

# James D. Ballif Structural Engineering Building Taking Shape

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Construction is underway on the James D. Ballif Structural Engineering Building, which broke ground in summer 2025. Made possible by donor James "Jim" Ballif, this modern facility will serve as a hub for advanced structural engineering research and help prepare the next generation of civil engineers.



*An architectural rendering of the James D. Ballif Structural Engineering Building, which will replace the existing SMASH Lab. Image credit: Design West*

The expansion will triple the footprint of the existing SMASH Lab, adding new research areas and offices for graduate students specializing in earthquake and structural engineering.

"This space is designed to cultivate community and belonging," said Marv Halling, head of the Department of Civil and Environmental Engineering. "Once fully online, it will thrive as a living environment where graduate students—who are at the heart of our work—spend their time, exchange ideas and drive innovation."

Utah State's program left a lasting impression on Ballif as he believes this program's preparation gave him a significant advantage, helping him stand out amongst his peers. Looking ahead, Ballif's contributions ensure that future generations of Utah State students will benefit from the same strong foundations that launched his career.

## SMASH Lab Update



*Construction on the James D. Ballif Structural Engineering Building broke ground in summer 2025.*

Built in 2009, Utah State's Systems, Materials and Structural Health, or SMASH, Laboratory specializes in dynamic testing of high-performance materials used in bridges and other structural components. This work advances the safety, durability and resilience of critical infrastructure.

Working both independently and in collaboration with the Utah Earthquake Engineering Research Center, the lab studies how structures perform under extreme conditions such as earthquakes. Using high-speed hydraulic actuators for hybrid simulation, researchers test how materials respond to loads like wind or traffic without damaging entire structures — highlighting the lab's rare capabilities.

Though the SMASH Lab is being renamed and expanded, its mission remains the same, and its research continues to grow stronger and more advanced.

## Utah Earthquake Engineering Research Center Update



*Progress being made on the James D. Ballif Structural Engineering Building, which broke ground summer 2025.*

The Utah Earthquake Engineering Research Center focuses on teaching students the fundamentals of earthquake engineering. Utah faces significant seismic hazards, yet less than 1 percent of the engineers needed to inspect buildings after a major earthquake are currently trained. This center aims to close that gap.

In 2023, the Utah Legislature dedicated \$2.5 million to help initiate this center with the goal to proactively seek engineering solutions to limit deaths, dollars and downtime caused by large seismic events within the state. The center will focus on numerous challenges which stand in the way of making Utah more resilient to the effects of destructive earthquakes. As Utah's leader in earthquake engineering, the center collaborates with civic, industry, academic and government partners, conducting regional risk assessments and advancing practical solutions that strengthen community resilience and well-being statewide.

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