House Committee on Education and Workforce

Subcommittee on Workforce Protections

Hearing – "Building an AI-Ready America: Safer Workplaces Through Smarter Technology"

February 11, 2026 at 10:15 AM

Testimony Submitted

By

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President

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Chairman Mackenzie, Ranking Member Omar, and Members of the Subcommittee, thank you for the opportunity to participate in today's hearing exploring such an important topic: how we can use technology to keep our nation's employees safe and productive.

My name is Jeff Buczkiewicz, President and CEO of the Mason Contractors Association of America. MCAA represents a $41 billion industry that employs approximately 4 million employees from coast to coast. We touch every Congressional District in the country. I'm excited to be here today to share where I see the construction trades becoming some of the most technologically advanced sectors in our economy.

At the Mason Contractors Association of America, we have two duties: help our members keep their workers healthy and productive and make this industry attractive so young people want to join the masonry field and have long, successful careers helping build the infrastructure our economy relies upon.

Four years ago, I saw AI coming. I knew if we didn't take advantage as an industry to build tools and programs that actually worked specifically for the masonry industry, someone else would try and the only options would be general, expensive, and most likely not too helpful for our members and their employees. I tasked my team to go innovate and we have spent the past four years building GEORGE, a purpose-built AI system for the masonry industry.

GEORGE, named after the first President of MCAA, can take pictures and videos of jobsites to immediately tell my members, their foremen, and employees if their wall bracing plans and implementation meet safety regulations and will actually prevent a wall collapse (one of the most dangerous circumstances on a construction site), ensure in real time employee PPE compliance so that remedies are immediately implemented instead of focusing on a "What happened?" after an accident has occurred, and be a virtual storehouse for best practices and safety regulations that can be immediately recalled at a moment's notice.

Our members not only build new construction, but a big sector of our work is restoring and repairing old and historic buildings throughout our country. As a result, we built a Restoration and Retrofit AI assistant, ensuring our contractors and their employees have extra eyes on the buildings and are equipped to address unique challenges that old construction materials and buildings always present. At this year's World of Concrete, which is the second largest annual trade show in the country, our hands-on AI Test Drive was our best attended program at the show, where we had contractors with both new construction and restoration practices drooling over the impact these programs could have on their jobsites.

This might just seem like we are jumping on the AI bandwagon, but what I want to reiterate to you today is that we have spent FOUR YEARS developing these systems to keep masonry employees safe, healthy, and productive. Over the next 5 years, estimates are showing that the construction industry will lose over 40% of our workforce to retirements. Construction is hard work. We must embrace systems that not only keep our employees going home safe every night, but that they can use to increase productivity, keep the wear and tear of construction work to a minimum allowing longer careers, and allow them to safely complete their jobs more efficiently, saving time and money. It doesn't hurt that we are also seeing this new generation of young men and women (recent high school graduates) who grew up on video games and smartphones, who just think this new technology is also really cool!

But it's not just AI. We're using LiDAR (Light Detection and Ranging) scanning to evaluate career and technical education students' masonry walls. An inexpensive handheld scanner creates a digital twin and scores the work instantly, ensuring that students who want to and are aiming to use their hands to construct walls and show off their art skills are judged by their actual work and not necessarily based off a paper test. This not only encourages students to continue to go into CTE programs, it also ensures that the skills they actually need in the field they are actually developing at school. I can tell you in all honesty after 30 years working for the masonry and stone industries I could ace any paper test you put in front of me, but you surely don't want me trying to build an actual wall! GEORGE would definitely not like what he would see!

And this gets us to the other arena where safety and technology are intersecting….our training programs. MCAA developed a virtual reality forklift training program where operators can feel what it's like when a load is about to begin tipping over, a skill and experience that otherwise wouldn't be available without actually tipping over a real forklift. We all know that one of the best ways to learn is to build off of our mistakes, and now technology is allowing us to make those mistakes without the risk of real injury or damage, but at the same time not losing any aspect of a real-world experience.

I have spent a lot of time talking about what MCAA and my team have been able to develop recently for our members and their employees, and I honestly think that most of our technology would be able to translate quite easily to other trades and players in the construction field. But I am also quite encouraged by what I see and have heard of in terms of other technologies coming to construction sites. Whether it is equipment like the MULE, a lift assist system that makes an 80-pound block feel weightless made by our partners at Construction Robotics, or exoskeleton suits, made by our partner FRACO, that take the exhausting lifting loads off a mason, companies are developing technology at a rapid pace that all ensure our citizens and employees are able to work safe, work efficiently, and stay productive as we continue to build the structures that make our country and economy ever expanding.

Technology is allowing young men and women who might otherwise not think of or be able to join the masonry industry to join the masonry industry. Technology is ensuring that our employees are working efficiently, productively, and safely. Technology is a tool that can immediately change the landscape in how we train our employees, whether new to the industry or new to a best practice. Technology analysis has the potential to completely change the way we learn about jobsites and what new equipment or practices are actually being utilized or not and why. The positives are endless!

As I mentioned, I have been working in the construction field for decades now and what I am developing and seeing in the field is truly life changing. My one ask to all of you here today would be to partner with industry in a bipartisan manner to ensure that technology use is encouraged in a responsible manner. Not to be used to punish. Not to be used to replace workers. Not to be used just to be "keeping up and staying relevant." But used to increase employee safety and protection. Used to prolong careers and productivity. Used to learn how employees go about their jobs and how they can conduct them in the safest way possible. We are sitting at the forefront of a truly groundbreaking moment, but for it to really take off we need partnership between industry and government.

That's what this is about. Keeping people safe. Extending careers. Sending workers home to their families the same way they came in - and maybe in better shape than before.

Thank you again for the opportunity to join you here today for this important hearing and I look forward to answering any questions that you may have.

Exhibit A: MCAA's GEORGE 3.0 - Purpose-Built AI For The Masonry Industry

What Is GEORGE 3.0?

GEORGE 3.0, set to release in late Q1 2026, is a comprehensive suite of purpose-built AI, VR/AR, and LIDAR tools developed by the Mason Contractors Association of America (MCAA) specifically for the masonry industry. Named after George Miller, the first president of MCAA, this system represents four years of dedicated development to create practical, industry-specific solutions. The existing GEORGE 2.0, which released in late 2024, is processing approximately 50 dictionaries worth of user inputs every month.

The GEORGE 3.0 launcher and publicly-available AI Assistants within the system.

Built on 75+ Years of Industry Knowledge

Unlike generic AI tools, GEORGE is built upon MCAA's 75 years of accumulated industry expertise, including:

- Decades of safety standards and best practices
- Technical, owned or explicitly-authorized publications like the *Standard Practice for Bracing Masonry Walls Under Construction*
- Training materials and certification programs
- Industry-specific terminology and workflows

Accessible Across All Devices

GEORGE 3.0 is designed to run on *any* device with a data connection and a browser, tablets on the jobsite, computers in the office, or phones in the field. Companies can add members to AI-projects and see the same things in real time. This ensures that safety and productivity tools are available wherever and whenever they're needed, from small residential contractors to large commercial operations.

Core Assistants:

Assistant	Purpose
PPE Monitoring	Real-time safety wear compliance monitoring and alerts (see Exhibit B)
Wall Bracing	Structural stability calculations for both internal and external bracing (see Exhibit C)
Restoration + Retrofit	Historic building analysis (see Exhibit D)
Spanish Translations	Removing language barriers on diverse jobsites using masonry-specific, industry-approved Spanish
Wall Evaluation	Quality control and inspection
Production Impacts	Workflow and productivity analysis based on an MCAA-commissioned 300-page PhD thesis. The study assesses productivity loss due to a variety of issues on job-sites including: weather, extended work days, congestion, etc.
Silica Exposure	Helps contractors create written exposure policies and answer questions about the rule
Forklift Training	Uses MCAA's existing Forklift Training manuals and makes it an interactive, hands-on experience using AI and VR

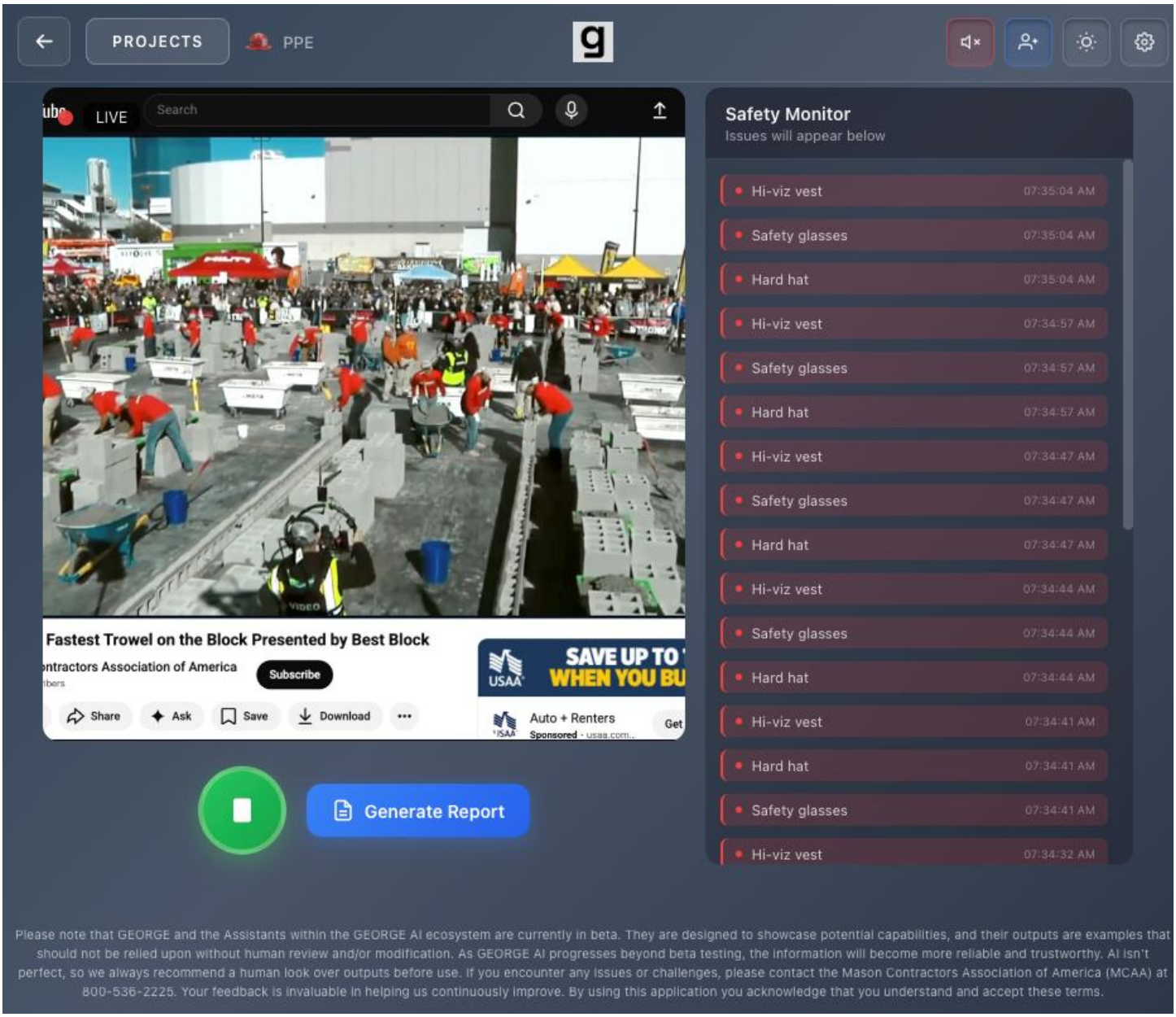
Most AI Assistants feature a mode selection to allow the users to easily find the AI tool they need.

Exhibit B: GEORGE 3.0 Assistant – Realtime PPE Monitoring With PDF Report Generation

The PPE (Personal Protective Equipment) Assistant transforms standard jobsite cameras into active safety partners. The system continuously monitors worksites in real-time to identify whether workers are wearing required protective gear.

Live Monitoring Interface

The dashboard displays live video monitoring with a Safety Monitor panel showing when issues are detected in real time. The prominent "Generate Report" button allows supervisors to create official compliance documentation at any time.



The live monitoring interface can use a camera on the device, a screen share for company cameras, and is modeled to show lacking PPE. It's modeled after the interface for many streaming platforms. Note, this video is from a competition, not a regular job-site.

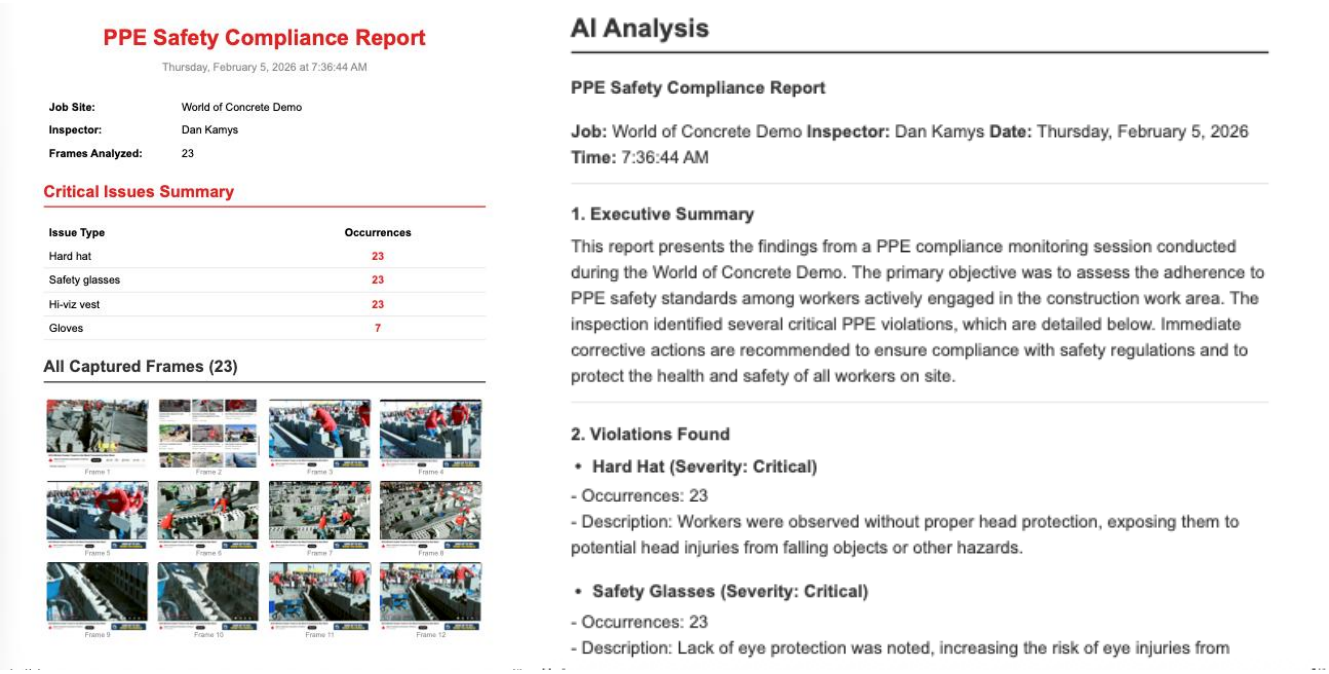
Report Generation and PDF Output

After a monitoring session, supervisors can generate an official safety compliance report.

The generated **PPE Safety Compliance Report** includes:

- **Job Site and Inspector Information** - Complete documentation chain
- **Critical Issues Summary** - Tabulated violations by type and occurrence
- **All Captured Frames** - Visual evidence with timestamps
- **AI Analysis** - Contextual breakdown of safety observations

Reports can be printed or shared as PDFs for record-keeping or training purposes.



PPE Safety Compliance Report

Thursday, February 5, 2026 at 7:36:44 AM

Job Site: World of Concrete Demo
Inspector: Dan Kamys
Frames Analyzed: 23

Critical Issues Summary

Issue Type	Occurrences
Hard hat	23
Safety glasses	23
Hi-viz vest	23
Gloves	7

All Captured Frames (23)

AI Analysis

PPE Safety Compliance Report

Job: World of Concrete Demo **Inspector:** Dan Kamys **Date:** Thursday, February 5, 2026 **Time:** 7:36:44 AM

1. Executive Summary

This report presents the findings from a PPE compliance monitoring session conducted during the World of Concrete Demo. The primary objective was to assess the adherence to PPE safety standards among workers actively engaged in the construction work area. The inspection identified several critical PPE violations, which are detailed below. Immediate corrective actions are recommended to ensure compliance with safety regulations and to protect the health and safety of all workers on site.

2. Violations Found

- **Hard Hat (Severity: Critical)**

- Occurrences: 23
- Description: Workers were observed without proper head protection, exposing them to potential head injuries from falling objects or other hazards.

- **Safety Glasses (Severity: Critical)**

- Occurrences: 23
- Description: Lack of eye protection was noted, increasing the risk of eye injuries from

3. Recommendations

- **Immediate Provision of PPE:** Ensure that all workers are equipped with the necessary PPE, including hard hats, safety glasses, hi-viz vests, and gloves.
- **Training and Awareness:** Conduct regular training sessions to reinforce the importance of PPE usage and compliance with safety protocols.
- **Regular Inspections:** Implement a routine inspection schedule to monitor PPE compliance and address any deficiencies promptly.
- **Feedback Mechanism:** Establish a system for workers to report PPE issues or shortages to management for timely resolution.

4. Corrective Actions Required

- **Distribute PPE:** Immediately distribute the required PPE to all workers on site.
- **Conduct Safety Briefings:** Organize safety briefings to educate workers on the importance of PPE and the potential consequences of non-compliance.
- **Monitor Compliance:** Assign safety officers to monitor PPE usage continuously and enforce compliance.
- **Document Compliance:** Maintain records of PPE distribution and compliance checks for accountability and future reference.

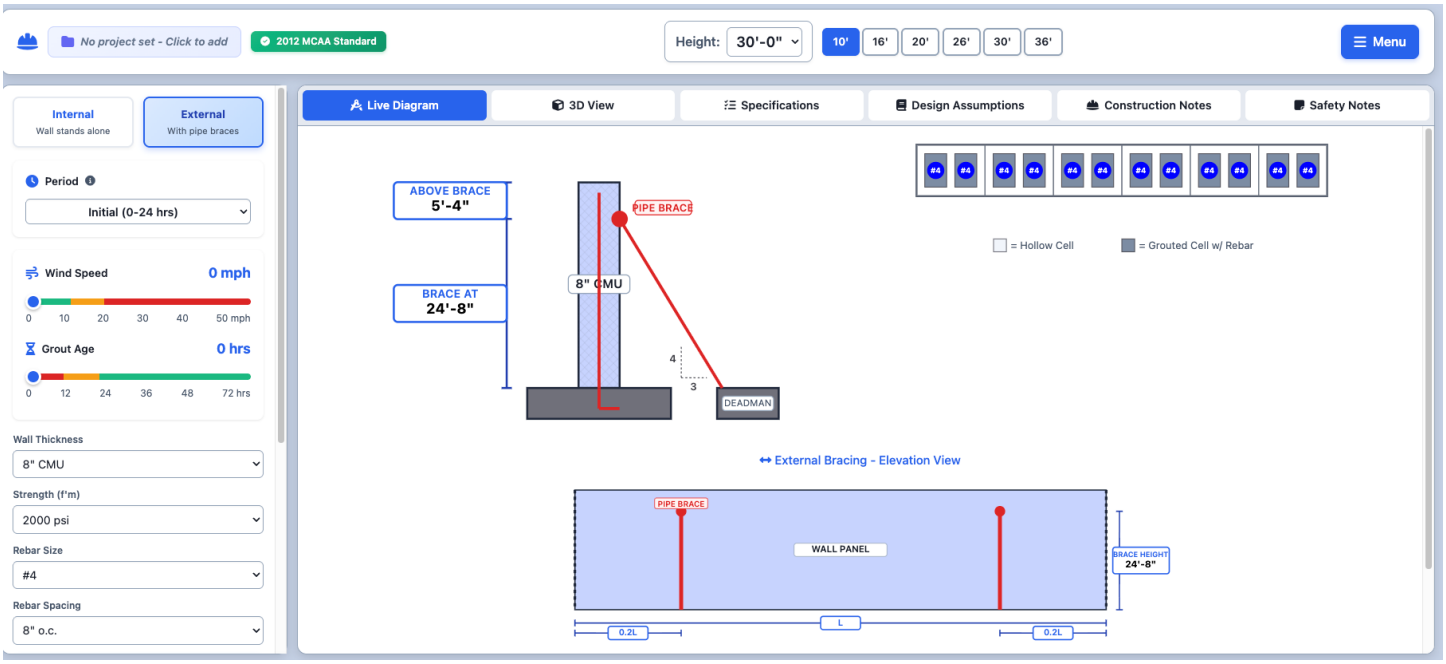
A comprehensive report with observations, thumbnails from the stream, and recommendations to correct can be generated from the system.

Shifting from Reactive to Proactive Safety: Rather than waiting for inspections or accident reports, foremen receive immediate data enabling instant correction of unsafe behaviors. This transforms the safety model from reactive punishment to proactive coaching and prevention.

Exhibit C: GEORGE 3.0 Assistant - Wall Bracing Calculator

The Danger: One hazard on a masonry jobsite is a wall collapse during the initial and intermediate phases of construction. Unsupported or improperly braced walls can fail sometimes catastrophically in seconds, causing serious injury or death.

The Solution: The GEORGE Wall Bracing Calculator digitizes the complex engineering standards required to brace walls safely, making decades of MCAA expertise immediately accessible to every contractor.

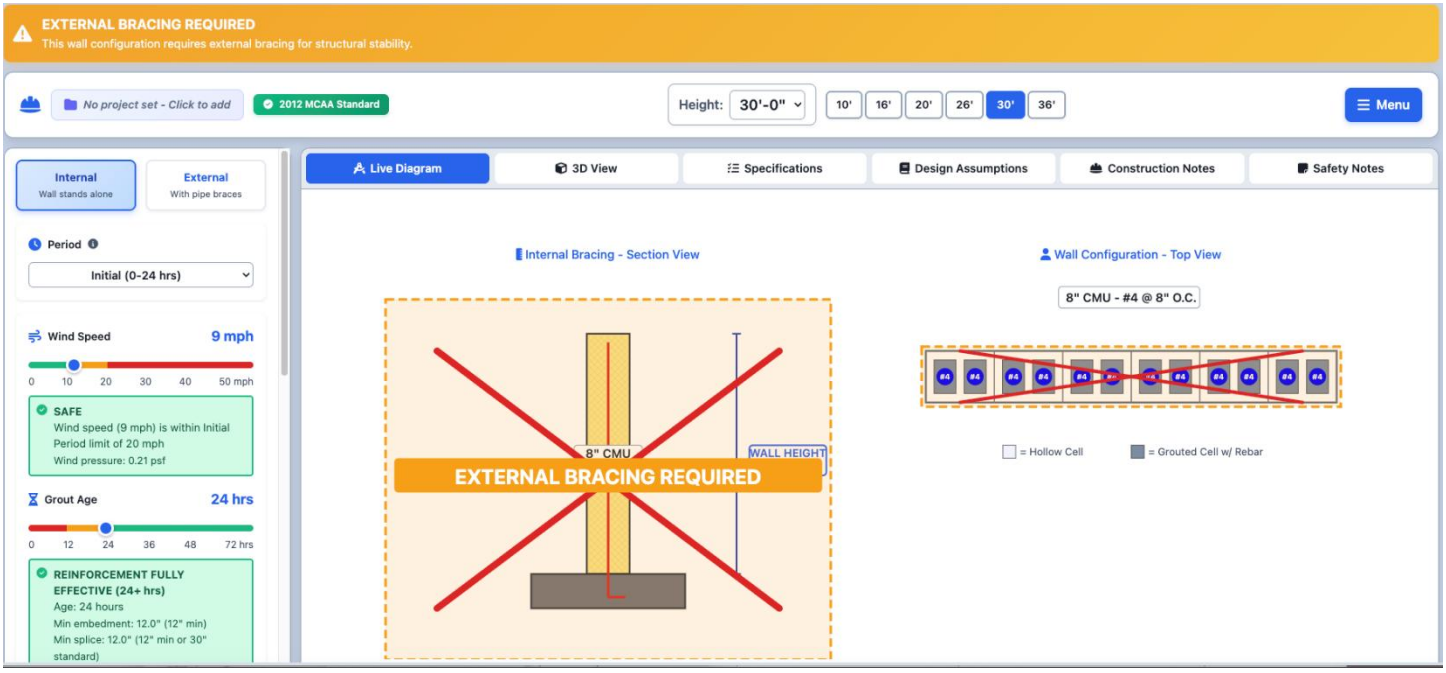


The GEORGE Wall Bracing calculator is based on established, OSHA-acknowledged documentation and makes complex calculations easily accessible for the industry.

Based on the Council for Masonry Wall Bracing Standard Practice Book

This calculator is built directly upon the **Council for Masonry Wall Bracing Standard Practice for Bracing Masonry Walls Under Construction (2012 Edition)**, the authoritative industry reference that has guided safe construction practices for decades. Previously, applying these standards required manual table lookups and calculations. GEORGE makes this knowledge immediately accessible with a few button presses.

Recently, a committee of industry experts has worked to add in generally-accepted internal bracing standards to determine when internal bracing (grouting, rebar) is sufficient.



Wall Bracing will immediately highlight the need for External Bracing when calculations exceed internal bracing specifications.

Intelligent Safety Warnings

When a wall configuration exceeds safe limits for internal bracing, the calculator immediately warns the user. For example, a 30-foot wall height triggers an “EXTERNAL BRACING REQUIRED” warning. The calculator:

- Displays a prominent orange warning banner
- Shows red X overlays indicating the configuration is unsafe for internal bracing
- Provides immediate feedback before any work begins

Input Parameters:

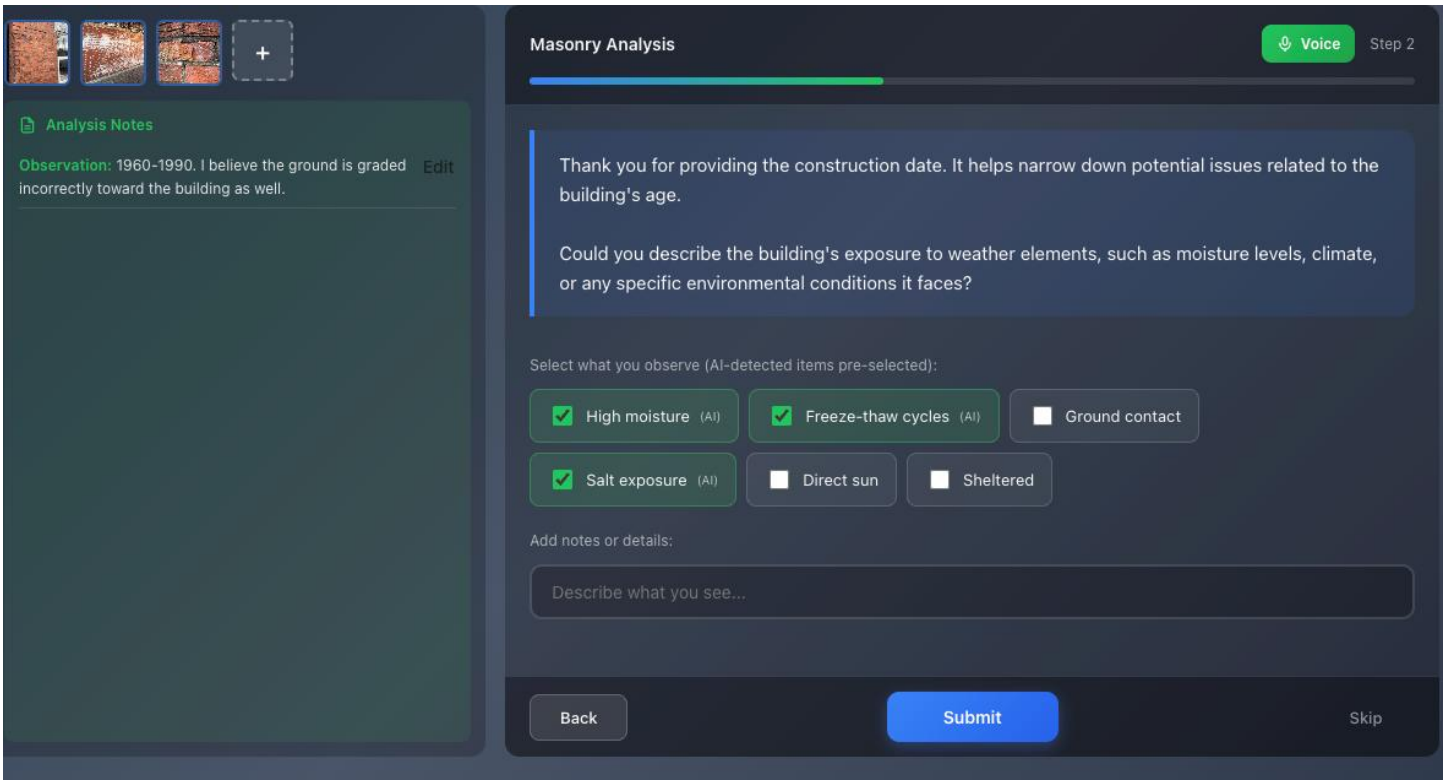
Parameter	Options
Wall Height	10’-0” to 36’-0”
Construction Period	Initial (0-24 hrs)
Bracing Type	Internal, External
Wind Speed	0-50+ mph
Grout Age	0-72+ hrs

Code Compliance:

- Council for Masonry Wall Bracing Standard Practice for Bracing Masonry Walls Under Construction (2012)
- TMS 402-16 (The Masonry Society)
- OSHA 29 CFR 1926.706

Exhibit D: GEORGE 3.0 Assistant - Restoration and Retrofit Diagnosis

Restoring historic and aging buildings presents unique challenges that differ fundamentally from new construction. The Restoration and Retrofit Assistant provides specialized AI-powered analysis for these complex projects.



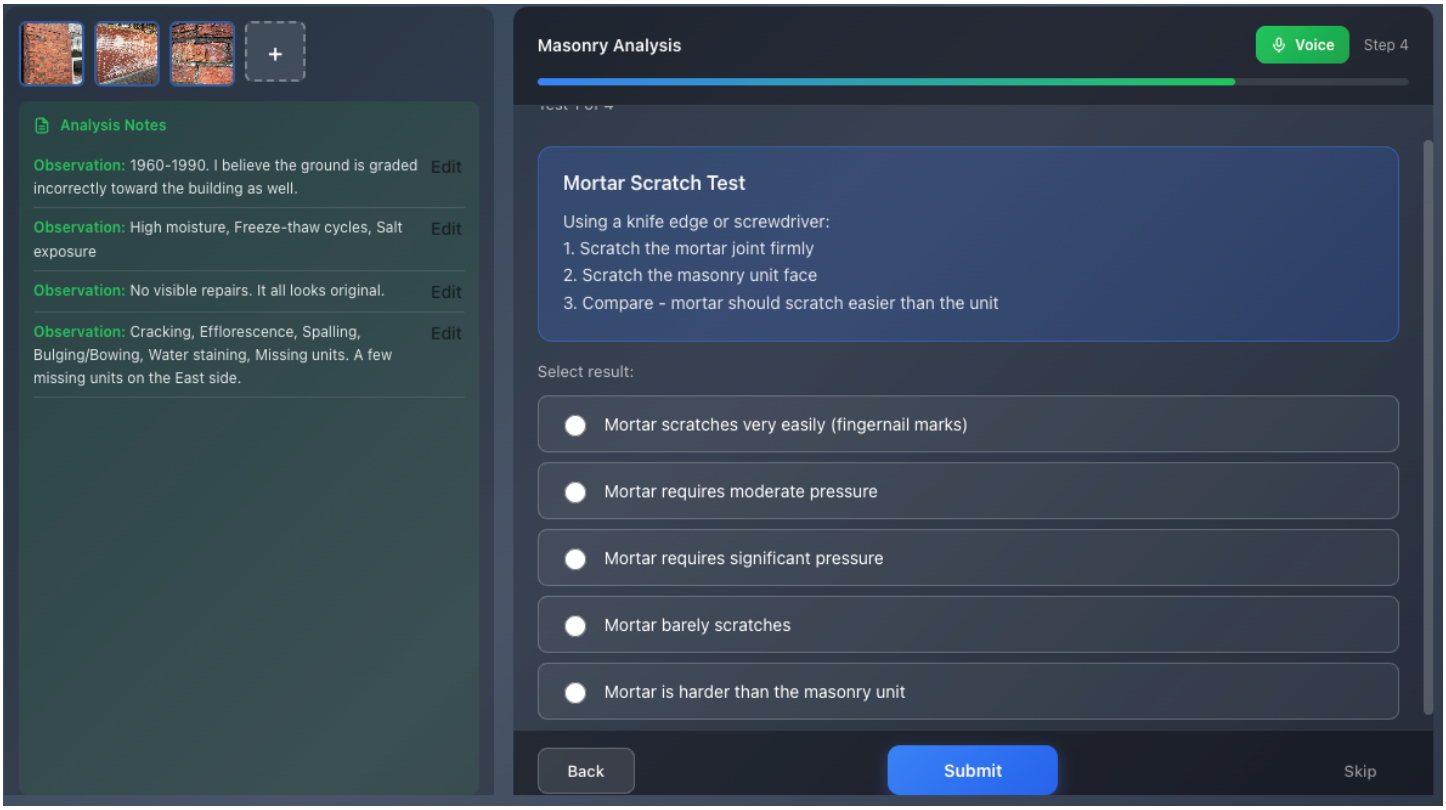
A screenshot of the Analysis Mode of the Restoration Assistant that dynamically interacts with the user based on their photos, observations, and its own observations. It does not replace a human, but acts as a field expert at their side.

Analysis Mode - Visual Diagnosis

In Analysis mode, contractors can capture or upload photos of existing structures for AI-driven evaluation. The system analyzes:

- **Cracks and fractures** - Pattern analysis to determine causes
- **Spalling and material degradation** - Assessment of masonry condition
- **Mortar deterioration** - Identifying repointing needs
- **Structural concerns** - Early warning signs of instability

The user is then asked a series of questions based off an AI decision tree and can supplement information that the AI gathers for reporting and recommendation. It will then recommend necessary diagnostic testing, walk the user through it, and then incorporate it into the report.



After initial photo analysis and user questioning, the system will walk the contractor through several tests to further diagnose the wall.

Key Capabilities:

- **Photo-Based Diagnosis** - Upload or capture images for immediate analysis
- **Material Identification** - Recognize historic masonry types and appropriate repair materials
- **Documentation Generation** - Automated condition reports for project scoping
- **Expert Consultation** - 24/7 access to restoration best practices

This technology enables masons to leverage many years of collective industry knowledge when facing unique or aging infrastructure (which is largely made of masonry), ensuring America's historic buildings are preserved safely and correctly.

MASONRY FIELD INSPECTION REPORT

1481 Merchant Drive Algonquin, Il 60102 | 2026-02-05

SITE PHOTOGRAPHS

Photo 1

Photo 2

Photo 3

> **Client:** MCAA HQ **Date:** 2026-02-05
>
> **Address:** 1481 Merchant Drive Algonquin, Il 60102

MASONRY FIELD INSPECTION REPORT

SITE INFORMATION

- **Site Address:** 1481 Merchant Drive, Algonquin, IL 60102
- **Client:** MCAA HQ
- **Inspection Date:** 2026-02-05

EXECUTIVE SUMMARY

The masonry inspection at 1481 Merchant Drive revealed significant structural and environmental issues affecting the building's integrity. The primary concerns include cracking, efflorescence, spalling, and bulging, exacerbated by high moisture levels, freeze-thaw cycles, and salt exposure. Immediate attention is required to address these issues and prevent further deterioration.

KEY FINDINGS

- Cracking, efflorescence, spalling, bulging/bowing, and water staining observed.
- High moisture exposure, freeze-thaw cycles, and salt exposure identified.
- Ground grading incorrectly directs water toward the building.
- Original construction with no visible repairs.
- Missing masonry units, particularly on the east side.

ENVIRONMENTAL FACTORS

- **Moisture:** High levels contributing to efflorescence and spalling.
- **Climate:** Subject to freeze-thaw cycles, increasing stress on masonry.
- **Salt Exposure:** Likely accelerating deterioration of masonry materials.

STRUCTURAL ASSESSMENT

- **Mortar Condition:** Hard and non-absorbent, requiring significant pressure to scratch.
- **Wall Ties:** Irregular pattern detected, suggesting potential failure or misplacement.
- **Cavity Measurement:** Test skipped, but wall tie issues are evident.

ROOT CAUSE ANALYSIS

The combination of environmental factors and original construction materials has led to the current state of deterioration. The hard, non-absorbent mortar is trapping moisture, causing damage to the masonry units. The irregular wall tie pattern indicates potential structural instability.

RECOMMENDED REPAIRS

- **High Priority:**

- **Mortar Repointing:** Replace existing mortar with Type N mortar to improve permeability and moisture escape.
- **Wall Tie Replacement:** Inspect and replace corroded or misplaced ties with hot-dip galvanized adjustable ties.

- **Medium Priority:**

- **Ground Grading:** Correct grading to direct water away from the building.
- **Water-Repellent Coating:** Apply a breathable coating to protect against moisture ingress.

URGENCY: HIGH

The system generates a comprehensive report with the user's photos, collaborative observations, and recommended next steps based off the MCAA's early work with a council of industry experts. Note, this building in the sample is not the MCAA headquarters or 1481 Merchant Drive, rather a series of sample walls with known issues.