



#### /// THE GPRS VALUE



#### (%) NATIONWIDE SERVICE

We have team members in every major metropolitan area in the United States, ready to handle any project nationwide.



#### RAPID RESPONSE

Time is always critical in any construction project. We understand this and have developed our operations so we can be on site within 48 hours.



#### CONSULTATIVE APPROACH

Our Project Managers are trained to ask questions and provide you with answers. This consultative approach helps us quickly identify your project scope and ensure we provide valuable solutions to keep your job moving.



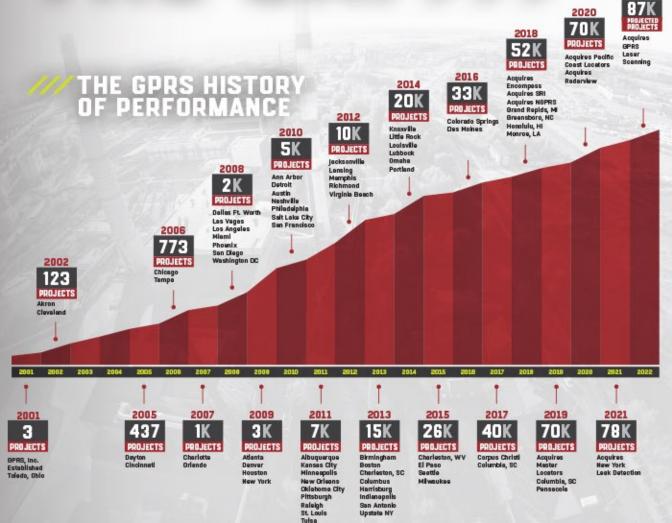


We deploy the best equipment operated by expert Project Managers. Since our inception, GPRS has completed hundreds of thousands of projects in North America with a 99.8%+ accuracy rating.

#### /// PROVEN ACCURACY

Since 2017, we have completed over 300,000 projects with a 99.8% accuracy rate along with a 99%+ approval rating according to our customer satisfaction survey. Historically, nearly 80% of our business is either repeat or referral. GPRS focuses on long-term performance and recognizes that repeatable accuracy will ensure customer satisfaction and business longevity

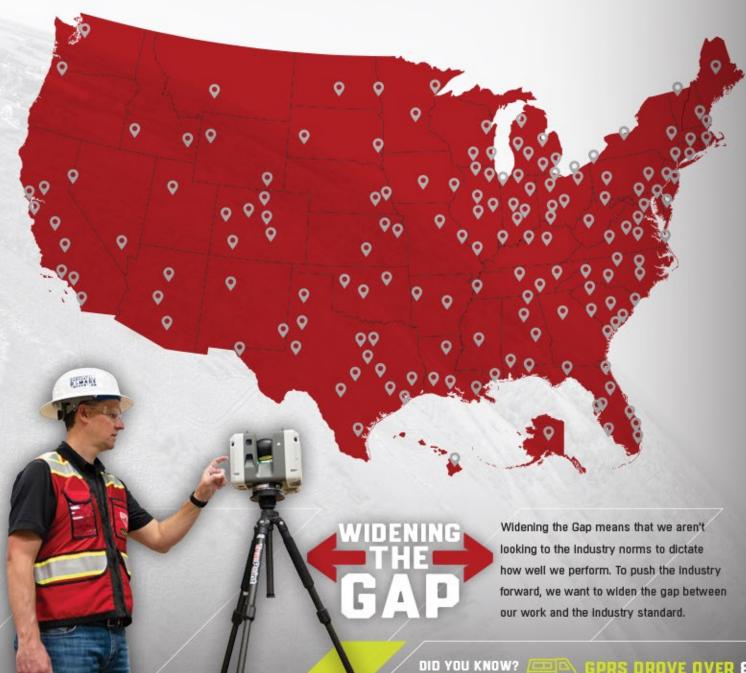




#### THE GPRS NATIONAL FOOTPRINT

Ground Penetrating Radar Systems provides our services throughout all major metropolitan areas in the United States. Our footprint ensures we can offer rapid response to your job sites and projects, often within 24 hours. We have over 300 highly trained personnel that are able to commit to large projects, obscure geographic locations, and unique job site requirements







#### /// RISK MANAGEMENT

GPRS services reduce the risk for you, your team, and your assets ■

- X ACCURATE AS-BUILT DATA
- ♠ EXPEDITE PROJECT PLANNING
- REDUCE CHANGE ORDERS
- **Q** ELIMINATE BUDGET OVERRUNS
- MAINTAIN PROJECT SCHEDULES
- PROTECT YOUR REPUTATION

#### INSURANCE COVERAGE

GPRS is prepared to meet the insurance and safety demands of the most rigorous project-specific requirements.

- Commercial general liability insurance policy: 1-million-dollar limit with a 10-million-dollar umbrella policy.
- Coverage includes products and completed operations.
- Commercial policies for Automobile Liability and Workers Compensation.
- Professional/Pollution Liability policy with a 5-million-dollar limit.



# WHAT'S UNDERNEATH

#### /// TEAM MEMBERS

GPRS is committed to providing opportunities and development for our people, who offer sensational service for our customers. The investment GPRS makes into its team members is rooted in our understanding that each team member is a crucial differentiator in our company's success.

#### TEAM DEVELOPMENT

Project Managers begin with a 3-month training program that marries classroom teaching and field mentorship. This program continues throughout their career in advanced field training courses. All field personnel are part of an industry-leading promotion track that measures their field accuracy, customer service, and professionalism. We invite them to join the GPRS Leadership Development Program, focusing on personal growth in leadership and business.

#### TEAM CHARACTERISTICS

The most critical component to our team members' work has always been their character. Each team member exhibits our core values both inside and outside the organization. When you combine personal character, team chemistry, and industry-leading competency, the result is sensational service for our customers.

#### /// CORE VALUES













INTEGRITY GROWTH MINDEDNESS SAFETY

MUTUAL RESPECT











#### /// PROJECT MANAGERS

AT GPRS, WE REFER TO OUR FIELD TECHNICIANS AS PROJECT MANAGERS. WHY?



#### START-TO-FINISH PROJECT MANAGEMENT

Our team members can assist your project from the scheduling and site walk phase through the reporting and billing phase. GPRS Project Managers are true professionals that deliver industry-leading customer service.



#### CLEAR & ACCURATE DATA / DELIVERABLES

3D laser scanning collects existing site conditions in the form of a point cloud, offering a precise digital record of a building or site with 2-4 mm accuracy. Point cloud data is imported into AutoCAD software to create 2D CAD drawings and 3D BIM models.



#### CLEAR COMMUNICATION

Our team members ask the right questions before arriving on site. While on site, they will do both a pre-job walk and a post-job walk.



#### A CAREER, NOT A JOB

Our field personnel are not just technicians, this is why we refer to them as Project Managers. They work beside a client through the entire process, providing excellent service. This is their career, their craft, and their trade. The result? An elite service.

## QUALITY STARTS HERE

#### /// THE GPRS ACADEMY

The GPRS Academy leads the industry by providing a structured and comprehensive approach to equipping Project Managers to locate utilities, scan concrete, and 3D laser scan sites. Our trainers give Project Managers the education they need through a classroom setting and a hands-on approach.

#### **EXPERT INSTRUCTION**

- GPRS Project Managers are taught by industry experts with decades of field experience.
- Trainees are taught how to interpret complex ground penetrating radar images and collect precise as-built site data.
- All training is conducted through an unparalleled utility locating, concrete imaging and 3D laser scanning academy.

#### **DUR TRAINING FACILITY**

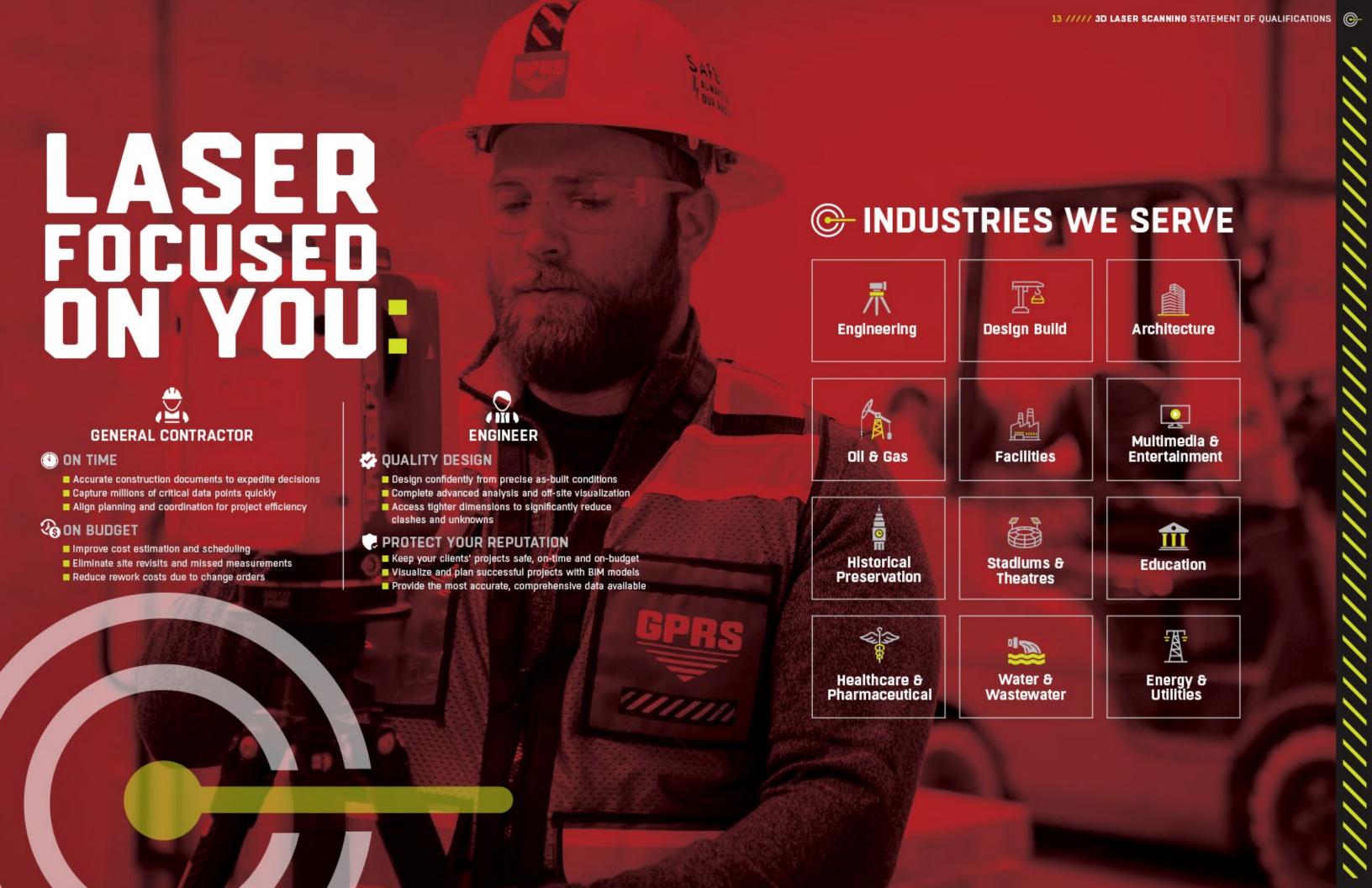
- Our Project Managers are thoroughly trained in our state-of-the-art, world-class training facility.
- All PMs are trained on a specially outfitted, 3,000 sq ft concrete slab containing post-tension cables, reinforcements, and conduit.
- Team members also gain real-world experience in a controlled, safe environment with our simulated indoor gas station and elevator shaft.
- Project Managers receive comprehensive training on the workflow for 3D laser scan data collection, processing, registration, and quality control.

#### PRACTICAL APPLICATION

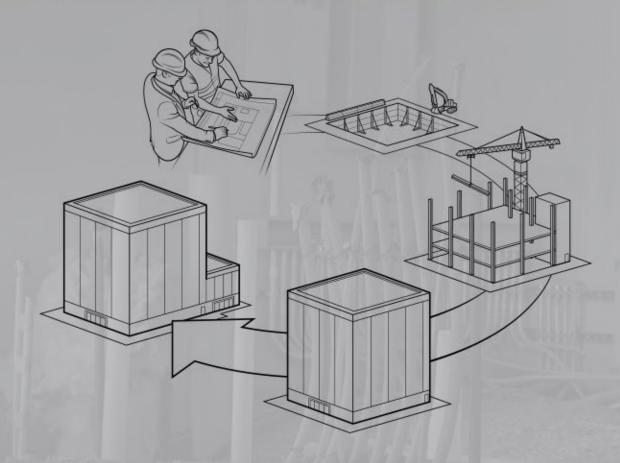
- Each Project Manager completes up to 3 months of rigorous training.
- This training includes shadowing in the field, executing the scanning process under the supervision of a trainer, and more.
- Our trainees leave the program with a greater than 99.8% subsurface scanning accuracy







#### PROJECT CYCLE SOLUTIONS



#### /// LIFE CYCLE SOLUTIONS

GPRS can provide solutions for the entire life cycle of your projects.

#### **PLANNING DESIGN**

We can provide information on as-built site data and underground utilities before plans and development are finalized. GPRS utility locating and 3D laser scanning services supplement existing maps to provide a more complete picture of existing assets, saving time and money

#### CONSTRUCTION

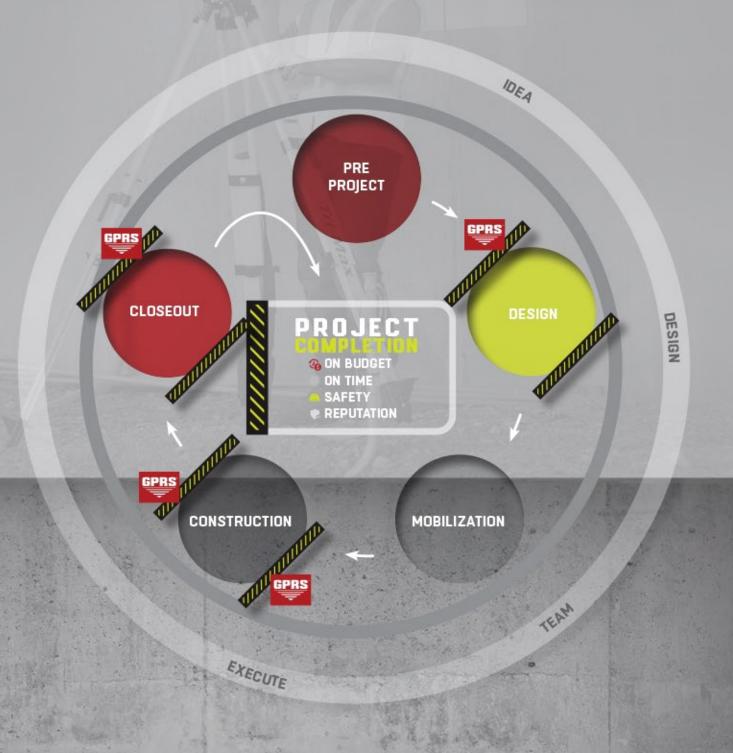
Prior to trenching, directional drilling, and other excavation work during the construction and renovation of subsurface infrastructure, it's critical to pinpoint underground assets to develop a plan for safe crossing. 3D laser scanning captures exact building dimensions, locations and layout, information that is crucial to the success of your project

#### O6M/REMODEL

Construction and renovations require design modifications and subsurface excavations.

GPRS is well equipped to perform laser scans and locates for public and private property assets. As a project evolves, we can continue to provide support as we keep detailed reports of every project we complete

### GPRS PROJECT CYCLE TIMELINE







As-bullt surveys have never been more accurate than with 3D laser scan technology. 3D laser scanning captures exact building dimensions, locations, and layout: Information that is crucial to the success of your project. Items are often moved, added, or removed from the original plan, so as-builts are invaluable in design, construction, renovation, prefabrication, and facility modifications.

#### CASE STUDY: AS-BUILT CREATION



#### TASK:

3D laser scan a Water Treatment Plant and deliver raw point cloud data.

#### PROJECT APPLICATION:

An Engineering Firm was generating construction drawings to expand an existing Water Treatment Plant.



#### PROBLEM

- No as-built drawings existed for the Water Treatment Plant. The firm needed accurate field conditions to create new layouts and plan for the facility expansion.
- Exact dimensions were required to plan modifications and fabricate pipe.
- The Engineering Firm was located in California, the Water Treatment Plant was located in Texas. It was important that they had accurate information digitally to begin design planning.



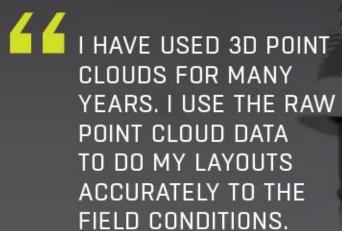
#### SOLUTION

- Using a Leica ScanStation, GPRS' Project Manager completed 40 laser scans of the building to capture architectural, structural, and MEP features.
- The client received a colorized point cloud in ReCap (.rcp files and related supporting files) and TruView files.



#### BENEFITS

- Laser scanning is an extremely efficient and accurate way to gather data necessary to create construction drawings of a building or space.
- 3D laser scanning eliminated the firm's travel to the Water Treatment Plant. In one day on site, enough scans were taken to create a complete colorized point cloud of the space.
- 3D laser scan data provided the Engineering Firm critical tie points on tanks and lines, information that was crucial to the expansion.



MIGUEL SANCHEZ | CAD DESIGNER



#### A3D BIM MODELING

3D BIM models are accurate digital representations of a building or site to facilitate design, construction, and operational processes. 3D BIM models provide clients with the ability to break down architectural, structural, and MEP building features and see how they fit into a single finalized structure. Users can Isolate and alter walls, columns, windows, doors, etc. to support the planning and design needs of any project.

## CASE STUDY: 3D LASER SCANNING



#### TASK:

An engineering firm needed to have existing conditions of a power plant documented and modeled to plan for renovations.

#### **PROJECT APPLICATION:**

Laser scanning to create an intelligent 3D BIM model would accelerate the engineering of facility upgrades.



#### PROBLEM

- The client needed to accurately document the existing conditions of the plant without interruptions to the power supply.
- The client required 2-4 mm accuracy of dense piping and pipe runs throughout the facility.
- The client needed to guarantee that installations complied with safety regulations.



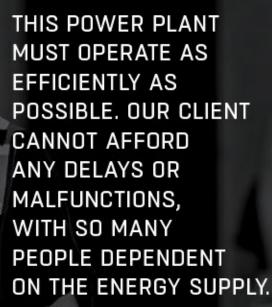
#### SOLUTION

- Where accessibility is difficult and areas are unsafe, 3D laser scanning offers a solution to capture precise as-built data from a distance.
- In one day on site, GPRS' Project Manager used the Leica RTC360 laser scanner to capture 150 laser scans, documenting existing conditions of the facility.
- GPRS generated a 3D BIM model for use in CAD software, including all civil, structural, electrical, and mechanical features, piping, and conduit 1" and larger.



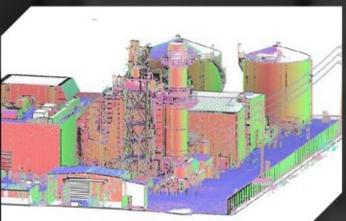
#### BENEFITS

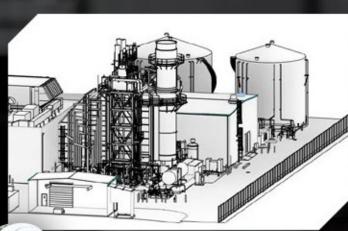
- Due to the vast space and density of the piping, it would have been much more difficult and time consuming to accurately depict the location of pipe runs, structural features, and other details in the plant manually.
- The point cloud data from laser scanning was used by CAD technicians to create an intelligent 3D BIM model for planning, fabrication and clashdetection.
- Verified measurements and virtual planning guarantee installations will comply with safety regulations.
- Using virtual 3D models, the firm can plan and model future developments to manage the facility without having to re-enter the site.



CHAN LAM, PE SENIOR EPC PROJECT MANAGER/ PRINCIPAL MECHANICAL









## CLASH DETECTION/ PREFABRICATION

3D laser scanning captures as-built site conditions with a high level of precision: helping to identify potential clashes, fabricate components, and plan a flawless installation. Information can be shared with other teams to ensure everyone is on the same page and can coordinate their work effectively. This saves time, money and headaches, by preventing costly modifications in the field.

#### CASE STUDY: CLASH DETECTION/PREFABRICATION

#### TASK:

Field verification to prefabricate ACM panels.

#### PROJECT APPLICATION:

Our client specializes in installing exterior envelope systems for commercial and industrial buildings. On this project, they were installing ACM (Aluminum Composite Material) panels to the canopy of a newly constructed airport terminal.



#### PROBLEM

- The construction plans did not match the existing conditions at the site. A deviation could cause a major issue. The installation process needed to be precisely planned to avoid rework.
- The shape of the canopy was complicated and stood 65 feet in the air. The client needed field verification and a plan to expedite proper installation of the panels.
- They were working overhead in a lift. There was no room for trial and error. The client was not interested in hanging panels, discovering issues, and having to take them back down.



#### SOLUTION

- The Project Manager conducted a site walk to devise a plan for the client.
- The canopy and curtain wall of an airport terminal were 3D laser scanned to capture precise as-built data and generate a 3D model and 2D drawings to facilitate ACM panel installation.
- 22" x 34" 2D CAD drawings were created with the panel layout for the client to take to the field. The panels were labeled with a custom number and included cut and shim points.



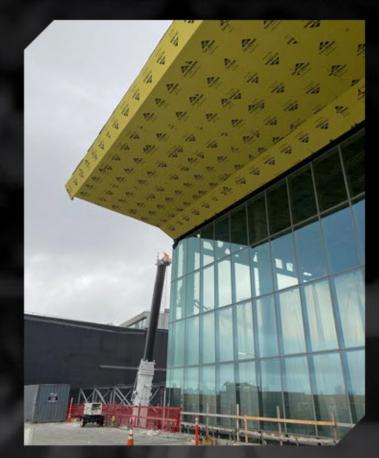
#### BENEFITS

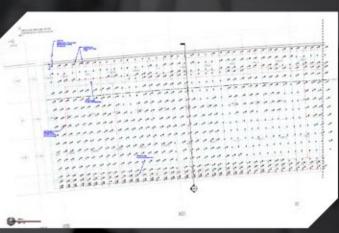
- Laser scanning obtained exact measurements for the client and took away any guesswork from this project.
- To circumvent the active construction site, the Project Manager scanned the site at night to eliminate movement and trades working.
- The client was able to fabricate components offsite and plan a flawless installation.

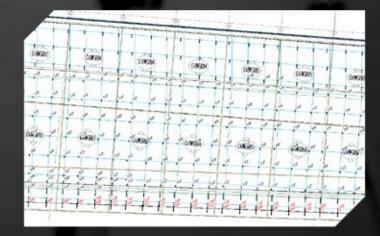
CONTRACTING GPRS TO
DO A 3D LASER SCAN
HAS BEEN ONE OF THE
BEST PROJECT DECISIONS
WE MADE. WITH THEIR
HELP WE WERE ABLE TO
REDUCE COST, INCREASE
PRODUCTIVITY, AND
DELIVER THE PROJECT
ON TIME.

VINCENT M. SUPERINTENDENT









## MIXED REALITY DEVELOPMENT MODELS

3D laser scanning can be used to create 3D models and 3D mesh files for use in mixed reality, projection mapping, and 3D gaming. When generating virtual reality experiences, computer-generated objects must precisely interact with the physical environment. 3D laser scan technology documents real-world environments with millimeter precision and GPRS reconstructs them into a dimensionally accurate 3D digital representation. Environments are quickly captured and rendered and prove to be more realistic and more engaging than those produced by traditional hand measurements. Once the environments are in your database, they can be adjusted and modified. Photorealistic assets are delivered in high detail with texture, providing the perfect element for stunning visualization applications.



#### TASK:

GPRS 3D laser scanned The Bank of America Stadium and the Gentle Giant panther statue for The Famous Group and the Carolina Panthers to create a mixed-reality experience for the home opening football game vs. the New York Jets.

#### PROJECT APPLICATION:

Those in attendance at the game were treated to a mixed reality experience that included an enormous virtual panther skulking menacingly throughout The Bank of America Stadium. 70,000 fans watched as the digital feline leaped from the center of the stadium and up onto the lumbotron. At one point the panther used its teeth to rip down a mixed reality Jets flag before tearing it to shreds on the field.



#### PROBLEM

- To sell the realism of mixed reality, computer-generated objects must precisely interact with the physical environment.
- As-built information and a 3D model of The Bank of America Stadium did not exist.



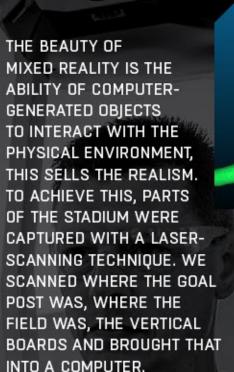
#### SOLUTION

- In 1 ½ days on site, using a Leica P40
   3D laser scanning is a fast and ScanStation, point cloud data of the interior field, stadium bowl, seating, and upper rigging area was captured.
- To give the panther virtual objects to climb on and interact with, CAD technicians used the point cloud data to create a Revit 2021 LOD 200 3D model of the stadium.
- The Gentle Giant panther statue at the front of the stadium was 3D laser scanned to create a triangulated 3D mesh model in .fbx file format for the animation/CGI.

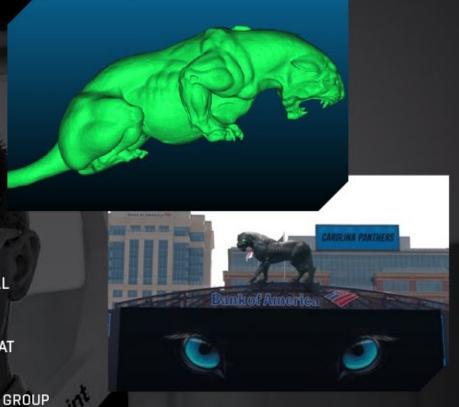


#### BENEFITS

- accurate way to digitize real-world objects for use in computer-aided design (CAD) and mixed reality.
- 3D models are created in our corporate office by experienced engineers and CAD technicians.



GREG HARVEY | THE FAMOUS GROUP





COMPLIMENTARY KMZ & PDF MAPS WITH EVERY UTILITY LOCATE COMPLIMENTARY ACCESS TO



### READY TO PUT YOUR NEXT PROJECT ON THE MAP?

VISUALIZE YOUR SUCCESS WITH GPRS.

/// GPRS SERVICES

## MAPPING & MODELING

GPRS can Increase the level of communication and safety on your project by providing clear and understandable maps. GPRS provides complimentary KMZ and PDF maps with every utility locate. When you upgrade to Premier Maps and Models created by the The GPRS Mapping & Modeling Team, you are showing your commitment to keep your project safe, on-time and on-budget.



#### MAPS PLUS™

- Site Plan
- Floor Plan

#### MAPS PREMIUM"

- HI-Res Site Plan
- Floor Plan with Linework

#### MAPS PREMIER"

- HI-Res Site Plan
- Floor Plan with Linework

### MODELS (3D)

#### MODELS PLUS"

- Virtual Tour
- Point Cloud
- Mesh Files

#### MODELS PREMIUM"

3D Model

#### MODELS PREMIER"

- 3D BIM Model
- Mixed Reality Development Models
- Advanced Analysis



CLOUD-BASED INFRASTRUCTURE MAPPING SOLUTION



**CARROOM** 





## ABOVE AND BELOW GROUND DATA CAPTURE

The combination of laser scanning and ground penetrating radar captures precise documentation of above ground existing conditions and subsurface information. Receive clear and understandable findings of structural, MEP, and field markings in point cloud data format, 2D site plans, and 3D models. Accurate data allows clients to expedite design planning, extract 3D coordinates and measure distances, along with the ability to mark-up and share this with project teams. Receiving critical site information will lower project risks and increase project efficiency.

## CASE STUDY: ABOVE AND BELOW GROUND DATA CAPTURE

#### TASK:

A Los Angeles, California high school required 3D laser scanning of the above ground and below ground infrastructure to create 2D CAD drawings and plan for HVAC system upgrades throughout the campus.

#### PROJECT APPLICATION:

The client required precise documentation of the surrounding structural elements and subsurface so they could design piping, reinforcing, and coring in the least invasive way.



#### PROBLEM

- A 12-year-old high school was replacing the piping on 16 HVAC units throughout the campus.
- The piping for these units runs intricately in and out of buildings, and through retaining walls and mechanical yards.
- The areas that the pipes thread through do not have any as-builts or existing plans.



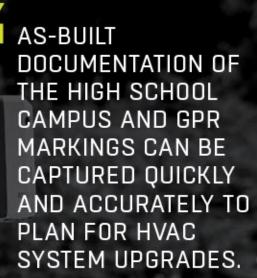
#### SOLUTION

- Using the Leica RTC360 laser scanner, a Project Manager captured elements of the surrounding campus and GPR markings in less than 2 hours on site.
- This project was laser scanned in full color, allowing the client to easily visualize and identify structural elements, pipes, conduits, and concrete reinforcement points inside the point cloud.
- CAD engineers created 2D AutoCAD floor plans and exterior elevations, PDFs with and without the point cloud overlayed.



#### BENEFITS

- The combination of laser scanning structural and ground penetrating radar markings provided the client a high-definition 3D comprehensive view of the campus, including both visible and invisible elements.
- With 3D laser scan data, the client can verify the HVAC mechanical equipment with confidence knowing high accuracy instruments minimize position error throughout the 3D space.
- The client has the most up-todate, accurate and comprehensive information to design HVAC upgrades.



CHRIS SANFORD | BUSINESS DEVELOPMENT MANAGER, GPRS









/// GPRS SERVICES



### CONCRETE IMAGING

Because concrete drilling comes with risk, GPRS Project Managers are equipped with multiple technologies to clear areas before core drilling and anchoring. Our scanning and imaging services can be completed on any surface, including concrete slabs, walls, columns, and beams. Upon completing the scanning process, you will have a clear layout of critical targets or impediments such as post-tension cables, rebar, beams, and condults.

- CONCRETE CORING APPLICATIONS
- PRE-PLANNING AND DESIGN
- SAW CUTTING APPLICATIONS
- STRUCTURAL ANALYSIS

## WHAT'S HIDDEN CPRS FINDS IT.



When GPRS places a GREEN BOX within a layout prior to cutting or coring concrete, we guarantee that area to be

FREE OF OBSTRUCTIONS

## VIEW YOUR INFRASTRUCTURE WITH SITEMAP.



SiteMap is a singular subsurface infrastructure mapping solution that allows users to experience their facility data with ease. SiteMap provides map data, subsurface utility information, and a common repository for facility artifacts. This geospatial solution also acts as an all-inclusive digital storage space for blueprints, as-built drawings, maintenance logs, permits, and more. The beauty of SiteMap is that it can geolocate every piece of information so the content can be located and cross-referenced on demand. SiteMap simplifies facility management by providing its users with a powerful all-in-one solution.



#### ORGANIZATION SIMPLIFIED

It's common for subsurface Infrastructure data to be fragmented. SiteMap alleviates the obstacles that hinder effective organization, such as:

- DRAWINGS BEING STORED IN MULTIPLE PLACES
- MAINTAINING OUTDATED AS-BUILT DRAWINGS
- RETAINING PARTIAL OR INCOMPLETE SITE DATA



#### **DIGITAL PLAN ROOM**

The Digital Plan Room acts as the central repository for facility documents. These documents are directly viewable in the Map Viewer when appropriately tagged with the location information. The Digital Plan Room is a secure space to store essential and relevant facility documents.

FILE STORAGE



HISTORICAL DRAWINGS



SITE PHOTOS



**DRONE FOOTAGE** 



DIGITIZED BLUEPRINTS

#### ORGANIZE YOUR ASSETS

- ACCURATELY MAPPED
- DIGITALLY STORED
- EASILY ACCESSIBLE

VIEW SITEMAP IN YOUR OFFICE OR ON YOUR MOBILE DEVICE



The Map Viewer makes viewing facility data easy as it allows the user to attach locational data to specific uploaded documents. This feature enables facility managers to track and locationally designate documents for reference quickly. Additionally, this makes sharing and updating location documentation a more fluid experience.



VIEWABLE, SEARCHABLE MAPS



3D MODELING VIEWER



TAG SITE FEATURES TO MAPS



## BEYOND BUSINESS AS USUAL

## /// GPRS CUSTOM SERVICE PLANS

Rather than send a rigid rate sheet to prospective clients, GPRS can create a customized service plan. We consider our industry experience, national footprint, and operational/scheduling capacity to craft a customized plan just for you.



#### SCHEDULING

With one single point of contact for your company, GPRS can schedule utility locating, video pipe inspection, and concrete scanning, and laser scanning projects for your site with one call.



GPRS understands that clear, understandable, and consistent pricing is a big deal. While we can provide consistent pricing nationwide, we can craft a cost structure that makes sense for the scope of work.



Every campus, site, and facility have different challenges. Since our inception, GPRS has completed hundreds of thousands of projects and relies on that experience when crafting a site-specific plan for safety, scanning, and reporting.









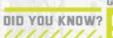
We're excited to unveil our latest service program, GPRS Partnership Plus™.

GPRS Partnership Plus is an exclusive service agreement and is only available to our most valuable clients. You'll receive premium benefits and services when choosing GPRS Partnership Plus.

Join us in the pursuit of 100% subsurface damage prevention.

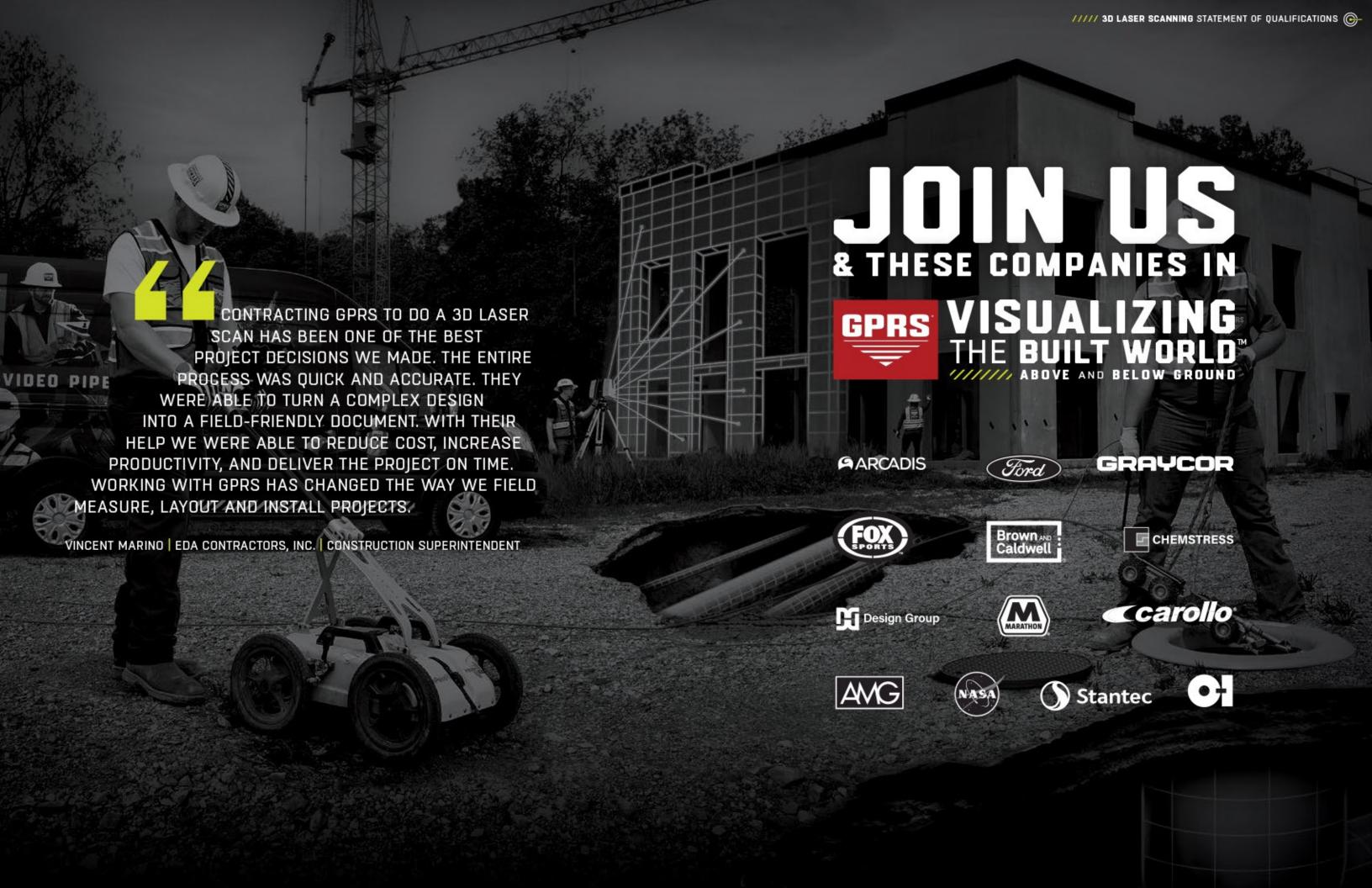
THE RIGHT CHOICE FOR SAFETY





OF THE ENR TOP



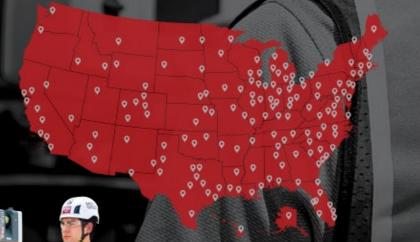




## SCHEDULE A PROJECT//

GPRS has an unmatched nationwide service network making it easy to find an expert Project Manager in your area. Please contact your local GPRS Project Manager for information, pricing, and scheduling needs.

### NATIONWIDE COVERAGE



SCAN TO



**NEAR YOU** 



MAKE SCHEDULING EASIER WITH THE GPRS APP.





GPRSING CO