



CONRAD
WASHINGTON DC

LEED Case Study

Key Parameters

Location: Washington DC

Gross Area: 406,342 sf

Construction Cost: \$160 million

Completion Date: Q4 2018

Project Type: Hotel and Retail

Rating System: LEED-NC v2009

SUSTAINABLE FEATURES

The **Conrad Washington DC** is a luxury hotel and retail space in the heart of the nation’s capital targeting the LEED Gold certification. LEED is a rating system developed to evaluate the environmental performance of buildings and reward sustainable design.

The Conrad is part of the new, 10-acre, mixed-use CityCenterDC development that includes office, residential and retail space, as well as two parks for public use. This five-star hotel has 360 guest suites, banquet and meeting facilities, a full-service restaurant and a rooftop bar. The building also boasts 30,000 square feet of retail space on its ground floor. Some of The Conrad Washington DC’s sustainable aspects include:

Green Roof and Stormwater Management

More than just a beautiful amenity, the Conrad’s vegetated roof and third-floor terraces serve several important functions. Foremost, they provide open space for hotel guests and restaurant patrons to relax, work or mingle. The plants and soil insulate the building, reducing the energy demand from the heat and air conditioning systems. They also diminish the heat island effect of the building and filter the city’s air to cut down on pollution and make DC a more livable place for all residents. Finally, the vegetation filters and recycles rainwater and is one aspect of the facility’s stormwater management plan that has helped reduce the amount of runoff into the city’s stressed stormwater infrastructure by 97.49%. Captured rainwater that exceeds the building’s irrigation needs is used in its cooling towers for air conditioning.

Reduced Heat Island Effect

The heat island effect is the idea that roads, buildings and other “heat islands” absorb energy from the sun and heat up the spaces around them. This phenomenon is most noticeable in densely-developed areas and explains why cities tend to feel hotter than their surrounding suburbs in the summer. Vegetation on The Conrad’s roof and terraces converts solar energy into plant energy,



LEED Scorecard

Target Certification Level: Gold
Score: 61

- Sites: 22 of 26
- Water: 4 of 10
- Energy: 13 of 35
- Materials: 6 of 14
- Environmental Quality: 9 of 15
- Innovation: 6 of 6
- Regional Priority: 1 of 4





FAST FACTS

2.04 Million

The amount of water, in gallons, that The Conrad saves each year.

1.96 Million

The amount of energy, in kilowatt hours, that The Conrad saves each year.

92.05

The percentage of construction and demolition waste that was diverted from landfills.

97.49

The percentage of rainwater that The Conrad Washington DC is able to manage on site, helping remove the burden from the city's stormwater infrastructure.

9,740

The area, in square feet, of vegetation covering The Conrad's roof and terraces.



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interfering with the sunlight that would otherwise warm the building. Additionally, the underground parking garage receives no direct sunlight. Compared to ordinary asphalt parking lots, which act as major heat islands, The Conrad's underground parking garage is far more efficient. The green roof adds an additional layer of insulation to the building, while it's garage helps regulate the temperature of the cars parked within; both features help keep the city cool and reduce the energy needed for air conditioning.

Access to Alternative Forms of Transportation

The Conrad Washington DC hotel is located in the new CityCenterDC development, where guests are walking-distance from every-day amenities, including retail stores, restaurants and entertainment venues. With conveniently located Metro stations and bus stops, guests have access to all the best modes of transportation to traverse the city. More adventurous guests can also take advantage of several bikeshare options around the nation's capital and experience why it is ranked one of the most bikable cities in the United States.

Reduced Water and Energy Consumption

Thanks to modern water and energy saving appliances installed in guest rooms, The Conrad Washington DC has been able to reduce water consumption by 24.7% and energy consumption by 17.8% compared to similar buildings. This amounts to annual water savings of 2.04 million gallons and energy savings of 6,704 MMBtu. These energy savings cut the building's carbon dioxide emissions by 25.2% or 2,705 metric tons per year. Additionally, by using captured rainwater with drip-irrigation technology for terrace and rooftop plantings, The Conrad Washington DC has eliminated its need to use potable water for irrigation. Its efficient drip-irrigation technology allows a reduction of 72.31% to its total water used for irrigation.

Renewable Energy Credits

The Conrad Washington DC offset 35% of its projected electricity consumption for its first two years of operation through investments in Green-e certified Renewable Energy Credits, or RECs. These credits allow buildings, like The Conrad, that are unable to generate renewable energy on site to support renewable energy projects elsewhere. The Conrad's RECs were primarily supplied by wind farms in Texas, where more wind energy is captured than anywhere else in the United States.