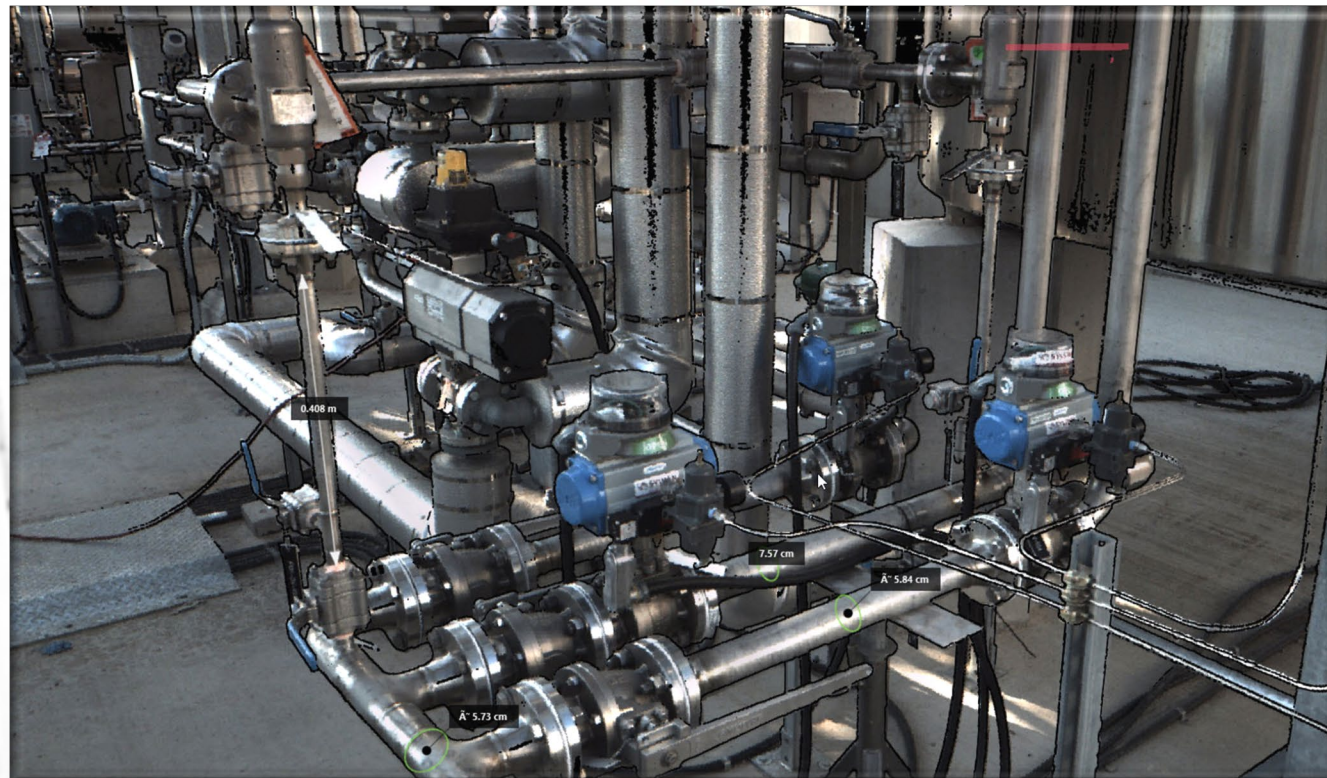
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# The Leica Difference



- when it has to be right **Leica**  
Geosystems

Major Competitor data



# 3DS TECHNOLOGIES CUSTOMERS



Alberici



GREAT LAKES ST. LAWRENCE SEAWAY SYSTEM

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