

## The New Normal Green deconstruction and remodeling

Susan Daywitt

As the landscape of green practices evolves, the impact on facility acquisitions and remodeling expands. This article will help you navigate the waters of managing your remodeling/ building projects, disposing of construction waste, and choosing redesign materials and equipment in a way that is cost-effective— without bruising your company's environmental conscience.

Building-related construction and demolition (C&D) debris totals approximately 160 million tons per year, accounting for nearly 26 percent of total non-industrial waste generation in the United States.

Green demolitions are on the rise and are necessary for LEED certification and even mandatory in some cities. Let's take a look at what the current landscape looks like.

### LEED Considerations

LEED is a system of standards developed by the United States Green Building Council to promote environmentally sustainable construction. LEED certification provides added value to a construction project, and credits are given to a new project that diverts at least half of its construction waste from landfills.

LEED is based on five credit categories that encompass the entire lifecycle of a remodeling or new construction project:

- Sustainable sites
- Water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality

The greater number of credit points, the higher level of LEED certification. The minimum LEED certification designation requires 40 credit points within the 110 point scale (100 points plus 10 bonus credits).

LEED provides building owners/operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. Even if a site is not formally pursuing LEED certification, the framework is valuable to the remodel team and project management as a roadmap and decision tool.

LEED provides restaurateurs a framework for identifying measurable green design, construction, operations and maintenance solutions to:

- Lower operating costs and increase asset value
- Reduce waste sent to landfills
- Conserve energy and water
- Be healthier and safer for occupants
- Reduce harmful greenhouse gas emissions
- Qualify for tax rebates, zoning allowances and other incentives

In some cities, green demolition is mandatory. For example, in San Diego, the Construction and Demolition Debris Deposit Ordinance took effect in 2008. The ordinance requires that the majority of construction, demolition and remodeling projects requiring building, combination and demolition permits pay a refundable C&D debris recycling deposit and divert at least 50 percent of their debris by recycling, reusing or donating usable materials. The ordinance is designed to keep C&D materials out of local landfills and ensure they get recycled. Expect more cities to follow suit in the future.

State or local ordinance determines how materials are dealt with, which makes coordination and compliance of remodel projects for companies with multiple locations across different regions complex.

### The Remodel and Green Demolition Process

Planning and coordination are essential success factors.

Planning begins months ahead at Friendly's, according to David Panella, Senior Director, Design and Construction at Friendly's Ice Cream LLC. At Panella's facilities, complete interior/exterior remodels are completed in a four-day restaurant close (Sunday through Thursday 5 p.m. re-open for business Friday). Corporate store remodels are fully managed in-house; design oversight is provided for franchise stores. This tight time-frame, coupled with many vendors and inspections, requires the utmost in coordination, communication and planning.

Dave Rader, Director of Facilities at Bravo Brio Restaurant Group, follows a similarly robust planning process. Each time a Bravo or Brio restaurant does an expansion, meetings with the architect, equipment supplier, construction manager, landlord and job superintendent are held to evaluate everything in the building from HVAC to flooring. Considerations include age, location and condition of all equipment. When acquiring an existing restaurant location, all equipment is assessed for hazardous materials and closely examined to determine whether to remove it from the property.

Working with good vendors to orchestrate and manage waste is crucial. Documentation expectations are typically handled through the contracts with material recovery facilities. Some vendors provide the data, as do some management companies.

If there is an environmental hazard (i.e., vinyl floors or lead), working with an environmental consultant and certified disposal facility for complete abatement and tracking is necessary. Especially in the case of lead, it is important to get the tracking details to have the reports to back up the project.

Panella explained that for their renovations, the biggest areas of waste are old carpet/flooring and booth upholstery. While there is not much that can be done with old carpet used well beyond its useful life, booths are reused as much as possible. More than 90 percent of the booth upholstery is not thrown out. Friendly's works with the fabricator to strip, keep the wood and use 60-80 percent of the recycled foam to create new booths.

Panella said they try to follow LEED guidelines as much as possible without increasing cost prohibitively. New facility construction projects have more flexibility than remodels and thus are closer to LEED compliance. This is because new construction offers more flexibility for cost and physical accommodations of new equipment technologies.

During remodels, hazardous waste materials are handled through environmental companies for abatement and tracking to pre-approved sites. Kitchen renovations generate lots of metals (particularly stainless steel) that are sent to salvage as scrap. Normal waste and recyclables are sent to on-site roll-off containers.

### Biggest Challenges

The biggest challenges with green demolition and remodeling are the sheer number of moving pieces (vendors, equipment, regulations, inspections, etc.) that need to be

managed, all while minimizing the amount of time a restaurant is closed. Timing and time frames are key. Panella shared that with the four-day timeline it is mission critical for the timing of inspections to be synchronized and on schedule. In 2013 out of 23 remodels, only one had to be delayed by a day. In terms of hazardous material concerns, most of the buildings and the materials in them are not that old (10-15 years versus older buildings of 30-40 years where asbestos would be a concern).

Rader shared his biggest issue, which is obtaining the as-built property drawings from previous tenants or landlords. In most cases, the previous owners do not leave the drawings. It is always helpful to have preventative maintenance records, to know the age of the equipment and how it has been maintained.

Both agreed that fires require major demolition and abatement. Rader recounted, "I got involved with new HVAC, refrigeration and new duct work with one job I did and found there were fires above the ceiling and contamination. We had to bring in a hazmat crew to eliminate the materials to assure we were in compliance. You could see where there were grease fires in the ceiling; it is amazing the previous owners did not burn to the ground."

Managing a combination of high-volume waste (such as old carpets)—as well as refrigeration fluids, oils and anything that can contaminate other things—requires a close eye on EPA and OSHA regulations.

#### Decision Points

The million dollar question for these projects is: How can my company reap the benefits of going green without increasing costs too much?

The cost-benefit analysis needs to take into account the triple bottom line (financial, social and environmental), not only for the year of the remodel but also over time.

The decision of whether to replace equipment with newer technology applies to all aspects of the facility. For example, adding new equipment, such as a ventless dishwasher, may cost more initially but reduce costs over time, eliminating the need for a vent hood on the roof (which requires its own periodic maintenance).

When replacing external counter and backsplash finishes, materials often have to be replaced with new finishes. As Rader explained, unless finishes are fairly new, sealed and cleanable, they are usually replaced with new surfaces that comply with health regulations. An example would be old marble versus granite.

These decision points happen continually during each remodel and are not made in a silo. Working with architects and engineers, facility construction managers receive specifications from which to map out the total design and operation cost. By assessing all costs, material content, operational efficiencies and sustainability, they are able to make the best overall decision.

The trend continues to move toward building with better, more durable materials that are easier to clean and service. In this way, sustainability is increased because materials do not have to be torn out prematurely. Over the long haul, this saves money and keeps them out of a landfill.

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