

## **Precast Protects Life: Healthy Buildings**

December 3, 2024 | Session Overview

#### Speaker

Jim Schneider, Executive Director, PCI Mountain States

#### Moderator

Sarah Swango, Vice President, Corporate & Foundation Relations, National Institute of Building Sciences

# **Precast Protects Life Overview**

Precast, prestressed concrete is a durable material known for its strength, resilience, and ability to protect the lives, livelihoods, and lifestyles of people and communities. Part of that equation is contributing to safe and healthy spaces where occupants can live and work.

On December 3, 2024, NIBS hosted this webinar with subject matter expert Jim Schneider, Executive Director of the PCI Mountain States.

In this presentation, Schneider discussed how precast concrete can be used to create safe and healthy spaces. He also highlighted case studies that utilized precast to accomplish goals.

Sarah Swango, Vice President, Corporate & Foundation Relations, National Institute of Building Sciences, served as moderator for the webinar.

## **Building for Tomorrow**

Buildings are the largest, most resource intensive product on the planet, and the construction of new buildings come at the expense of our natural systems.

This includes the land needed for our cities, materials and water for buildings, and waste generated by our structures – all put a strain on global resource health.

Making decisions about our buildings today must take into account the health of occupants and longevity of structures, said Jim Schneider, Executive Director, PCI Mountain States.

Green building and net-zero strategies hold promise to minimize the adverse impact of buildings on our natural systems and resources, he said.

According to Allen and Ari Bernstein of the Harvard T.H. Chan School of Public Health, the nine foundations of a healthy building include ventilation, air quality, thermal health,

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moisture, dusts and pests, safety and security, water quality, noise, lighting and views.

## Precast Concrete is a Low-Emitting Material

Indoor air quality is a global issue.

According to the National Institute of Environmental Health Sciences, "both short- and long-term exposure to indoor air pollution can cause a range of health issues, including respiratory diseases, heart disease, cognitive deficits, and cancer. As one prominent example, the World Health Organization estimates 3.8 million people worldwide die every year from illnesses attributable to harmful indoor air."

Precast concrete is a low-emitting material, and it also serves as an air barrier.

Additionally, when it comes to sound attenuation, precast concrete walls, floors, and roofs typically do not require additional treatments to provide adequate sound insulation.

Precast concrete also provides light comfort, reflecting light deep into interior spaces, and it helps to regulate indoor temperature, creating energy efficient and comfortable spaces.

# **Precast Concrete and Fire Safety**

Apart from the comfort benefits of precast concrete, Schneider also touched on life safety and the basics of keeping people safe inside of a building.

For example, designing for fire safety protects lives and minimizes the impact of the fire on a building itself.

Some advantages to precast include that it's noncombustible and fire resistant. It also provides fire-rated walls, columns, beams, and flooring.

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