ACEC Colorado Engineering Excellence Awards 2027: Executive Summary

The National Science Foundation Ice Core Facility (NSF-ICF) provides long-term frozen storage, processing, a laboratory, and support space for meteoric ice cores collected from glaciated regions of Antarctica and North America. Designed to maintain ultra-low temperatures essential to preserving core integrity, the facility can store more than 30,000 meters of ice cores while enabling scientists to curate and study them under controlled conditions. The design team worked closely with GSA to create a facility that supports both the specialized needs of the ice cores and the people who handle, process, and research them. The facility includes -40°C refrigerated storage, laboratory and processing space, storage areas, offices, and support areas.

Located primarily within the existing Building 810 at the Denver Federal Center, the new facility replaces GSA's aging ice core storage operation with a more reliable, spatially efficient, and modernized solution. The new NSF-ICF provides approximately 20 percent more storage capacity within the same footprint as the previous freezer.

The project consists of five independent but interrelated structures supporting five primary functional elements: refrigerated warehouse and ice core preparation spaces with specialized fire protection systems to protect the irreplaceable cores; refrigeration equipment and machine rooms; shop and storage areas; office and support spaces; and loading and shipping areas. A new public entrance also supports tours and educational visits, while exterior improvements such as loading dock repairs and expanded gravel access areas improve logistics and delivery operations.

Together, these improvements will ensure the long-term preservation, efficient handling, and continued global research of the NSF-ICF for decades to come.