

# Occupational Safety and Health Administration Trenching and Excavation

As part of the Department of Labor, the Occupational Safety and Health Administration (OSHA) aims to ensure safe and healthful conditions for American workers by providing training, outreach, education, and assistance. In the construction industry, trenching and excavation hazards—like cave-ins—are the leading cause of death. To help mitigate this danger, OSHA instructors are using the Microsoft HoloLens and Clirio mixed-reality software to give construction workers hands-on hazard training from the safety of a classroom.



**3.** Inside the immersive environment, workers can safely view, engage with, and learn about trenching hazards as if they were on site.



**1.** OSHA instructors use photogrammetry to capture images of real trenches. The images are uploaded to Clirio, an Azure-powered mixed-reality platform, where they're processed and deployed to HoloLens.

**2.** Wearing a HoloLens, OSHA instructors host connected sessions where they show workers holographic trenches in real-world detail.

**4.** Construction workers now have the hands-on training to improve trenching and excavation safety in the field.