First LEED for Healthcare Certification in the Country Complete

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The Group Health Puyallup Medical Center in Puyallup, Wash., LEED Gold. Credit: Sozinho Imagery

No buildings impact the health of their occupants more directly than healthcare facilities, but the existing LEED rating systems weren't designed specifically to record and reward green medical buildings. With the first building now certified under the LEED for Healthcare (LEED-HC) rating system, the industry has its first case study in the Group Health Puyallup Medical Center.

This month, Group Health Cooperative's new medical office building in Puyallup, Wash., became the first in the nation to earn a rating under LEED-HC, earning LEED Gold. The project leveraged the unique credits related to medical facilities to promote both building performance and features to improve occupant health and well-being.

The most critical element of the process was the team's integrated approach to design. Before LEED was on the table, Group Health Cooperative and its facility manager, CBRE, had planned an intensively integrated process that brought together a wide variety of experts to optimize the design and construction process, efficient service delivery and a healthy indoor environment.

LEED-HC is the first LEED rating system to help institutionalize this critical first step, with a prerequisite for Integrated Project Planning and Design. The rating system includes both a prerequisite for a minimum amount of integrated project planning, as well as an additional innovation credit for advanced coordination, which the project earned for its exemplary collaborative process.

The agreements among the team members, including The Benaroya Company (developer), Collins Woerman (architect), GLY (contractor), University Mechanical, Pacland (civil, landscape), Pivotal Lighting, and Engineering Economics Inc. (commissioning authority), were based on performance targets for the whole project, which made for an engaged and focused team.

When the team identified a target for energy performance as part of the LEED-HC process, all parties, including Group Health, leaned in to make sure that target was achieved effectively within budget. As a result, Group Health will have a high-performing building with low operating costs well into the future. The savings in energy cost is estimated to be 29 percent over the LEED baseline (ASHRAE 90.1-2007).

In addition to points for energy efficiency, the project earned several credits that are new to LEED, appearing for the first time in the LEED-HC rating system:

Connection to the Natural World: Many studies have shown faster recovery times and other improved health outcomes from providing patients with a connection to nature. Group Health Puyallup includes two spaces for this connection: a landscaped area on the ground level for patients and visitors to relax, and a green roof and covered patio that is an extension of the staff lounge.

Water Use Reduction: Reducing water use is always a part of LEED, but LEED-HC is unique in requiring reduced potable water use for cooling medical equipment. For example, medical sterilizers use very hot water to sanitize equipment. In order to protect the plumbing system, the hot water coming out of the sterilizer has to be tempered with cold water to bring down the temperature. This project used a special temperature sensor to add cold water only when it's needed, rather than running cold water all the time.

Community Contaminant Prevention – Airborne Releases: Recognizing that indoor air quality is of the highest importance in medical facilities, this new credit rewards projects that include only the least-polluting combustion equipment, such as furnaces and boilers. LEED-HC requires the levels of oxides of nitrogen (NOx)

emitted by combustion hot water heaters to be under 55 parts per million. Group Health Puyallup has a steam generator boiler (hot water heater) that has less than half of that level, providing hot water for the entire building with less pollution.

PBT Source Reduction: Persistent bioaccumulative toxins (PBTs) are chemicals that accumulate in our bodies and can cause negative health impacts. Lead, cadmium and copper are all PBTs that are found in common building materials. This credit requires projects to minimize the use of these chemicals by using a variety of strategies; for example, lead-free solder, flux and roofing. Group Health Puyallup used a number of lead-free products, as well as mechanically crimped copper joints to avoid joint-related copper corrosion.

“Earning the first-ever LEED for Healthcare Gold certification validates our commitment to enhancing the environmental sustainability of Group Health facilities,” said Bill Biggs, Vice President, Administrative Services at Group Health. “The health of our patients, employees and communities depends on a healthy environment and we are committed to conducting our operations in an environmentally sensitive manner."

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