



Historic Building Conservation: Safety Protocol Onsite and in the Lab

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Presentation Overview

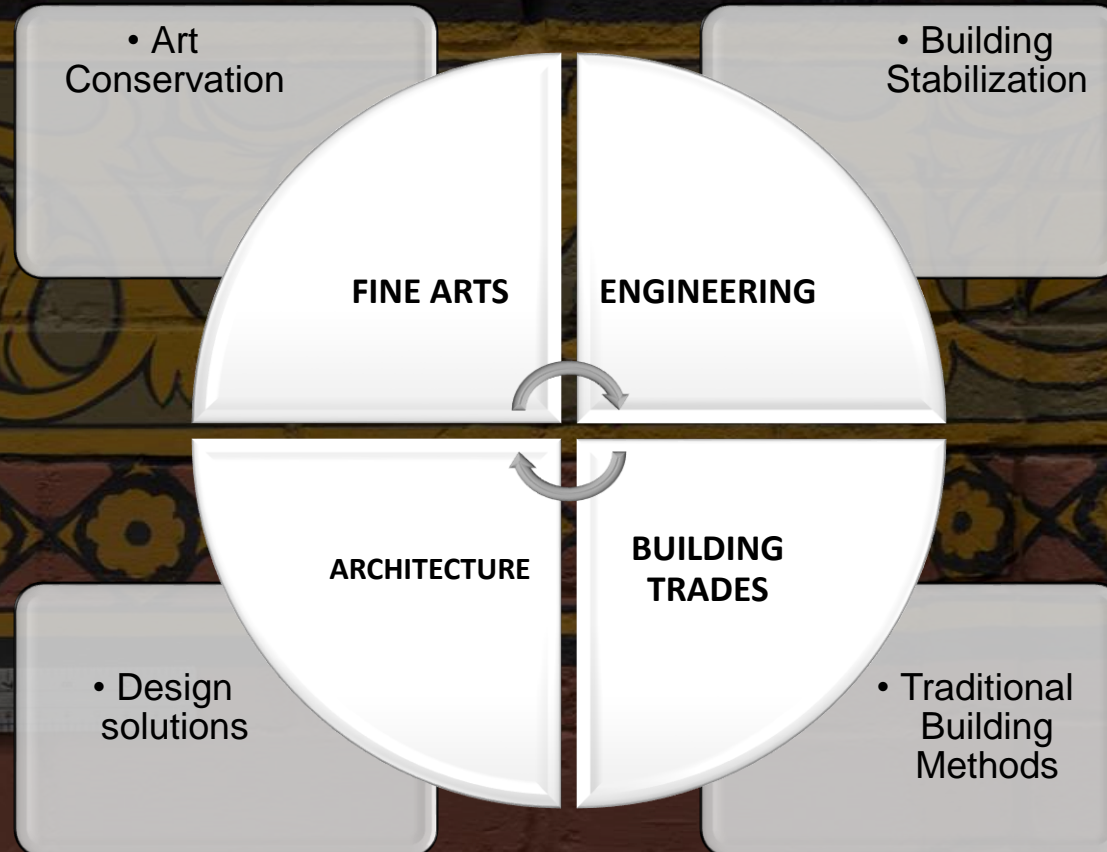
- Risks Unique to Historic Building/Architectural Conservation
- Increased focus on safety in adjacent fields
- Efforts to increase safety awareness in graduate school programs





ARCHITECTURAL CONSERVATION: GENERAL HAZARDS

Architectural Conservation



Architectural Conservation

Architectural and Art Conservation

Similar Materials

Similar Methodologies

Similar Risks



Architectural Conservation

Architectural and Art Conservation

- Toxic Artist Materials
- Toxic Cleaning Supplies
- Workplace Injury
- Environmental Hazards



Architectural Conservation

Distinguishing Factors

- Jobsite Conditions
- Heights
- Building Materials
- Structural Instabilities



INCREASED FOCUS ON SAFETY
IN ADJACENT FIELDS

Construction & Building Trades

OSHA's Respirable Crystalline Silica Standard for General Industry and Maritime 2018

- Enforcement began June 23rd 2018
- Adopted by the BAC
- permissible exposure limit (PEL) of 50 $\mu\text{g}/\text{m}^3$, averaged over an 8-hour day

OSHA's Crystalline Silica Rule: Construction

OSHA is issuing two standards to protect workers from exposure to respirable crystalline silica—one for construction, and the other for general industry and maritime—in order to allow employers to tailor solutions to the specific conditions in their workplaces.

Who is affected by the construction standard?

About two million construction workers are exposed to respirable crystalline silica in over 600,000 workplaces. OSHA estimates that more than 840,000 of these workers are exposed to silica levels that exceed the new permissible exposure limit (PEL).

Exposure to respirable crystalline silica can cause silicosis, lung cancer, other respiratory diseases, and kidney disease. Exposure can occur during common construction tasks such as using masonry saws, grinders, drills, jackhammers and handheld powered chipping tools; operating vehicle-mounted drilling rigs; milling; operating crushing machines; and using heavy equipment for demolition or certain other tasks.



Without dust controls, using a handheld power saw to cut concrete can expose workers to high levels of respirable crystalline silica.

The construction standard does not apply where exposures will remain low under any foreseeable conditions; for example, when only performing tasks such as mixing mortar; pouring concrete footers, slab foundation and foundation walls; and removing concrete formwork.

What does the standard require?

The standard requires employers to limit worker exposures to respirable crystalline silica and to take other steps to protect workers.

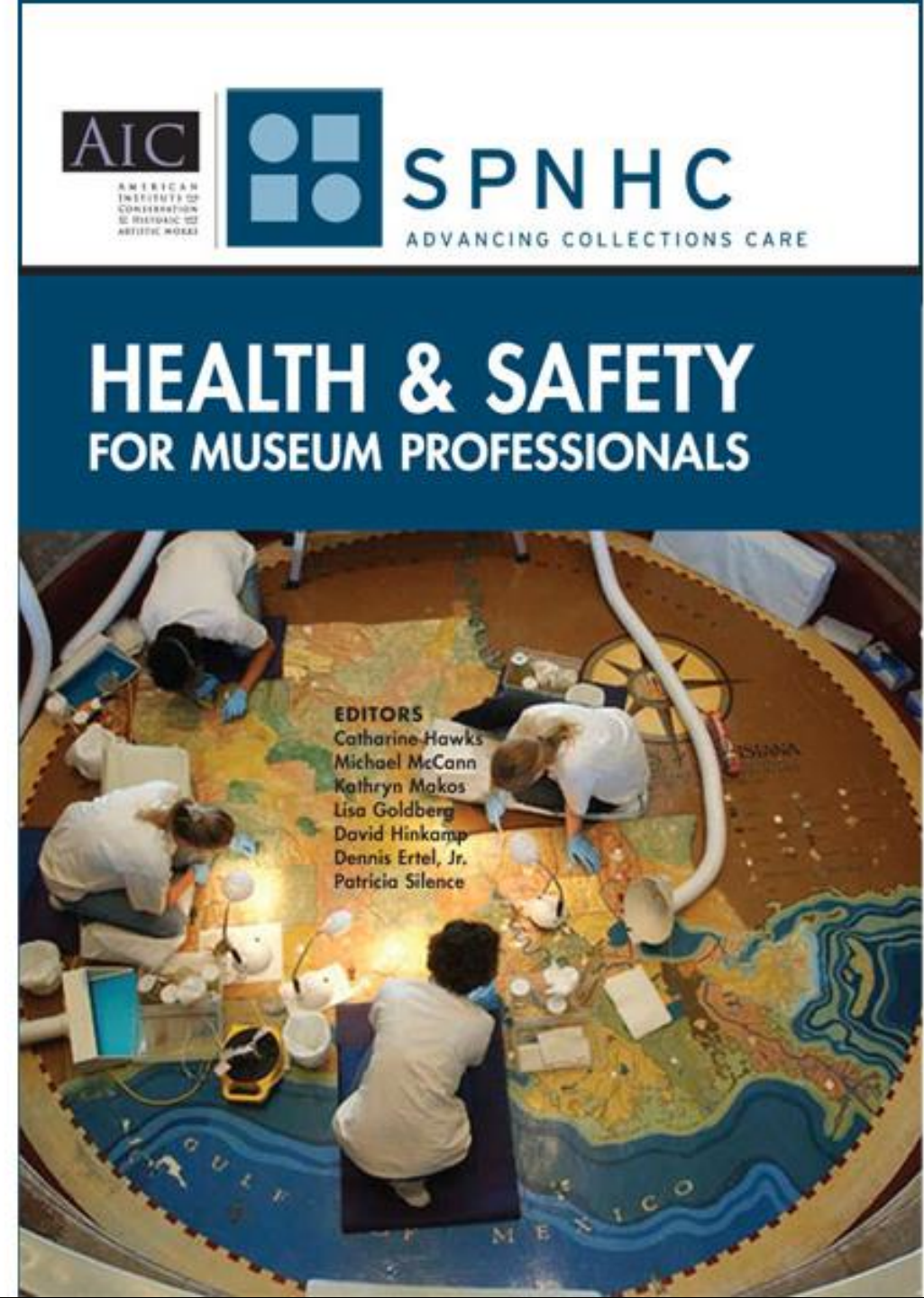
The standard provides flexible alternatives, especially useful for small employers. Employers can either use a control method laid out in [Table 1*](#) of the construction standard, or they can measure workers' exposure to silica and independently decide which dust controls work best to limit exposures to the PEL in their workplaces.

Regardless of which exposure control method is used, all construction employers covered by the standard are required to:

- Establish and implement a **written exposure control plan** that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Designate a **competent** person to implement the written exposure control plan.
- Restrict **housekeeping** practices that expose workers to silica where feasible alternatives are available.
- Offer **medical exams**—including chest X-rays and lung function tests—every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.

Art Conservation

- AIC Health and Safety Committee
- Smithsonian Institution Safety Manual
- CDC's NIOSH Pocket Guide to Chemical Hazards
- COOL Health & Safety Bibliographic Resources and Resource Guides



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INSTITUTIONALIZING HEALTH & SAFETY

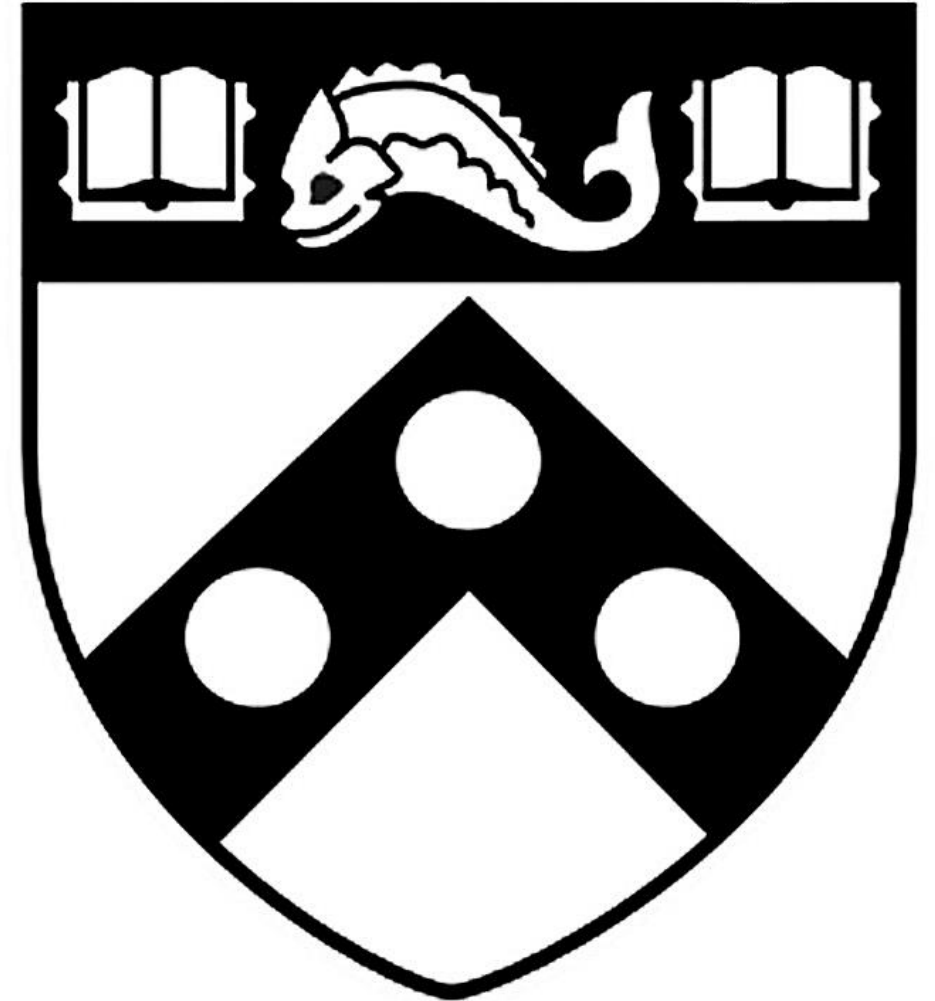
University Safety Awareness Program

University of Pennsylvania Graduate
Program in Historic Preservation

Developed by:

- Faculty
- EHRS
- Professionals in the field

PennDesign



University Safety Awareness Program

Program Includes:

- Safety integration into HSPV courses for all students
- Additional Lab safety for those on Conservation track
- OSHA 10 training for all students
- Respirator fit tests available
- Health and Safety Resource Guide



University Safety Awareness Program

Goals:

- To make aware all students and faculty of the potential hazards working in the field.

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- To make aware all students and faculty of the potential hazards working in the field.
- To inform students of what kind of health and safety protocol they should advocate for in a professional setting.
- To provide conservation students with relevant safety training including in the lab.



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THANK YOU

