Improving LEED

Walter Jones is Assistant Director of Occupational Safety and Health for the Laborers’ Health & Safety Fund of North America.

In this interview, Jones provides his insight on the United States Green Building Council’s (USGBC) Leadership in Energy and Environmental Design (LEED) rating system and offers his suggestions for improving LEED with respect to occupational safety and health in construction.

EnvPS: Please provide a brief description of your professional background and of your position with the Laborers’ Health & Safety Fund of North America (LHSFNA).

WJ: I have been doing industrial hygiene for about 16 years with the last eight in construction. I hold a master’s degree in environmental and occupational health science from Hunter College. With LHSFNA, my main responsibilities include conducting worksite audits to ensure compliance; conducting trainings and education seminars to help improve safety culture; and developing health and safety programs to help contractors create safer worksites and win contracts. I am a member of NIOSH’s Prevention through Design Council and sit on the OSHA Advisory Committee on Construction Safety and Health and the A10 Accredited Standards Committee for Construction and Demolition Operations.

EnvPS: What is the USGBC’s LEED rating system? How has LEED impacted occupational safety, health and environmental (SH&E) practices within the construction industry in the years LEED has been in use?

WJ: LEED has been good at promoting the best environmental health practices. It focuses on measures that will leave a smaller environmental footprint, encourages recycling and the use of renewable resources. Although LEED is strong at encouraging environmental health best practices, it does not really address occupational safety and health (OSH). It somewhat emphasizes controlling indoor air quality for installers and future building occupants, but for the most part, LEED is blind to occupational safety and health during construction.

EnvPS: Under the LEED system, five components of a green building include site planning, water management, energy, material use and indoor environmental quality. In your opinion, what is the best way to achieve excellence in each of these components/categories while still maintaining effective SH&E practices throughout the construction process?

WJ: The best way to achieve excellence is to plan for it. Currently, no direct relationship exists between meeting LEED’s benchmarks and providing a safe work environment. You may meet those goals, but still fall short of excellence in occupational safety and health. For example, the CityCenter project in Las Vegas, NV received six platinum LEED certifications, but six workers died during the CityCenter’s construction. LEED compliance did not cause these deaths, but what does that say about priorities?

There are many occupational safety health practices that go beyond the universally relied on basic requirements of OSHA that can achieve the same futuristic level of excellence that we see in LEED certified buildings. Some suggested basic measures would include giving points for the use of an effective injury and illnesses prevention program (I2P2), requiring OSHA30 hour training of all employees, utilizing Prevention through Design concepts, or using BIM technology to identify and resolve OSH issues. The folks at
NIOSH’s Prevention through Design Council, OSHA’s Design for Safety Workgroup and Britain’s Health and Safety Executive have been collecting and promoting sustainable cost-effective measures in OHS parallel to that in environmental health. These measures can be easily incorporated into existing environmental rating systems or stand alone. For example, Sathy Rajendran, CSP, Hoffman Construction, developed the Sustainable Safety and Health Rating System, which fits neatly into the LEED system. John Gambatese, Oregon State University and Michael Behm, East Carolina University have been working on sustainability measures for safe constructability. One of the next steps is for ASSE or ANSI to establish its own green/safe design in construction process that can be referenced similarly to the LEED process.

EnvPS: What challenges can those pursuing LEED certification potentially face?

WJ: From an occupational safety and health perspective, these challenges are how do we move beyond the often outdated, politically derived, minimum requirements of OSHA regulations to increase workplace safety and health? How do we move beyond PPE and eliminate hazards through the use of engineered controls. How do we ensure that injuries are infrequent and not severe? How do we protect workers future health from current exposures? For example, if we design a building to have a living roof, how do we create it so that those who build and maintain the roof are safe from fall hazards? If we design solar panels for roofs, shouldn’t we concomitantly design safe installation methods? Daylighting adds more glass to a building—how will we create safer ways for workers to clean the glass? Is the energy savings from spray polyurethane worth the risk to installation and demolition workers or firefighters? Historically, waste management has always been very hazardous work. Instead of filling landfills with our construction waste, we are asking recyclers to sort this increasingly voluminous amount of waste materials. How do we better protect them?

EnvPS: Does the construction of green buildings present any unique SH&E hazards? If so, does the LEED certification process make any provisions to reduce or eliminate these hazards?

WJ: I am not aware of any mechanism in the process to address OHS hazards that may occur. It would be wonderful if USBGC would take a lead on this, but ultimately, it up to the OHS community to advise and pressure the USGBC and other green rating systems to incorporate OHS and it’s up to our professional organizations, AIHA, ASSE and ANSI to promulgate standards, processes, materials and companion rating systems to reference and fill the gaps.

EnvPS: Based on your experience, have you seen any cases where the pursuit of LEED certification led to a reduction in occupational injuries during the construction process?

WJ: I have not seen any. However, anecdotally, it cuts both ways. In terms of peer reviewed studies, the University of Oregon has shown that LEED makes no difference in injury rate reduction, which is disappointing. Building construction still remains one of the most hazardous occupations in this country. One would hope that LEED would show the way to sizable reductions instead of maintaining the status quo. For whom are we saving this planet? If we are saving it for people, workers are people, too.

EnvPS: How has LEED influenced federal, state and local green building regulations?

WJ: To their credit, the effect has been amazing. President Obama has issued an executive order requiring the Federal Government to follow similar green practices in government buildings. Some cities have areas set aside for LEED only buildings. Building codes are changing to force LEED compliance. What’s amazing is that there are about 100,000 buildings being constructed every year. However, as I understand it, there have only been about 6,000 LEED certified buildings from about 30,000 applications over the last ten years. Yet, this process is having a titanic effect on how we construct buildings in the U.S. My hat’s off to them.

EnvPS: In what ways can LEED help incorporate safety into the building design process?

WJ: In some ways I think I’ve answered that question. Look, OSH professionals and organizations, such as ASSE and in its secretariat’s role within ANSI, should take advantage of the progressive energy created by environmental rating systems. Although there is definitely a cost savings from reducing energy dependence, the driving force behind adoption of LEED is that everyone wants to build, work, live and play in an environmentally friendly building. Being environmentally friendly is marketable and LEED certified building owners uses this fact to separate themselves from the competition. It’s not often that being socially responsible is also profitable. That’s great. I believe that the same segments of the public can be similarly marketed to occupy facilities designed with enhanced occupational safety and health in mind because of their long-term savings to society and contribution to the public welfare. Where the tipping point of acceptance lies is uncertain, but it is clear that the surge in interest to buy and build green provides an excellent opportunity to make the case.