



GREEN SHEET

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Greenbuild 2017 was held in early November at the Boston Convention and Exhibition Center in Boston, MA.

Over 25,000 attendees from 100 countries participated in the event, and Rudolph and Sletten's delegates were Ben Hancock, Kalie Ward, Mike Mohrman, and Hugo Mailloux-Beauchemin. In the event's closing speech by our 42nd President Bill Clinton, he reminded us that "we have to be the change we advocate. We have to do it without the guarantee of success or permanence, but with the certainty that just making the effort is better than nothing."

One of the main emerging topics discussed throughout the event was "Resiliency". Whereas "Sustainability" implies *continuity* (something that is replenishable or that the use of a resource is balanced so that it will never be depleted), "Resiliency" implies *elasticity* (the ability to bounce back after a disaster, whether that disaster is a natural one such as earthquakes, hurricanes and tornadoes or man-made such as bombings and chemical spills). The call to action is for us to understand the context each built environment is situated in and design for the vulnerabilities that can be expected as a consequence of that environment. We've been focusing on transforming our buildings to lower their impact

on our environment, but we need to also start focusing on transforming our buildings to be better able to withstand the impact the environment has on them.

Resiliency acknowledges the fact that a short term sustainability impact can be outweighed by the long term resiliency benefit of a proposed building strategy. The message being conveyed is that although sustainability and resiliency are not the same pursuit, there is considerable overlap in the pursuit of these strategies and that overlap is where we need to focus because an ideal community, economy or business is (to the greatest extents possible) both sustainable and resilient.

SUSTAINABLE PROJECT TALLY

33 Completed Projects
7,066,871 square feet
\$2,069,085,199

25 In Progress Projects
11,650,134 square feet
\$3,748,913,475

Recently Certified PROJECTS



UC Los Angeles
Geffen Hall -
David Geffen
School of Medicine
120,000sf / \$90,000,000



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To design a building with resiliency means to start the design process by thinking carefully about common points of stress due to normal use, as well as the most likely disaster situations in the environment that could challenge the integrity of the building and/or endanger its occupants. The local environment always plays a critical role in determining factors that make a building resilient or not. With regard to common points of stress, one example would be the elimination of those sustainable sheet good flooring products that quickly wear down in main corridors at back-of-house locations. With regard to disaster situations, us on the West coast may focus on earthquakes, extreme heat, fire resistance, and water shortages, whereas the East coast may focus more on hurricanes, extreme cold, and flooding.

The consensus among the scientific community is growing stronger and stronger that anthropogenic climate change (climate

change originating from human activity) is exacerbating natural disasters, and as global weather patterns continue to change and trigger more extreme events, this concept of resiliency needs to be promoted to the main stage and discussed alongside sustainability in order to combat the challenges that lie ahead.

We're pretty good at assessing energy use, water use, etc. but we're not really good when it comes to assessing and measuring resiliency. The necessary tools simply do not exist yet. Whether those tools manifest themselves in the form of a "resilience standard" that identifies "certification" criteria through an independent third-party organization like GBCI does with the LEED rating system is yet to be determined. RELi is a resilient rating system and certification for buildings, neighborhoods, homes and infrastructure, similar to LEED in its structure and format. It was created in 2012 by San Francisco architecture firm Perkins+Will

in collaboration with the Institute for Market Transformation. In 2012, RELi was adopted by the U.S. Green Building Council (USGBC) and is moving towards becoming a global standard rating system under USGBC's rubric.

The AIA published the Building Industry Statement on Resilience back in May of 2016 and it's a great summary of the call to action with regard to resiliency in the built environment. In it, resilience is defined as "the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events." Andrew Zollli with the New York Times may have put it best in his 2012 article on "Learning to Bounce Back" stating, "where sustainability aims to put the world back into balance, resilience looks for ways to manage in an imbalanced world."

SUSTAINABILITY RATING SYSTEM RUNDOWN

Green Business Certification Inc. (GBCI) is an American organization (est. 2008) that provides third-party credentialing and verification for several rating systems relating to the built environment, the most well-known of which is the LEED rating system developed by the USGBC (est. 1993).

GBCI Sr. VP of Credentialing & Certification Sarah Alexander presented a rundown of the eight rating systems now covered under the GBCI umbrella. We must all do our best to keep up with the evolving world of building rating systems, especially as they apply to our market, and GBCI is a good benchmark for determining whether a rating system has established itself as one with staying power.



LEED (Leadership in Energy and Environmental Design): Developed by the non-profit U.S. Green Building Council (USGBC)

in the 90s and released in the early 2000s, it includes a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes, and neighborhoods that aims to help building owners and operators be environmentally responsible and use resources efficiently.



TRUE (Total Resource Use and Efficiency): The TRUE Zero Waste certification system enables businesses to define, pursue and

achieve their zero waste goals, cutting their carbon footprint and supporting public health. TRUE promotes processes that consider the entire lifecycle of products used within a facility. TRUE allows businesses to support public health and ecosystems, cut their ecological footprint and advance a green economy.



WELL (not an abbreviation): The WELL Building Standard is a performance-based

system for measuring, certifying and monitoring building features that impact human health and well-being. The result of seven years of interdisciplinary research, WELL sets an evidence-based standard and performance requirements for seven Concepts of impact: air, water, nourishment, light, fitness, comfort and mind. WELL-certified buildings ensure human-centric design principles and the promotion of human health and well-being, creating buildings that improve the nutrition, fitness, mood, sleep patterns and performance of their occupants.

Rudolph and Sletten Sustainability Development Committee (SDC)

Our mission is to further develop Rudolph and Sletten as an industry leader in sustainable construction.

Sustainability Director:
John Home – Roseville

Committee Members:
Matt Chadwick Mike Mohrman
Ben Hancock Hannah Salling
John Home Jeff Swinyer
JR Hussey Kalie Ward
Hugo Mailloux-Beauchemin





SITES (not an abbreviation): The Sustainable SITES Initiative (referred to as “SITES”) is the most comprehensive rating system for developing sustainable landscapes. The rating system is designed to distinguish and measure landscape performance and, by doing so, elevate its value in the industry. SITES certification is for development projects located on sites with or without buildings that can range from national parks to corporate campuses, streetscapes to homes, and more.



PEER (Performance Excellence in Energy Renewal):

A comprehensive, consumer-centric, data-driven system for evaluating power system performance across six categories: reliability and resiliency, operations management and safety, energy efficiency and environment, grid services, innovation and exemplary performance, and regional priorities (vary by region). PEER can be utilized for a variety of power systems, including: campuses, microgrids, critical infrastructure, an entire city's grid and a utility territory. Projects can become certified by achieving a minimum set of requirements and score under the PEER rating system.



Parksmart (not an abbreviation): The world's only rating system that defines, measures and recognizes high-performing, sustainable practices in parking structure management, programming, design and technology. Parksmart garages offer significant benefits for drivers, tenants, building owners, and property managers. Parksmart creates opportunities for parking structures to lower their energy usage through lighting, ventilation, controls and commissioning measures, reducing operational costs up to 25% compared to the national average. Formerly known as Green Garage Certification



GRESB (Global Real Estate Sustainability Benchmark): An investor-driven organization that assesses the Environmental, Social and Governance (ESG) performance of real assets globally, including real estate portfolios and infrastructure assets. Participants receive comparative business intelligence on where they stand against their peers, a roadmap with the actions they can take to improve their ESG performance and a communication platform to engage with investors. Investors use the ESG data and GRESB's analytical tools to improve the sustainability performance of their investment portfolios, engage with managers and prepare for increasingly rigorous ESG obligations from governmental regulators, tenants, owners and other stakeholders.



EDGE (Excellence in Design for Greater Efficiencies): A green building certification system for new commercial and residential buildings focused on making buildings more resource efficient. Details of the project are entered into the free online EDGE software application that quickly predicts savings in energy, water and embodied energy of materials as compared to local construction practice and estimates utility savings, capital costs, and the payback period. Within minutes, a building designer can determine the optimum combination of design strategies for the best return on investment. The project must reach the EDGE standard of a 20% improvement in energy, water, and materials as measured against local construction practice. When achieved, the project is registered for certification.

Sarah Alexander shared recent developments on GBCI's new “Arc” digital platform. Still in its infancy, the Arc platform is intended to provide seamless integration amongst all of GBCI's rating systems and a common platform from which a project owner can evaluate their project's sustainability performance. GBCI also develops and administers the LEED professional credential exams for the LEED AP and LEED Green Associate credentials, the WELL professional credential exam for the WELL AP credential, and the SITES professional credential exam for the SITES AP credential.