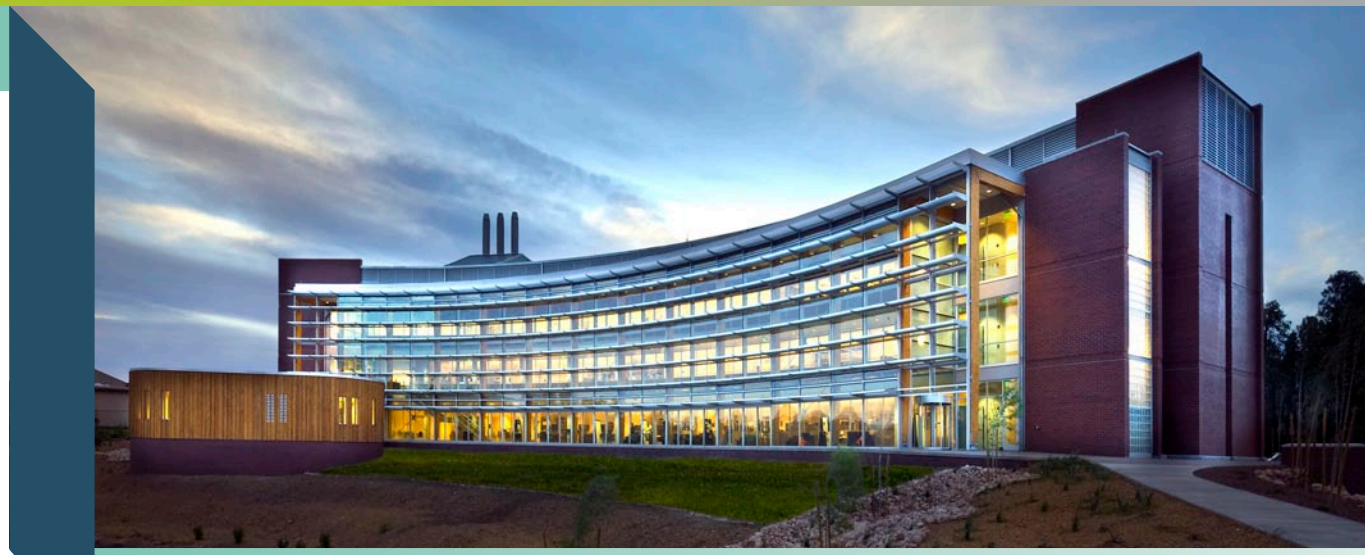
NAU APPLIED RESEARCH & DEVELOPMENT BUILDING

Flagstaff, Arizona

The Northern Arizona University (NAU) Applied Research & Development (ARD) Facility is arguably the most sustainable laboratory building in the world. This signature 61,000 SF facility brings together groups for research, study and application of sustainable technologies. NAU assembled a world-class sustainability team for this project, identifying the goal of LEED Platinum certification from the start. The project was delivered as Construction Manager At Risk (CMAR), enabling the contractor to provide valuable cost estimates during the design phase. Cost input and experience was essential in preserving the goal of Platinum certification. The Commissioning Agent & Energy Modeler were also involved in the design, which was extremely valuable when exploring new technologies such as underfloor air distribution, a vegetated green roof and a radiant floor heating system.



OWNER	ARCHITECT	CONTRACTOR
NORTHERN ARIZONA UNIVERSITY	BURNS WALD-HOPKINS SHAMBACH	KITCHELL CONTRACTORS

SUSTAINABLE STRATEGIES

- The building is located at a major entrance to the NAU campus, showcasing sustainable features
- Innovative greywater and wastewater strategies were utilized, including waterless urinals and high-efficiency plumbing fixtures
- A curved floor plan allows for extensive daylighting throughout, while computer-controlled roller shades, daylighting and occupancy sensors all reduce energy consumption
- The concrete mix contained 33% fly ash by volume, and was used throughout the project for structure, thermal mass and finish material
- FSC certified wood was used everywhere possible and sourced from a nearby forest only 175 miles from the project site

PROJECT RESULTS

LEED for New Construction
PLATINUM level achieved

1st project in Arizona to utilize pervious concrete paving

88% energy cost savings above ASHRAE 90.1-1999 energy standard

91% of construction waste was diverted from the landfill

44% of the building's power supplied by on-site solar photovoltaic system

LEED Facts

LEED for New Construction v 2.1
Square Footage: 61,000 SF
Certification Date: 12/3/2007

POINTS ACHIEVED	60/69
Sustainable Sites	13/14
Water Efficiency	5/5
Energy and Atmosphere	16/17
Materials and Resources	7/13
Indoor Environmental Quality	14/15
Innovation and Design Process	5/5

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Green Ideas™
Environmental Building Consultants