

Construction and Demolition Diversion

Implement a construction and demolition debris recycling program for major renovations and new construction to achieve a recycling and diversion rate of at least 80 percent.

Introduction

Construction and Demolition Debris (C&D) is bulky, non-compactable material generated during construction and renovation projects. This material includes ceiling tiles, bricks, glass, carpeting, cabinetry, cement and much more. (See accompanying document, “Defining Waste Streams.”) Hospitals have demonstrated the financial and environmental value of reducing the amount of C&D headed to landfills through reduction, reuse and recycling.

STEP 1: Deconstruction

If construction is from within an existing space, the hospital can inspect, identify and capture materials, equipment and resources instead of having them removed as waste. Old laboratories, offices and patient care areas have numerous recoverable items that can be donated, reused or recycled. Any material removed from the waste stream translates into dollars and a healthier environment. A walk-through should be part of any renovation to ensure that any leftover wastes or specimens are properly handled and managed before workers enter the space. This is particularly important in grant-funded laboratories and other facilities where potentially infectious or hazardous materials can be left behind. If not properly labeled, these materials can lead to an accidental exposure or regulatory infraction. Conduct a walk-through and sign-

off on the space before the end of every grant. Materials such as cabinetry, casework, desks, file cabinets and other leftover furniture, hardware, lighting fixtures and ballasts, and office supplies and equipment are all recoverable. Often this process is overlooked during a project, and dollars are poured down the drain while waste is dumped into crowded landfills.

Check regional resources, such as Habitat for Humanity, the Salvation Army reuse outlets, other architectural reuse stores and other nonprofit organizations that accept donations. Document waste diversions for LEED credits, sustainability reporting and Practice Greenhealth Environmental Excellence Awards. Work with partners to weigh and quantify diverted materials.

Develop a written deconstruction policy for use with all space renovations.

STEP 2: Plan Ahead

C&D recycling can be written into any construction specification. Many contractors and construction companies now routinely track C&D recycling for LEED credits or other green building rating systems. While the facility may not be working toward LEED certification with a project, the contractors work with the organization as business partners for C&D recycling and reporting. The contract should specify that:

- Any rebates should come back to the hospital in a form of a rebate.

- All C&D recycled should be tracked by final destination. Volumes should be reported to the facility monthly.
- The contractor/construction company should delineate whether materials will be sorted onsite or commingled. If there is no room to segregate material onsite, then the commingled material can be sorted offsite. This is common among large hospitals, where space is tight and renovation is constant.
- If using LEED, percent of C&D recycled (out of total C&D) should also be reported.

These percentages are the LEED indicator required under Materials & Resources Credit 2 in LEED for HC (50 percent threshold for 1 point, 75 percent threshold for 2 points, 95 percent diversion for exemplary performance). (Excavated soil or land-clearing debris

does not count toward this credit.) The HHI challenge seeks an 80 percent C&D diversion. Roll-offs should be placed where possible in a secure area or fenced area inaccessible to the public to prevent dumping.

STEP 3: Contracting

Check contractors’ references and ask them about service, reliability and reporting. Consider checking with the GPO and Purchasing to see if any contracts are established. Consider visiting

any C&D transfer locations to see the operations first- hand, and to learn more about the process and other opportunities. Consider in-house reuse strategies for donation and reuse.

STEP 4: Pilot

If segregating onsite, start with a small pilot to work out problems and maximize return. Onsite segregation usually maximizes return, but this is not always an option. Educate staff about

the possibility of a long-term commitment to C&D segregation even on a day-to-day basis. A small container for materials such as carpeting and ceiling tiles can be used to collect the C&D generated every day.

STEP 5: Educate

All employees and contractors shall be educated about the organization’s C&D recycling and overall sustainability initiatives, including hazardous and RMW management. The importance of education cannot be overestimated. At one facility, the sustainability manager witnessed a contractor putting construction debris in a red bag and throwing it down the trash chute. Signage can

help to identify bins, and support ongoing monitoring and inspection. Occasional off-site visits can ensure that materials are being recycled as specified.

Consider writing a newsletter piece or creating a poster for staff, patients and community members who otherwise may not know about the hospital’s C&D recycling program.

STEP 6: Track & Report

C&D recycling rates should not be added to the general waste baseline because hospitals are renovating at widely varying rates, and these differences can skew data for the health care sector. Data can be tracked per project and then

aggregated for total percent recycled per year. This data can be reported to The Joint Commission Environment of Care Hazardous Material and Waste Management Committee or a green team, construction team or other group to ensure that it is captured as part of an overall sustainability plan.

Track & Report

Tons C&D Land filled or Incinerated per project	Tons C&D Recycled or Reused per project	Percentage Recycled

7. Written Plan

Develop the written plan after the pilot to ensure lessons learned are addressed. Include the plan in

policy and procedure manuals and make it part of RFPs for renovation and construction projects.

8. Continuous Improvement

Review the process at least annually to ensure the recycling rate stays above 80 percent. Continuously look for additional materials to recycle or reuse. For example, carpeting is frequently recoverable for recycling, and recycled carpeting can be used in renovation projects. Recycling lessons learned can be applied to material purchases. Purchases of recycled products can also help identify additional opportunities for the facility to segregate and recycle materials.

Resources

The Green Guide for Health Care Operations Section WM Credit 1.4 Recycling & Reuse of Facility Alterations and Additions offers guidance and resources, www.gghc.org.

The Institutional Recycling Network offers resources, including sample specification language and written case studies with an over 90 percent recycling rate - <http://www.wastemiser.com/resources.html>.

Practice Greenhealth Waste Web Page - <http://practicegreenhealth.org/topics/waste>

Less Waste Action Plan

HH enrollees identify which level they seek to achieve. Discuss with the team and set the facility goal.