



*Waste Reduction and Recycling Assistance for Businesses*

## **Construction and Demolition Waste Management Monthly Report Hy-Vee Weitz Construction New Hy-Vee LEED Grocery Store, Madison, WI**

### **FINAL REPORT**

December, 2009

WasteCap Resource Solutions provided construction and demolition waste management services in order to establish, implement and document successful construction and demolition debris reduction, reuse and recycling during the demolition and renovation phases of the former K-Mart store into a new Hy-Vee grocery store, located on the east side of Madison, WI, from September 2008 through approximately October 2009 (13 months total). Demolition was about three months and construction took place over about 10 months.

These services allowed Hy-Vee Weitz Construction to meet LEED waste management requirements for Materials and Resources Credits 2.1 and 2.2 with the goal to achieve a 75% recycling rate.

### **SUMMARY OF ACTIVITIES AND RESULTS**

The Hy-Vee Grocery Store redevelopment project began in October 2008. WasteCap met with the project team and representatives of DeConstruction, Inc., the demolition contractor to discuss the strategies that would be used during demolition activities to recycle and reuse as much material as was practical and to identify the materials that would be recycled and reused. WasteCap then used that information to develop a Demolition Waste Management and Recycling Plan, a requirement of the City of Madison before it will issue a permit for demolition. The plan was submitted to the city on October 14, 2008 and approved the same day.

During the demolition phase of the project, DeConstruction, Inc. salvaged and sold for reuse much of the equipment and fixtures in the building. This equipment included HVAC equipment, air handlers, bathroom and plumbing fixtures, food service equipment, and interior and exterior doors. They also salvaged a considerable quantity of lumber and concrete block that was sold for reuse. WasteCap was instrumental putting the demolition contractor in touch with a ceiling tile recycling company so that 111,000 pounds of ceiling tiles could be recycled.

Demolition activities were largely complete in March 2009. WasteCap had planned to issue an interim recycling report to the City of Madison at that time to summarize the results of the demolition recycling program. However, demolition recycling data did not become available until June. By that time construction phase recycling materials and data were so commingled it became difficult to compute a "demolition phase" recycling rate separate from the overall project rate. At that point it was decided that WasteCap would issue one report at the completion of the project.

In late March, WasteCap prepared a construction waste management plan to cover the new construction portion of the project. This plan is required for the LEED certification program.

During early 2009, WasteCap staff spent a considerable amount of time talking to the City of Madison forester and Habitat for Humanity staff to see if we could find a home for about twenty five trees that were in parking lot planting beds and needed to be removed to accommodate the new parking area Hy-Vee needed. Both groups showed initial interest and plans were made to remove the trees with a tree spade so the could be transplanted. As time went by, this initial interest seemed to fade. WasteCap then asked a professional arborist to inventory the tree species on site and provide his opinion on transplanting them. The report that came back said that the trees were relatively mature for transplanting, and that the survival rate would probably be less the 50 percent if attempted. Also, most of the trees on the site were ash trees. Most arborists believe that the emerald ash borer, a recently arrived insect pest in Wisconsin, within the next 15 to 20 years, will destroy most of the ash trees in southern half of the state. For these reasons, the arborist recommended that the trees not be saved.

WasteCap also learned something new about the LEED system, specifically what can be counted in the reuse data. In June, WasteCap was asked by project management if we thought the weight of the portion of the building that was salvaged could be counted as reuse in our recycling statistics. (During the planning stages of the project it was learned that too much of the original structure would be removed for the project to fall under LEED criteria for “existing buildings” so the project fell under the criteria for “new construction.”) We had never been asked that question before and did not know the answer, so we submitted the issue to LEED reviewers for a determination. Their answer was that yes, if a reasonably accurate estimate of the weight of the building that was reused could be made, then the weight could be included in the project recycling numbers as reuse. Thus, included in the 1,610.9 tons reported as Reused Material is 700 tons for the portion of the building that was saved.

## RECYCLING RESULTS

The project generated 12,877 tons of waste and diverted 11,546 from going to the landfill for an overall project recycling rate of 90 percent.

### Final Project Results

| Material              | November 2009<br>Volume (yd <sup>3</sup> ) | November 2009<br>Weight (tons) | To Date<br>September 2008-<br>November 2009<br>Volume (yd <sup>3</sup> ) | To Date<br>September 2008-<br>November 2009<br>Weight (tons) |
|-----------------------|--|--------------------------------|--|--|
| Asphalt               | 0  | 0                              | 2,899.20   | 4,530.00   |
| C&D Recycling         | 30   | 2.50                           | 180  | 23.91  |
| Cardboard             | 0  | 0                              | 390  | 11.38  |
| Concrete              | 0  | 0                              | 4,998.00   | 4,998.00   |
| Metal                 | 0  | 0                              | 2941.80  | 285.96   |
| Reuse*                | 0  | 0                              | 1,648.63**   | 1610.90  |
| Wood                  | 0  | 0                              | 940  | 131.08   |
| <b>Total Recycled</b> | <b>30</b>                                  | <b>2.50</b>                    | <b>13,967.63</b>   | <b>11,588.73</b>   |
| <i>Trash</i>          | <b>30</b>                                  | <b>1.63</b>                    | <b>6,080</b>   | <b>1,288.42</b>  |
| <b>% Recycled</b>     | <b>50.00%</b>                              | <b>60.53%</b>                  | <b>69.72%</b>  | <b>90.00%</b>  |

\*\*Volume calculation does not include reused portion of the building.