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## **Recycling Construction and Demolition Materials Case Study** **The Columns at Rockwell Place, Northampton, MA** **J. Rockwell Allen and Saloomey Construction**

*Summary: When developer J. Rockwell Allen converted a long vacant building on the former Northampton State Hospital site into 25 condos, the project sought LEED for Homes certification. LEED certification includes a prerequisite for construction and demolition (C&D) waste and recycling. The general contractor, Saloomey Construction, worked closely with the hauler and subcontractors to collect several materials separately in designated bins, including masonry, gypsum wallboard, and cardboard. As a result of their waste diversion efforts, this project recycled more than 90% of materials and anticipates receiving two LEED credits for diverting construction and demolition materials from disposal.*

### **Planning and Preparation**

As a developer, one of J. Rockwell Allen's interests is transforming underutilized properties into something valuable. The Columns at Rockwell Place is his first time pursuing LEED certification on a project. Rockwell recognizes that today's buyers are looking to invest in environmentally friendly properties; for Rockwell, the additional steps to achieve LEED certification are offset by being able to offer the marketplace a higher value product.

Since one of the prerequisites for LEED certification is developing a plan for managing construction and demolition materials, Saloomey Construction held a meeting with all of their subcontractors to discuss C&D recycling. The contractor then approached several hauling companies to assess recycling options. Saloomey Construction worked with USA Hauling to develop a plan to stage dumpsters throughout the construction process to collect certain designated materials separately. This process is called source separation.

### **Source Separation**

Throughout the project there were always a few containers on site to collect materials, and the mix of containers evolved with the stage of construction. For instance, during demolition the hauling company sited a masonry dumpster, which allowed the contractor to collect more than 90 tons of masonry for recycling.



*Collecting gypsum wallboard in a separate, covered container helped recycle 20 tons of this material.*

### **At-A-Glance**

- *This project is pursuing LEED for Homes Certification and expects to receive two credits for construction and demolition waste and recycling*

- *The contractor collected several materials in designated containers, including:*

- *Masonry - 90 tons*
- *Gypsum Wallboard - 20 tons*
- *Cardboard - 2 tons*

- *Over 90% of materials from this project were recycled*

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During the drywall installation, the hauler sited a closed container for gypsum wallboard scraps. By collecting it in a separate, covered container, over 20 tons of gypsum scraps from this project could be recycled. USA Hauling aggregates gypsum from different construction projects, and USA Gypsum picks up the material and transports it to their plant in Pennsylvania for recycling.



*This container provided a dry place to store cabinets as well as a container to collect source separated cardboard.*

Most finish materials arrive packaged in cardboard, and need to be stored in a dry place until the contractor is ready to install them. The waste hauler offered a creative solution to the need for dry storage while also offering an efficient way to collect source separated cardboard; they placed two closed containers on the job site. When finish materials arrived on site, the contractor stored them in one of these closed containers to keep them out of the elements. As cabinets and other finish materials were installed, their cardboard packaging was removed and placed in the adjacent container. As a result, several tons of clean cardboard from this project were recycled.

### **Mixed Collection**

Throughout the project, a dumpster was always on site to collect materials that were not being source separated.

USA Hauling transported these mixed materials to their C&D processing facility in Suffield, Connecticut. This processing facility sorts out several materials for recycling, such as metal, clean wood, and aggregate. It also separates cardboard; however, a lot of cardboard in a mixed dumpster is contaminated by other materials or gets wet from rain and snow. The recycling rate for source separated cardboard is much higher than for cardboard placed in a mixed dumpster. Similarly, when clean gypsum is placed in an open mixed container with other materials, it gets wet, contaminated, and crushed into small pieces. As a result, it cannot be sorted out for recycling at a C&D processing facility. Source separation is the only effective way to recycle clean gypsum.



*Materials collected in a mixed container were sent to a C&D sorting facility.*

### **Benefits**

A combination of source separation and mixed dumpsters sent to a C&D sorting facility resulted in a very high overall recycling rate for this project. This project collected and recycled more than 120 tons of source separated material, including masonry, clean gypsum, and cardboard. Effective planning and communication between the general contractor, subcontractors, and waste hauler ensured a successful recycling program.

For more information on recycling and reuse of C&D materials, see the [RecyclingWorks in MA best management practices for construction and demolition materials](#).