

Fine-Tuning our Buildings for Optimum Performance

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The notion that green building is a process and not just an event is something that is often overlooked. Much like the life cycle of a building, the green building process is one that takes a building from merely a sustainable "vision" to a sustainable structure.

The LEED rating system centers on sustainable operations and providing verification through LEED certification. The first phase in the green building process is called integrated design, which requires a team of professionals who understand that the use of the building, its indoor and outdoor conditions, will vary over its lifetime, and the team must plan for every reasonable contingency.

Will the building be used in the same way forever? Will a coffee shop open on the first floor? Will the ventilation system satisfy the requirements of any potential tenant? The building must perform optimally in a variety of future scenarios. The first phase team will envision, complete and test the building before ushering it into a second phase (i.e., ongoing operations and maintenance) and a new team, with different skills and goals.

LEED drives this integrated approach building by asking teams to identify and simulate the best combination of design strategies for an energy efficient, healthy performing building and occupants. However, the green building process and LEED cannot rely on performance simulations alone – merely simulating building operations will not ensure high performance operations.

The only way to ensure high performance operations is to listen to the building. Operators must collect useful feedback from the building while it is in use and fine-tune all the building systems based on an understanding of the inherent capabilities of the design and the needs of the occupants. Are the occupants comfortable? Or, do the lights stay on far after the last person leaves for the night? Operators should always be asking questions and getting answers – fine-tuning - in order to keep the building performing at its design potential.

Every time a building goes through the tuning process, the design performance information gives the user an idea of how their green building should perform. Operating teams can use the tools that LEED provides – LEED for Existing Buildings, [Building Performance Partnership](#), etc. - to track, benchmark and verify energy use, water use, occupant satisfaction, transportation and other key aspects in ongoing building performance. USGBC empowers the teams that use these tools to fully understand the operating intent of the building, to fix issues they identify, and to educate and inform occupant behavior in their building. The act of collecting and understanding the operating data produced by green buildings and their occupants is the best way to make sure the building continues the green process.

When starting out with LEED, think of each phase of the green building process as a new stage of life; many buildings will experience growing pains, adjustment periods and identity crises. If the building does not receive the attention it needs, its support systems (e.g., ventilation and water systems) may function improperly and the building will suffer. Maintaining awareness of the building's systems - tracking their ups and downs - is the longest phase of the green building process and should never end. USGBC recognizes that this phase of the green building process is critical to ongoing efficiency and continues to devote time to supporting teams in their operations and maintenance efforts.

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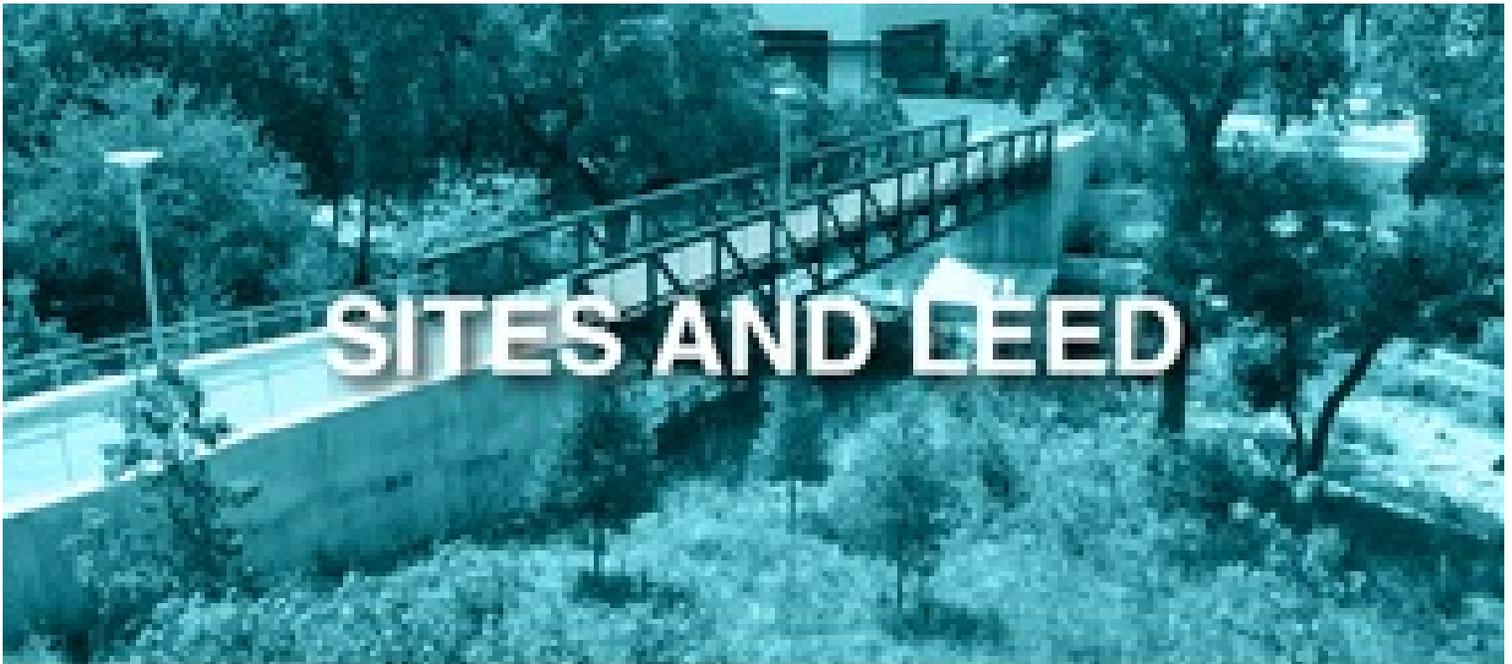
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