



The Sage Report

A Monthly Newsletter of Insights, Projects, and Productivity

AI WORKBENCH

Transforming Voice Memos into Professional Documents

With just a smartphone and ChatGPT or other AI Chatbot, you can turn a rough voice memo into a polished, professional document without worrying about perfect phrasing or structure.

Step 1: Record a Voice Memo

For iPhone users (iPhone 12 and later), the built-in Voice Memos app is a quick way to capture notes hands-free:

1. Open the **Voice Memos** app.
2. Tap Record and start speaking.
3. Tap Done, then rename the file for easy reference.

Android users can use the Google Recorder app (available on Pixel devices) or third-party apps like Otter.ai or Rev Voice Recorder for similar functionality.

Step 2: Copy the Transcript

On an iPhone 12 or later, you don't need to manually transcribe or save to Notes. **Live Captions** makes it even easier:

1. Open the Voice Memos recording.
2. Pause the playback.
3. Tap and hold on the transcript that appears
4. Copy and paste directly into ChatGPT.

Android users can get similar transcripts from Google Recorder or Otter.ai.

Step 3: Let AI Clean It Up

Here's the best part: **your voice memo doesn't have to be perfect.** It can be a collection of half-finished thoughts, random ideas, and even nonsense. Just talk. AI will extract the important details and structure them into a professional format.

Once you copy the transcript, paste it into ChatGPT and ask it to refine it into any of the following:

- **Email:** "Format this as a professional email to a client."
- **Field Report:** "Turn this into a structured site visit report."
- **Letter:** "Draft a formal letter based on these notes."
- **Meeting Minutes:** "Summarize this as clear and concise meeting minutes."
- **Proposal:** "Use this information to draft a project proposal."
- **Inspection Summary:** "Convert this into a clear and professional inspection report."
- **Technical Memo:** "Refine this into a concise technical memo."

Next time you're on-site or brainstorming on the go, just hit record. AI will turn your raw thoughts into a well-structured, professional document in seconds.

THE SAGE BRIEFING

New Employees

In March, we welcomed two new team members to Sage:

Kelly Inglis joined as our new Office Manager. With over 15 years of experience in administrative management, finance, and office operations—including her most recent role at Greenbush Reformed Church—Kelly will support Tina and the principals with the business side of operations.

Donaldo Pengu started as a Mechanical Designer. He'll work Fridays until graduating from HVCC's CAD Certificate program in May, then transition to full-time. He previously worked as an HVAC Technician for Eastern Heating and Cooling and SUNY Albany's heating plant and holds an HVAC degree from HVCC. His hands-on experience brings valuable perspective to our design work.

OGS Term Contract Awarded

Sage was selected for the latest OGS engineering-architecture term contract—one of eight firms chosen, with each contract valued at \$7.5 million. This is the largest term contract OGS has issued. Thank you to everyone whose contributions to past term projects helped earn this opportunity. OGS remains one of our most important clients, and this selection reinforces their trust in our work.

Campus Outreach

Steve Marsh and Russ Bailey visited Union College to present on Sage's internship and career opportunities. Kevin Lovett also spoke at a Union College seminar on structural engineering careers. These sessions generated interest in internships and helped lay the foundation for a long-term relationship with the university.

Summer Interns

This summer, we'll welcome a mechanical engineering intern from Tufts and see the return of Max from Union College in the electrical department. Additional interns are in the works, and we'll announce the full group once finalized.



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Using COMcheck as a Design Tool

COMcheck is often viewed as a necessary step for permitting when required by a client or code official. However, it's a powerful design tool that should be used on every project to confirm compliance—regardless of whether it's officially required. By integrating COMcheck early in the design process, teams can proactively verify that their project meets energy code requirements, avoiding last-minute surprises and costly redesigns.

Why Use COMcheck on Every Project?

Even if a project doesn't require a COMcheck submission, running it as an internal code compliance check can catch potential issues before they become costly problems. Some key benefits include:

- *Fan Horsepower Limits* – COMcheck verifies that total brake horsepower (bhp) for HVAC fans remains within allowable code limits, preventing over-specification of fan motors.
- *Equipment Efficiency Compliance* – Verifying that HVAC and water heating equipment meet the required AHRI-rated efficiencies ensures that the project is code-compliant from the start. Many systems fail because actual condition efficiencies don't meet AHRI minimums.
- *Lighting Power Density (LPD) Verification* – Running COMcheck helps ensure that lighting wattage does not exceed the allowed watts per square foot, avoiding non-compliance issues that could require fixture reductions or additional controls.
- *Trade-Offs for Compliance* – COMcheck allows flexibility by permitting certain high-performance features to offset other areas that might not meet strict code minimums.

Use COMcheck Web—Not COMcheck Desktop

One important change to be aware of is that all future national and state energy codes will only be implemented in the COMcheck Web which can be found [here](#). This means:

- The desktop version will no longer receive updates with new energy codes, effectively making it obsolete.
- **The 2020 New York State Energy Code does not exist on the desktop version**, meaning projects in NYS must use the web version for compliance.

Using COMcheck Early to Streamline Design

Rather than waiting until permit submission, running COMcheck during early design phases allows design teams to:

- Verify compliance proactively rather than making changes at the last minute.
- Optimize equipment and system selections based on energy code requirements.
- Ensure all mandatory measures are accounted for using the COMcheck Designer's Checklist.
- Identify compliance trade-offs early, such as heat recovery allowing for slightly lower HVAC efficiencies.

The Designer's Checklist: A Hidden Compliance Asset

One of COMcheck's most valuable but underutilized features is the Designer's Checklist included in the output report. This checklist highlights mandatory code requirements that must be included in the design, such as:

- HVAC system controls (thermostats, economizers, ventilation, etc.)
- Fan system efficiency limits and motor horsepower restrictions

Even when a COMcheck report isn't required for permitting, using the Designer's Checklist ensures that all code-mandated elements are incorporated into the design from the start.

Final Thoughts

COMcheck isn't just for permit submissions—it's an essential design verification tool that can be used on any project to confirm compliance before issues arise. By incorporating it early and using the latest COMcheck Web version, designers can ensure smooth approvals, optimize system selections, and avoid unexpected code failures.



April 2025

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UPCOMING WEBINARS AND SEMINARS – APRIL 2025

We've added a list of free live webinars and seminars to the newsletter this month. Each offers at least one PDH and qualifies as a *Course of Learning* – a format that includes traditional classroom-style courses or live webinars with real-time interaction with an instructor. As a reminder, New York State requires that 18 of the 36 total continuing education hours for professional engineers be completed through *Courses of Learning*.

Engineering Ethics: Professional Ethics For Engineers

Host: NoonPi

Date: April 2, 2025 | Time: 12:00 PM – 1:00 PM

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Manual Pressure Drop Calculations for HVAC Hydronic Piping Systems

Host: Taco

Date: April 8, 2025 | Time: 12:00 PM – 1:00 PM

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Green Building Through Sun Control Design

Host: GreenCE

Date: April 9, 2025 | Time: 12:00 PM – 1:00 PM

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Resilience, Cost Savings, Sustainability – Can Microgrids Really Achieve All 3?

Host: Association of Energy Engineers (AEE)

Date: April 9, 2025 | Time: 10:00 AM – 11:00 AM

Format: Webinar | Credits: 0.2 CEU (2 AEE credits) | Cost: Free

[Register Here](#)

Building Envelope Evaluation Utilizing Fenestration Testing

Host: Atlantic Testing

Date: April 10, 2025 | Time: 2:00 PM – 3:00 PM

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Active Chilled Beams, System Design, and Payback

Host: Price Industries

Date: April 15, 2025 | Time: 12:00 PM – 1:00 PM ET

Format: Webinar | Credits: 1 PDH

Cost: Free

[Register Here](#)

Horizontal Directional Drilling: Design and Construction

Host: PDH-Pro

Date: April 16, 2025 | Time: 1:00 PM – 2:00 PM ET

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Green Building Strategies for Commercial Restrooms

Host: GreenCE

Date: April 16, 2025 | Time: 12:00 PM – 1:00 PM EDT

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Drawing the Line: Safety Railing Systems that Protect Lives

Host: GreenCE

Date: April 21, 2025 | Time: 12:00 PM – 1:00 PM EDT

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

HVAC Hydronic Balancing

Host: Taco

Date: April 22, 2025 | Time: 12:00 PM – 1:00 PM EDT

Format: Webinar | Credits: 1.0 PDH | Cost: Free

[Register Here](#)

Powering the Sustainable Future: IEEE PES's Editorial Leadership in Power, Energy, and Climate Change

Host: IEEE Power & Energy Society (PES)

Date: April 22, 2025 | Time: 11:00 AM – 12:30 PM EDT

Format: Webinar | Credits: 1.5 PDH | Cost: Free

[Register Here](#)

What Engineers Need to Know: The Impact of A2L Refrigerants on VRF System Design and Installation

Host: HPAC Engineering

Date: April 23, 2025 | Time: 11:00 AM – 12:00 AM ET

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Critical Power: Designing for EV Charging Stations

Host: Consulting-Specifying Engineer (CFE Media)

Date: April 29, 2025 | Time: 2:00 PM – 3:00 PM ET

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)

Natural Gas Infrastructure: Safety, Design, and Maintenance

Host: PDH-Pro

Date: April 26, 2025 | Time: 1:00 PM – 2:00 PM ET

Format: Webinar | Credits: 1 PDH | Cost: Free

[Register Here](#)



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Snell Dietel MacGuire Library HVAC Renovation

Emma Willard School, Troy, NY

Sage Team: Dan Breen, Alva, Marcus, Dave, Brandon, Mike, Richard

Sage Engineering Associates conducted a detailed study and prepared comprehensive construction documents for the HVAC renovation of the Snell Dietel MacGuire library building at Emma Willard School. The study evaluated two potential options for upgrading the building's aging and non-functional heating and cooling systems: a geothermal heat pump system and an air-cooled chiller with condensing boilers. While the geothermal option offered long-term sustainability benefits, it was not chosen due to its significantly higher upfront costs.

The selected option, an air-cooled chiller and condensing boiler system, will provide an efficient and cost-effective solution to meet the building's heating and cooling needs. The new cooling system will feature a 180-ton (2,200,000 BTU/hr) air-cooled chiller, and the heating system will incorporate three condensing boilers, each with a capacity of 1,500,000 BTU/hr. Additional system upgrades will include new circulation pumps, a glycol-based chilled water system for freeze protection, and hydronic specialties to optimize system performance.

The project will replace the existing six multizone air-handling units with variable air volume (VAV) units equipped with modern controls and variable frequency drives (VFDs) for enhanced energy efficiency and precise zone management. The outdated pneumatic controls throughout the building will be replaced with a direct digital control (DDC) system to modernize system management.

Construction will be phased to minimize disruptions, with substantial completion scheduled for 2026. Estimated Construction Cost: \$3M.

