



# s u s t a i n a b l e p r e s e r v a t i o n

Wayne N. Aspinall Federal Building and U.S. Courthouse

the wayne n. aspinall federal building and u.s. courthouse modernization project site net-zero goal sustainability lead platinum target contemporary design impact collaboration participation planning engagement energy efficiency shared success the wayne n. aspinall federal building and u.s. courthouse sustainable preservation modernization project site net-zero goal sustainability lead platinum target contemporary design impact collaboration participation planning engagement energy efficiency shared success the wayne n. aspinall federal building and u.s. courthouse modernization project site net-zero goal sustainability lead platinum target contemporary design impact collaboration participation planning engagement energy efficiency shared

# building details

The \$15 million high performing green modernization of the Wayne N. Aspinall Federal Building and U.S. Courthouse in Grand Junction, CO, preserves the 41,562 square foot building's historic character, while transforming the landmark structure into one of the most energy efficient, sustainable historic buildings in the country.

The project aims to be GSA's first site net-zero energy building on the National Register of Historic Places. Designed to achieve LEED® Platinum, this innovative model turns a 1918 building into a net producer of energy. Using American Recovery and Reinvestment Act funding, GSA is preserving historic volumes and finishes within public and agency spaces and replacing the entire infrastructure with energy efficient systems.

The building houses nine federal agencies. The facility remained occupied during construction, with some temporary relocations taking place during key construction milestones.

**Type:** Federal Office Building and Courthouse

**Construction:** Remodel

**Size:** 41,562 square feet

**Occupants:** U.S. Courts, U.S. Probation, U.S. Marshals, U.S. Army Corps of Engineers, U.S. Senator Mark Udall, FBI, U.S. Attorneys, IRS and GSA.

**Completion date:** January 2013





# green building team

**Courts:** “This project has not only successfully retained the original Western Slope character of the building, but has also created a highly efficient energy neutral facility that represents the gold standard for future similar projects. The beautifully renovated courtroom will allow the United States District Court to fulfill its mission of providing a fair and impartial forum that ensures equal access to justice in accordance with the rule of law, protects rights and liberties of all persons, and resolves cases in a timely and efficient manner for the citizens of the greater Grand Junction region.” —The Honorable Marcia S. Krieger, Chief Judge, United States District Court for the District of Colorado

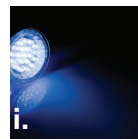
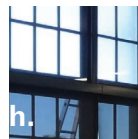
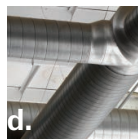
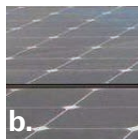
**Building Owner:** “This project is one of our crown jewels in the Rocky Mountain Region. It’s been a unique project in that we’ve converted the building into a model of energy efficiency and sustainability, while preserving its original character. We’re thrilled to have had the opportunity to give this building new life and have it continue to be an integral part of the Grand Junction community.” — Susan Damour, GSA Rocky Mountain Regional Administrator

**Design-Build Contractor and Architect-of-Record:** “The Wayne Aspinall Federal Courthouse building was chosen to be an example of historical preservation and exemplary energy conservation. This modernization project sets new and bold standards for the preservation and efficient use of natural resources for historical building renovations. The LEED Platinum and Net Zero programs used on this renovation demonstrates what can be done with clear vision and leadership.” – Frank X. Eppink, Regional Manager, The Beck Group

## **Lead Design Architect, Integrated Engineer, Sustainable Design and Historic Preservation**

**Consultant:** “The modernization of the Aspinall building under GSA leadership serves as a model of the aspirations of the American Recovery and Reinvestment Act, and a symbol of American innovation in energy independence. Through the dialogue between complementary contemporary work and carefully preserved historic fabric, the rehabilitation of this legacy federal building honors traditions of the past, celebrates technologies of the present, and advances sustainability for the future.” — Paul E. Westlake, Jr., FAIA, Managing Principal and a Lead Designer, Westlake Reed Leskosky

# green building features



- a.** Reuse of the existing building conserves resources and reduces waste generated through demolition. Outdated mechanical and electrical systems were replaced with highly efficient technology while maintaining the historic shell and its significant embodied energy.
- b.** 385 photo-voltaic roof panels convert solar energy into 123 kw usable electricity to generate power for the building on site.
- c.** 32 GeoExchange wells 475 foot deep allow the building to reject or absorb heat to the ground, depending on season and heating and cooling demand.
- d.** A high-efficiency HVAC system tied to the GeoExchange system filters and conditions air for comfortable cooling and heating year-round.
- e.** Spray foam insulation provides additional thermal resistance of R-10 to the thick masonry walls and reduces overall building energy consumption by 11%.
- f.** Rigid roof insulation up to 10" thick with an average thermal resistance of R-35, reduces heat loss and heat gain, and allows for the down-sizing of heating and cooling equipment.
- g.** A white colored roof membrane reduces solar gain and air-conditioning loads, as well as potential urban heat island effects.
- h.** In an approach sensitive to the historic wood windows, new storm panels with high-performance UV control film reduce heat transfer by a factor of two and control solar heat gain.
- i.** LED light sources reduce energy consumption, cooling load, and maintenance, and contain no mercury, a source of toxic pollution when disposed.
- j.** Workstations have proximity to windows for natural daylighting. Lighting fixtures on the perimeter are on a separate zone, and electric lighting automatically dims or shuts-off to reduce energy consumption.
- k.** Low-flow EPA WaterSense rated plumbing fixtures reduce water use by approximately 40% less than a typical building.
- l.** Wireless controls for lighting and HVAC, including solar powered devices, reduce the impact to the historic building, and avoid conventional copper wiring.
- m.** Several parking spaces designated for fuel-efficient vehicles and a bicycle rack encourage alternative modes of transportation that reduce fuel use.

# key project goals

- Designed to be GSA's first site net-zero energy building on National Register of Historic Places; targeted LEED® Platinum
- Aims to achieve federal government requirement for net-zero and energy independence by 2030 — twenty years ahead of the goal
- Turns a 1918 building into a net producer of energy
- Site net-zero energy strategies including energy-saving geothermal heating and cooling system and solar panel array
- Balances modernization and new technologies with historic preservation

## Restoring Historic Buildings

This project not only transformed this building into a high performing green building, it provided extensive restoration efforts that brought many of the building's original historic features back to life.

When the U. S. Postal Service vacated the building in 1965, GSA discovered that the first floor post office area, elevator lobbies and two main entrances were heavily modified. Through this ARRA project, a number of historic features have been restored.

- The main lobby has been transformed from a small entry vestibule to its original grandeur
- After 40 years, the three floor height historic curved stairwell was reopened from being hidden behind a wall
- Original arched windows, interior arched colonnade, decorative column capitals, marble-bordered terrazzo floor and other historic elements are now exposed and visible in the lobby
- Wood flooring in the lobbies and corridors are restored including the original wood paneled doors
- Arched windows that were hidden behind dropped ceilings are revealed again
- The original skylight in the Post Office workroom was restored to providing increased daylight

# gsa fine arts collection

More than one fourth of GSA's 1600 owned buildings are listed in or eligible for the National Register of Historic Places, the nation's listing of historic properties, and approximately half are more than 50 years old.

As part of its commitment to historic preservation, GSA is working to maintain the architectural excellence of America's public buildings. For more information visit GSA's [Historic Buildings](#) page.

## **GSA's Fine Arts program and Federal Buildings**

The federal government has incorporated artwork in its public buildings since the 1850s. When GSA was established in 1949, it assumed responsibility for the stewardship of much of this artwork and for the continued commissioning of American artists to create permanently installed artwork for federal buildings across the nation.

GSA's art collection is one of our nation's oldest and largest public art collections. It consists of permanently installed and movable mural paintings, sculpture, architectural or environmental works of art, and works on paper dating from 1850 to the present. These civic works of art are in federal buildings and courthouses across the United States. Maintained by GSA as a part of our national and cultural heritage, the Fine Arts Collection serves as a reminder of the important tradition of individual creative expression.

*Harvest* by Mary Louise Harrington Emerson Ronnebeck was commissioned by the Treasury Relief Art Program, a federal art program enacted during the New Deal era. *Harvest*, created in 1940, depicts a young man and woman working together harvesting peaches, symbolizing the richness that came to the land following the introduction of irrigation with a water wheel in the background. The mural resides in the Wayne N. Aspinall Federal Building and U.S. Courthouse in Grand Junction, CO.





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