THE AMERICAN UNIVERSITY

McKinley

LEED NC v2.2 Gold

4400 Massachusetts Ave NW, Washington D.C. 20016

BUILDING HISTORY

McKinley, originally constructed in 1907, is the second oldest building on the American University campus. President Theodore Roosevelt laid the cornerstone of the building in 1902. In 2014, McKinley reopened following a substantial renovation that included a newly remodeled interior and an addition. The building now houses the School of Communication.

Originally named the Ohio Hall of Government, the founders of American University later decided to rename the building The McKinley Memorial-Ohio College of Government in honor of the late President William McKinley.

Architect Henry Ives Cobb designed the iconic domed roof building and marble-columned entrance. Campus was originally planned to have a second quadrangle outside of the building's main entrance under the dome, this plan was later changed and is why McKinley appears to face the wrong direction. Since the renovation of 2014, the building now incorporates some modern features, such as a glass entrance, a media innovation lab, a focus group teleconference suite, and a 150-seat theater for master classes and screenings.

PROJECT HIGHLIGHTS

LEED (™) Facts

McKinley
The American University
2015

Location	4400 Massachusetts Ave NW, Washington D.C. 20016
Rating System	LEED-NC v2.2
Certification Achieved	Gold
Total Points Achieved	41

Sustainable Sites	10/14
Water Efficiency	3/5
Energy and Atmosphere	6/17
Materials and Resources	6/13
Indoor Environmental Quality	11/15
Innovation in Design	5/5

100% — *Amount of green electricity used in the building*

75% — *Existing walls, floors, and roof reused*

25% — *Reduction in energy usage compared to a standard building*

65% — *Reduction in irrigation water usage compared to conventional landscaping*

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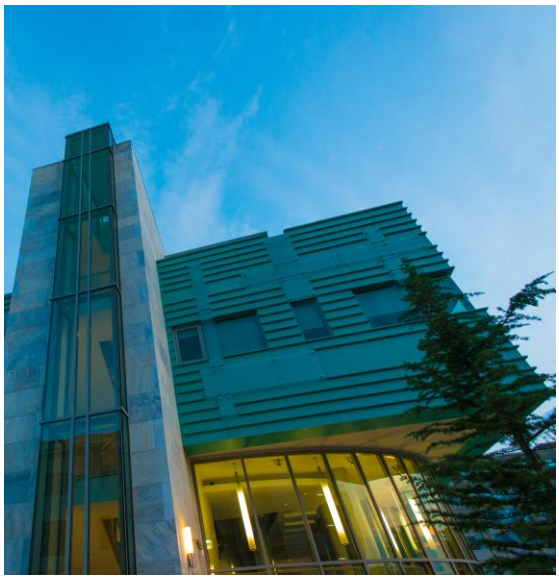
PROJECT TEAM

Owner: The American University	Mechanical Engineer: WSP Flack + Kurtz
Architect: Bowie Gridley Architects	Civil Engineer: Wiley/Wilson
Contractor: Sigal	Structural Engineer: Thornton Tomasetti
LEED Professional: The American University	Commissioning Agent: Ebert & Baumann



ADDITIONAL RESOURCES

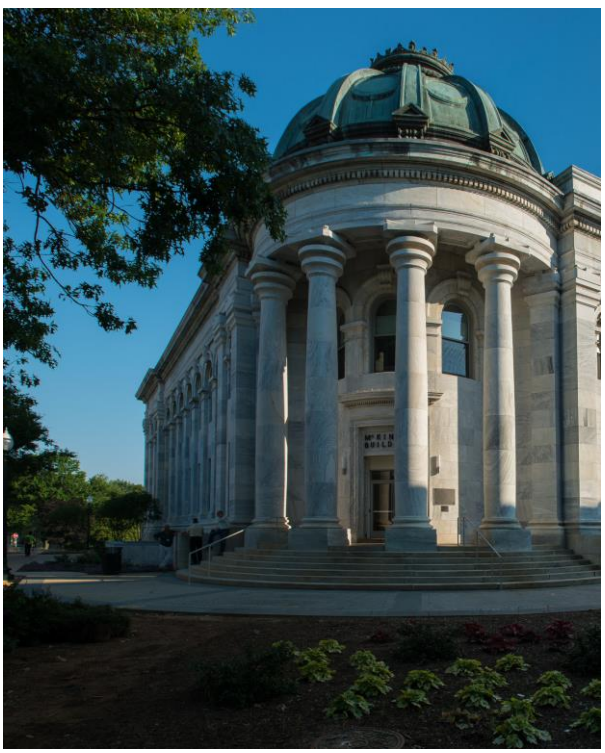
Office of Sustainability:
www.american.edu/sustainability/

University Facilities:
www.american.edu/facilities/

U.S. Green Building Council:
www.usgbc.org

GBCI:
www.gbci.org

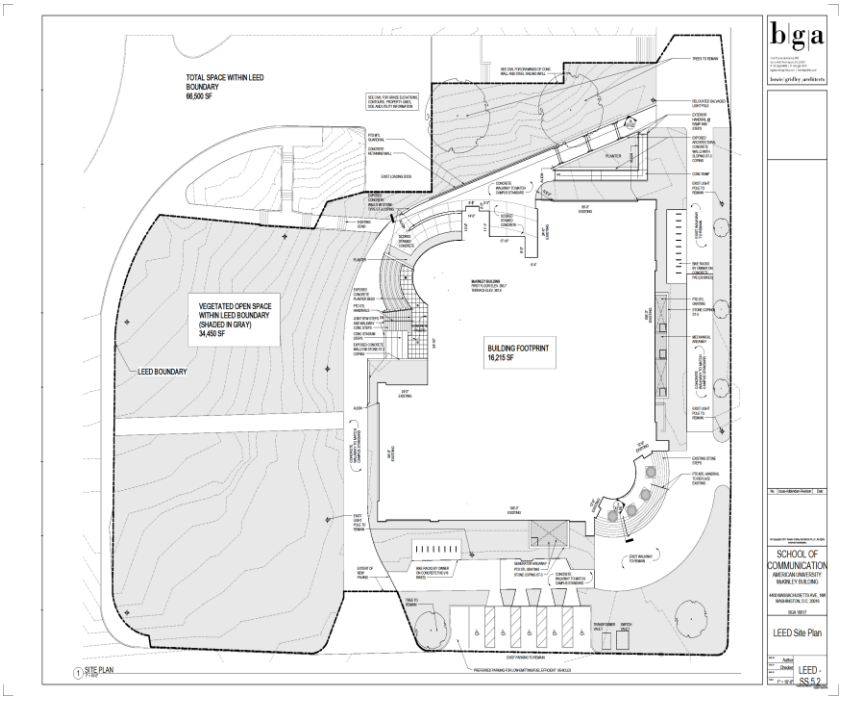
View details for all of AU's LEED buildings:
www.gbig.org/collections/18029



SUSTAINABLE SITES

A building's location plays an important role in determining its lifetime environmental impact. Selecting a location that is well connected to public transportation and basic services such as schools and grocery stores can reduce vehicle reliance and create easy community connectivity. The McKinley building is located in the heart of the American University campus, in a dense suburban area with easy walkable access to amenities, including restaurants, banks, places of worship, and retail. The building is well connected to the rest of Washington, DC by metro bus and the university shuttle, which runs to the Tenleytown metro. In addition to public transportation options, bicycle racks located outside the building facilitate easy alternative commuting.

Additionally, design features that minimize run off and the heat island effect lessen the environmental impact of the building in its community. McKinley includes 4,000 square feet of green roof, which reduces storm water runoff and mitigates the heat island effect. Excess storm water run-off is filtered through a storm filter, removing pollutants, such as fine solids, soluble heavy metals, oils and total nutrients.



Native and adaptive plants are used in the project landscaping to help reduce irrigation needs. The turf area surrounding the building is designed to serve as a drainage system, absorbing the runoff as the site slants towards the bio-retention basin. This system ensures that the turf remains healthy while irrigation needs are minimized.

WATER EFFICIENCY

Smart design reduces runoff, waste water, and the need for end of pipe pollution solutions in construction. Water efficiency, both indoors and outdoors, reduces potable water waste and the amount of water sent back to energy intensive wastewater treatment facilities.

The McKinley building landscaping is designed with native and adaptive plant species, which require less irrigation than other plant types. The landscape is designed to use 65.6 percent less potable water than standard landscaping.

Water efficient plumbing fixtures are used throughout the building. The lavatory faucets, water closets, and urinals all conserve potable water by having flush and flow rates lower than standard fixtures. Through the use of efficient fixtures, McKinley uses 37 percent less water indoors than a standard building.

ENERGY AND ATMOSPHERE

Green buildings aim to provide occupants with a comfortable indoor environment that uses energy efficiently. Sustainable building design, high efficiency equipment, and energy conserving practices minimize the energy used for heating, cooling, ventilating, and illuminating building spaces. American University is committed to reducing energy usage on campus as part of its effort to reduce greenhouse gas emissions. The McKinley building relies on highly insulated walls, roof, and windows, to minimize the amount of heated or cooled air escaping through the building.

Additionally, electricity consumption is reduced through the use of efficient lighting fixtures, reduced lighting power, occupancy sensors, and daylighting controls, which adjust the lighting in a building according to the amount of natural ambient light present. The building's energy efficient features result in 26 percent less energy use than a conventional building. Additionally, because American University purchases renewable energy for all campus electricity use, 100 percent of the building's electricity consumption is offset with renewable energy credits.

MATERIALS AND RESOURCES

Using sustainably sourced, recycled, and reused building materials reduces the environmental impact of construction. Sustainable materials are responsibly extracted and processed, or locally sourced, thus minimizing air pollution due to production and transportation. Additionally, green building project teams look for ways to reuse construction waste when possible and recycle waste when not.

During McKinley's major renovation, 75 percent of the existing walls, floors, and roof were reused. The existing walls and exterior marble were reused to form the walls of the new building addition. New materials used in the building contained a total of 30 percent recycled content. The concrete used throughout the building contained 20 percent post-consumer recycled content, and was sourced 10 miles away from the project site. The Terrazzo floors are made of recycled granite and marble. Interior adhesives, sealants, paints, coatings, and carpets are all low or no VOC (volatile organic compounds) which improves indoor air quality. Zero waste containers can be found throughout the building, in addition to a recycling room located on the terrace level to provide occupants with environmentally friendly waste disposal options.

INDOOR ENVIRONMENTAL QUALITY

A healthy indoor environment positively impacts the way people learn, work, and live in a building. Air quality, thermal comfort, acoustics, and lighting all play a role in the productivity, comfort, safety, and security of building occupants.

To ensure a healthy indoor environment, McKinley has numerous features that help improve air quality. All indoor spaces were designed with ventilation rates 30 percent greater than the minimum required rates. The increased ventilation rates allow for greater amounts of fresh air to circulate in the building and reduce pollutants and odors in the air. Carpet tiles used throughout the building are low VOC, which contributes to an improved indoor air quality. Carbon dioxide sensors have been mounted in heavily trafficked areas and allows the demand control ventilation system to provide the correct amount of fresh air for the number of occupants present in the room. This strategy promotes healthy indoor air quality and reduces energy consumption.

INNOVATION IN DESIGN

The innovation in design section recognizes design and construction features that go beyond sustainable design standards. The McKinley project team included several innovative sustainability features during the building's design and construction.

American University purchases 100% Renewable Energy credits to compliment campus electricity consumption, therefore all the electricity used in McKinley is sourced from green power. Outreach efforts through sustainability focused building signage and campus sustainability tours provide campus visitors with the opportunity to learn more about the university's green buildings. McKinley's maintenance also follows LEED's green housekeeping standards, which uses environmentally friendly cleaning products and procedures.

LEED SCORE CARD

LEED-NC Version 2.2

Project Checklist

McKinley

Sustainable Sites — Possible Points: 14

Y	?	N			
Y			Prereq 1	Construction Activity Pollution Prevention	Required
1			Credit 1	Site Selection	1
1			Credit 2	Development Density and Community Connectivity	1
		1	Credit 3	Brownfield Redevelopment	1
1			Credit 4.1	Alternative Transportation—Public Transportation Access	1
1			Credit 4.2	Alternative Transportation—Bicycle Storage & Changing Rooms	1
1			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Ve	1
1			Credit 4.4	Alternative Transportation—Parking Capacity	1
1			Credit 5.1	Site Development, Protect or Restore Habitat	1
1			Credit 5.2	Site Development, Maximize Open Space	1
1			Credit 6.1	Stormwater Design, Quantity Control	1
1			Credit 6.2	Stormwater Design, Quality Control	1
		1	Credit 7.1	Heat Island Effect, Non-roof	1
		1	Credit 7.2	Heat Island Effect, Roof	1
		1	Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 5

Y	?	N			
1			Credit 1.1	Water Efficient Landscaping. Reduce by 50%	1
		1	Credit 1.2	Water Efficient Landscapin, No Potable Use or No Irrigation	1
		1	Credit 2	Innovative Wastewater Technologies	1
1			Credit 3.1	Water Use Reduction, 20% Reduction	1
1			Credit 3.2	Water Use Reduction, 30% Reduction	1

Energy and Atmosphere — Possible Points: 17

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
1			Credit 1.1	Optimize Energy Performance: 10.5%	1
1			Credit 1.2	Optimize Energy Performance: 14%	1
1			Credit 1.3	Optimize Energy Performance: 17.5%	1
1			Credit 1.4	Optimize Energy Performance: 21%	1
1			Credit 1.5	Optimize Energy Performance: 24.5%	1
		1	Credit 1.6	Optimize Energy Performance: 28%	1
		1	Credit 1.7	Optimize Energy Performance: 31.5%	1
		1	Credit 1.8	Optimize Energy Performance: 35%	1
		1	Credit 1.9	Optimize Energy Performance: 38.5%	1
		1	Credit 1.10	Optimize Energy Performance: 42%	1
		1	Credit 2.1	On-Site Renewable Energy: 2.5%	1
		1	Credit 2.2	On-Site Renewable Energy: 7.5%	1
		1	Credit 2.3	On-Site Renewable Energy: 12.5%	1
		1	Credit 3	Enhanced Commissioning	1
		1	Credit 4	Enhanced Refrigerant Management	1
		1	Credit 5	Measurement & Verification	1
1			Credit 6	Green Power	1

Materials and Resources — Possible Points: 13

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	Required
		1	Credit 1.1	Building Reuse, Maintain 75% of Existing Walls, Floors & Roof	1
		1	Credit 1.2	Building Reuse—Maintain 100% of Existing Walls, Floors & Roof	1
		1	Credit 1.3	Building Reuse, Maintain 50% of Interior Non-Structural Elements	1
1			Credit 2.1	Construction Waste Management, Divert 50% from Disposal	1
1			Credit 2.2	Construction Waste Management	1
		1	Credit 3.1	Materials Reuse, 5%	1
		1	Credit 3.2	Materials Reuse, 10%	1
1			Credit 4.1	Recycled Content, 10% (post-consumer + 1/2 pre-consumer)	1
1			Credit 4.2	Recycled Content, 20% (post-consumer + 1/2 pre-consumer)	1
1			Credit 5.1	Regional Materials, 10% Extracted, Processed & Manufactured Regionally	1
1			Credit 5.2	Regional Materials, 20% Extracted, Processed & Manufactured Regionally	1
		1	Credit 6	Rapidly Renewable Materials	1
		1	Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y	?	N			
Y			Prereq 1	Minimum Indoor Air Quality Performance	Required
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
		1	Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Carpet Systems	1
		1	Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
		1	Credit 8.1	Daylight & Views, Daylight 75% of Spaces	1
		1	Credit 8.2	Daylight & Views, Views for 90% of Spaces	1

Innovation and Design Process — Possible Points: 5

Y	?	N			
1			Credit 1.1	Innovation in Design: Green Cleaning Program	1
1			Credit 1.2	Innovation in Design: Green Education & Outreach Program	1
1			Credit 1.3	Innovation in Design: 100% Green Power	1
1			Credit 1.4	Innovation in Design: Recycling Program	1
1			Creidt 2	LEED® Accredited Professional	1

Total — Possible Points: 69

Y	?	N
41		28

Certified 26 to 32 points **Silver** 33 to 38 points **Gold** 39 to 51 points **Platinum** 52 to 69