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HIGH PERFORMANCE CERTIFICATION PROGRAM

by Matt Kiszka and Erin Reynolds

New construction and substantial renovation of academic buildings and facilities constructed or maintained with state General Fund moneys (hereafter referred to as "state facilities") are required to comply with the High Performance Certification Program (HPCP). The program requires the application of energy efficiency standards and sustainable building practices to achieve operational cost savings and a decreased environmental impact. This *issue brief* outlines details of the HPCP.

Background

Creation of the HPCP. Senate Bill 07-051 directed the Office of the State Architect (OSA) in the Department of Personnel and Administration to select and administer an HPCP for the new construction or substantial renovation (where the cost of the renovation exceeds 25 percent of the facility's current replacement value) of state facilities designed on or after July 1, 2008, when the projects are:

- larger than 5,000 gross square feet; and
- constructed or renovated with 25 percent or more state funds.

A state facility also includes academic facilities constructed or renovated on a higher education campus and paid from cash funds. State law requires that the HPCP establish a standard of design or construction that:

- can be quantified, measured, and verified by an independent third party;
- reduces the consumption of energy, water, and other resources;
- results in the recovery of the initial increased capital costs attributable to compliance with the program through a reduction in long-term energy, maintenance, and operating costs;
- improves the indoor environmental quality of state buildings;
- encourages the use of Colorado products, regardless of certification status; and
- complies with federal standards for the treatment of historic properties.

Implementation of Program

Overview of the LEED certification program. The OSA adopted the U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) program as its standard to independently measure the efficiency and environmental impact of the design, construction, and performance of new and existing state facilities. LEED certification is categorized into several rating systems: Building Design and Construction (BD+C); Interior Design and Construction; Building Operations and Maintenance; Neighborhood Development; and Homes. Each system is further divided into categories to address the type of building seeking certification.

Most often, the OSA employs the BD+C system which offers certifications for new construction and major renovations, a building's core and shell, and schools, among other construction project types.

Once registered, new construction and major renovation projects achieve points toward certification for employing efficient and

environmentally friendly technologies and strategies during design and construction. Table 1, below, outlines the nine energy and environmental design areas for the BD+C rating system.

Table 1
LEED BD+C Rating System

Design Area	Points	Example
Energy and Atmopshere	33	Optimization of energy use
Indoor Environmental Quality	16	Use of low-emitting materials
Location and Transportation	16	Access to quality transit
Materials and Resources	13	Managing construction waste
Water Efficiency	11	Reducing water use
Sustainable Sites	10	Protection or restoration of habitat
Innovation	6	Utilization of new methods
Regional Priority	4	Addressing regional environmental priorities
Integrative Process	1	Using holistic design approaches

Source: USGBC.

All new LEED projects must implement a number of prerequisite credits in areas such as energy performance, building level energy metering, water use reduction, and indoor air quality. Additional credits may be earned by implementing measures that further reduce energy use and environmental impact.

LEED certification is awarded at four levels, based upon points achieved:

- LEED Certified (40-49 points);
- LEED Silver (50-59 points);
- LEED Gold (60-79 points); and
- LEED Platinum (80-110 points).

The OSA-targeted standard of high performance certification is LEED Gold.

State facilities designed and constructed to HPCP standards. To date, 18 facilities have been designed and constructed to HPCP standards since the program's implementation in 2008. Many other facilities have been voluntarily designed, constructed, or renovated to these standards, particularly on higher education institution campuses. In December 2013, the OSA reported that 102 state-owned buildings have attained or are in the process of attaining LEED certification.

HPCP cost-benefit example. The University of Colorado conducted an independent energy performance analysis of its LEED Gold-certified Wolf Law building in 2010 and found that in comparison to a conventional same-sized building on campus, Wolf Law used 46 percent fewer resources (electric, steam, water), saving $250,000 in operational costs on an annual basis.

State exemptions to the HPCP. Facilities that are smaller than 5,000 gross square feet and those without a heating, ventilation, or air conditioning system are exempt from the requirements of the HPCP. Additionally, if a facility undergoing substantial renovation cannot achieve certification due to either the historical nature of the facility or because the initial increased capital costs cannot be recouped within 15 years, an accredited professional can assert in writing that the renovation has been consistent with the high performance certification program to the extent possible. Finally, the OSA may exempt certain facilities from complying with requirements of the program if it identifies extenuating circumstances that prevent implementation.

Energy-efficient buildings. Expanding on the HPCP, Senate Bill 13-028 requires state agencies, including higher education institutions, to monitor, track, and verify utility usage data for all state facilities designed, constructed, or substantially renovated on or after January 1, 2010; this data is collected and monitored by the OSA.