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Safety from the Ground Up: Best Practices for Underground Utility Operations

Introductions

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CM Labs:

Global leader in simulation-based engineering & training solutions

Headquartered in Montreal, Canada

1,300 Vortex Simulators over 39 countries

Global partner & support network

Leading provider of simulation-based solutions

Earn CUSP hours on a simulator

News Release • 5 min read

CM Labs Helps Make CUSP Recertification More Convenient Than Ever

Operators can now use CM Labs' simulation training and select webinars to earn CUSP points for recertification.

MONTREAL, QC, April 24, 2025—CM Labs Simulations, the leading vendor for simulation-based training solutions in the utilities, construction, and ports industries, today announced that operators can now use its simulation training and select webinars to maintain Certified Utility Safety Professional (CUSP) Certification. The Utility Safety & Ops Leadership Network (USOLN), the non-profit organization that develops and administers the CUSP certification program, will now accept simulation training hours on CM Labs simulators and time spent attending select webinars for recertification.

To maintain certification, CUSP credential holders must engage in ongoing professional development activities. These activities are quantified as CUSP points, with operators needing to accumulate 30 CUSP points over two years to retain their certification. Now, training completed on a CM Labs simulator can be counted, at a 1:1 ratio of simulation training hours to CUSP points, towards recertification. Attending select CM Labs webinars

Read more:

2025-05-14 • 1 min read

The Sky is the Limit | Innovation Showcase Episode 1

Video

POLL QUESTION

Have you or someone you know ever hit a utility line on the job?

1. Yes

2. No

Leading causes of utility line incidents

Water/sewer was the leading type of work involved in damages, followed by telecom in 2023 *(2023 DIRT Report)*

- In 2023, there were **211,887 total damage reports in the US** according to CGA
- Utility strikes damages are estimated to more than **100 billion dollars in damages globally**
- Accelerated urbanization and infrastructure investments

#1 cause for hitting utility lines: Failure to notify the 811 center

Represents 26% of total incidents reported

Know what's below.
Call before you dig.

#2 cause for hitting utility lines:
Excavator failed to maintain clearance after verifying marks

Represents 15% of total incidents reported

#3 cause for hitting utility lines:
Utility lines not marked due to locator error

Represents 14% of total incidents reported

Site Inspection can prevent incidents in the workplace

40% of the incidents reported could be prevented during the site inspection before starting the work

Site Inspection can prevent incidents in the workplace

What would you notice if you had to do a site inspection for this site?

Site Inspection can prevent incidents in the workplace

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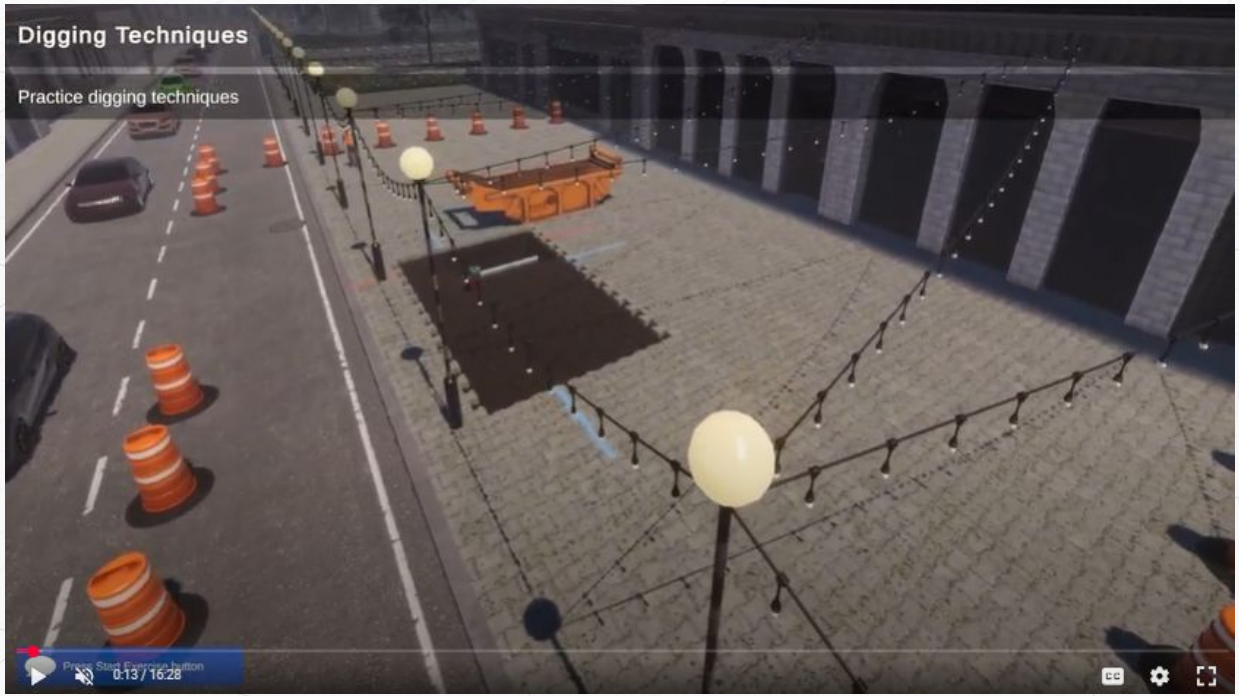
Site Inspection can prevent incidents in the workplace



What would you notice if you had to do a site inspection for this site?

Simulation can help you learn the basics

- **Realism** - Simulations replicate real site conditions without actual danger
- **Safe environment** - Trainees can experience hazardous scenarios safely
- **Standardized training** - ensures all employees receive uniform training
- **Onboarding & Recurring Training -** Ideal new hires or refreshing veteran workers

Safety pre-shift inspections

- Motivation
  - OSHA - Daily inspection requirement
  - Safety & Productivity loss
- Common Issues
  - Hydraulic Leaks
  - Damaged equipment
  - Worn out or faulty components
  - Inadequate fluid levels
- Safety Impact
  - Unexpected Machine Behavior
  - Physical hazard

Safety pre-shift inspections

CM Labs - Walkaround Inspections (WAI)

- Features
  - Critical inspection points
    - Inside and Outside
  - Clear explanations for inspections and their importance
  - Supports multiple equipment types
  - Visually demonstrates common equipment failures or issues.

Safety pre-shift inspections

How can simulation help?

- Why?
  - Train inspections in simulation, so you **don't pay for oversights** on the job.

- **Student** Benefits:

Hands-on Experience Without Risk	Exposure to Varied Scenarios
Immediate Feedback and Correction	Confidence Building

Safety pre-shift inspections

How can simulation help?

- Why?
  - Train inspections in simulation, so you **don't pay for oversights** on the job.

- **Company** Benefits:

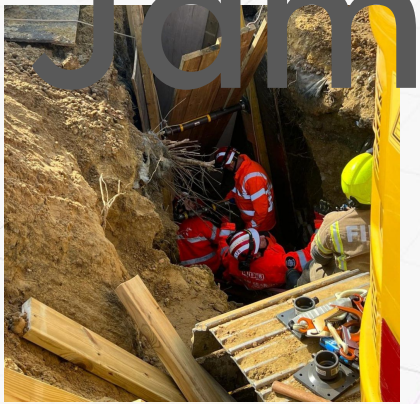
Enhanced Safety Culture	Cost Savings/ Reduced Downtime
Standardized Learning Experience	Data-Driven Training

POLL QUESTION

Have you ever seen or been involved in a trench collapse at work?

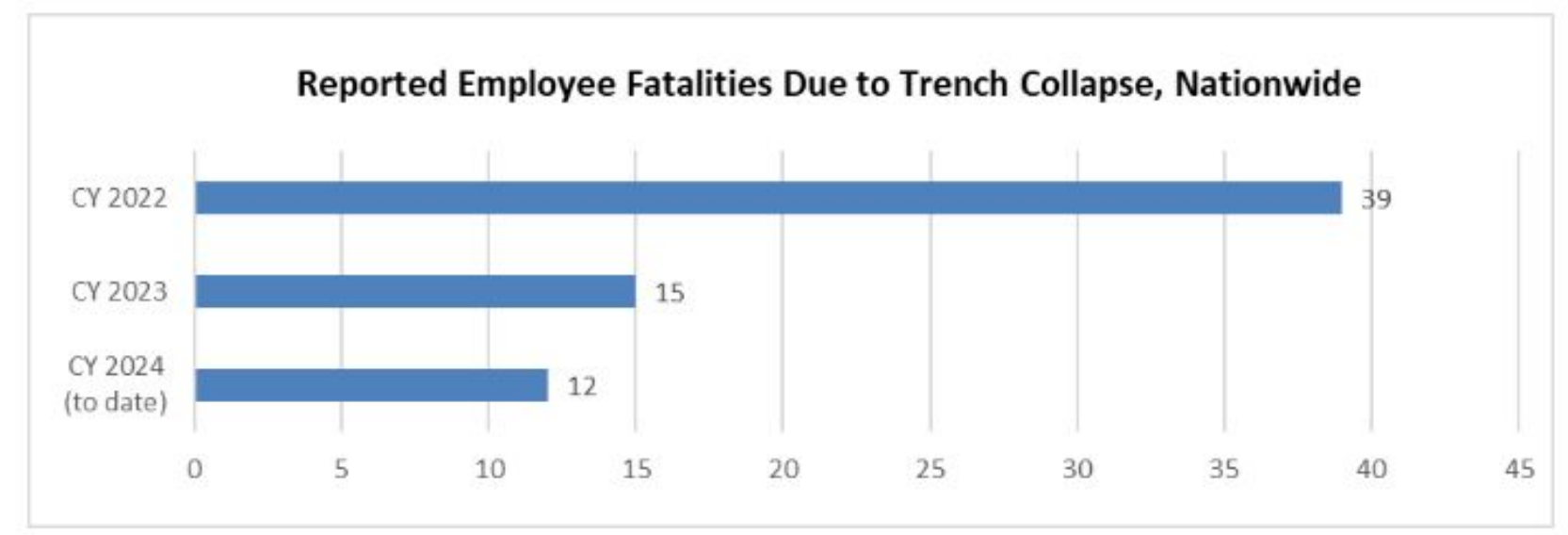
1. Yes, I've seen a trench collapse happen at work
2. Yes, I've been caught in a trench collapse at work
3. No, I haven't experienced a trench collapse at work

Meet Gary James



250+ workers have died in trench cave-ins over a decade

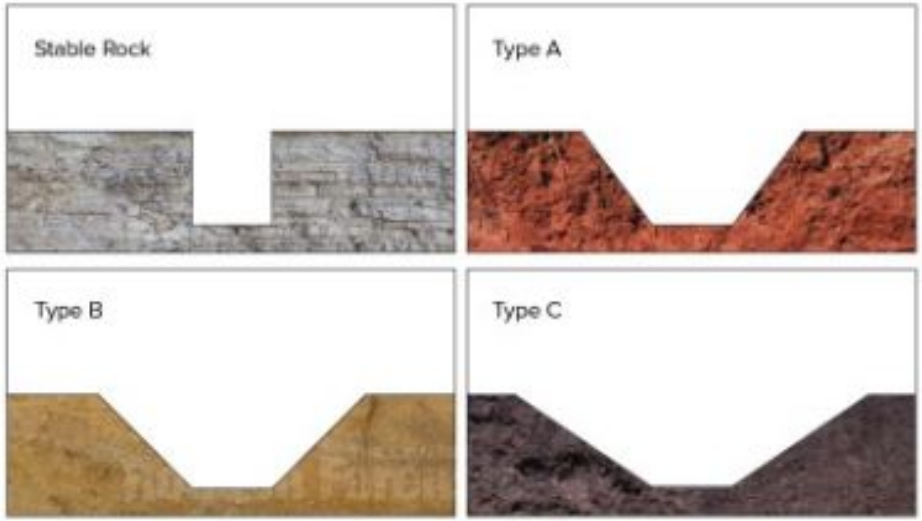
Thankfully, trench collapses declined nearly 70 percent since calendar year 2022.



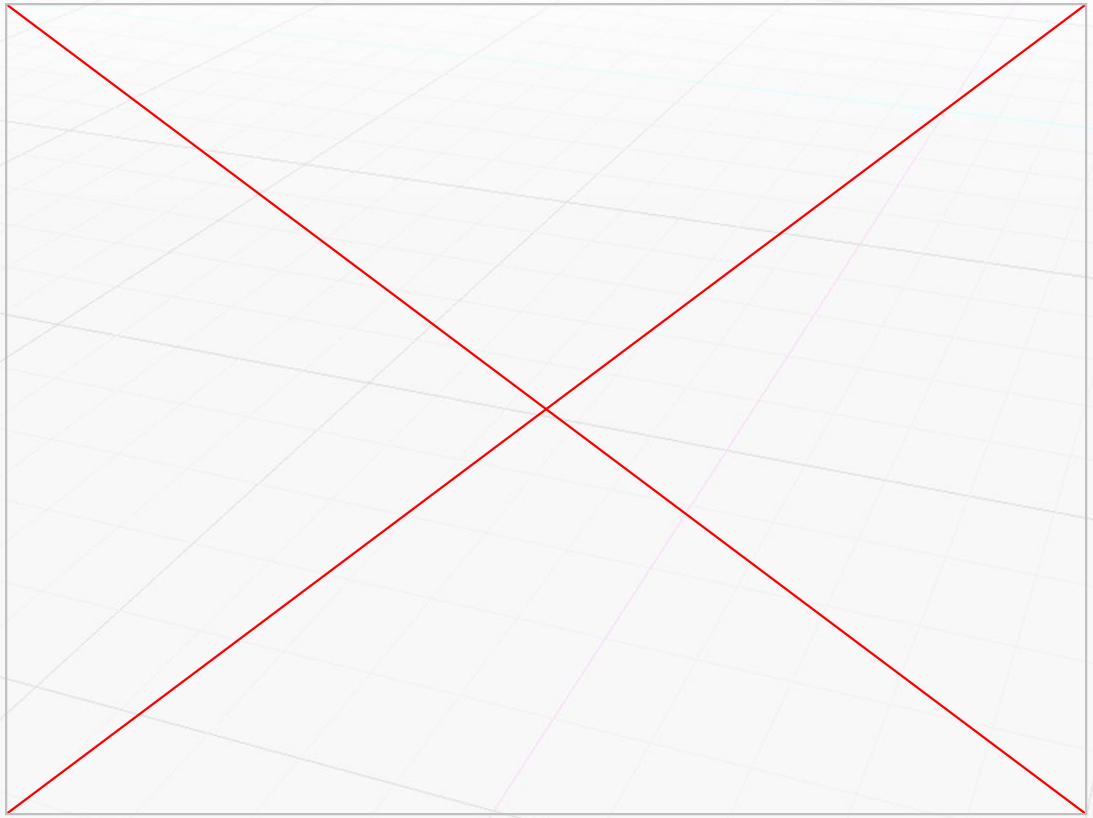
Simulation benefits for learning safety trenching techniques

Simulation benefits for learning safety trenching techniques

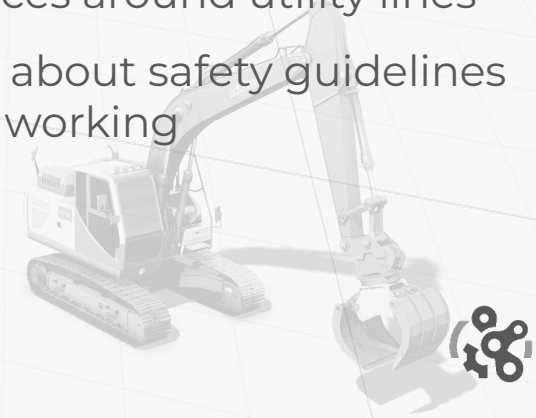
Shoring vs Sloping



Simulation benefits for trenching around utility lines



- Practice different excavation techniques at different angles in a safe environment
- Practice Safe excavation practices around utility lines
- Learn about safety guidelines while working



POLL QUESTION

Have you ever considered simulation for training before?

1. Considering Simulation
2. Just Adopted Simulation
3. Adopted Simulation Long Ago
4. Not familiar with Simulation

Key Takeaways

- Leading cause of Utility line incidents is a failure to notify 811

- Site inspections are crucial in helping keep workers safe by identifying hazards ahead of time

- Create a culture of safety in the working environment

- Employing simulation tools can mitigate the risks associated with operating in high risk environments.

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Thank you for attending!

Any Questions?

Key Takeaways

- Create a culture of safety in the working environment