

## **Summary of Major Project Activities and Results**

Construction on the UW Health American Family Children's Hospital (AFCH) began in the summer of 2005. J.H. Findorff & Son, Inc., the general contractor on the project, hired WasteCap Wisconsin to help manage the construction waste reduction and recycling program on this important, highly-visible community project.

In July 2005 WasteCap developed and wrote the waste management plan for the project that established a 50 percent recycling goal. A recycling program kickoff luncheon was held on August 17, 2007. The luncheon, cosponsored by WasteCap and J.H. Findorff & Son, was attended by all trade and craft workers on the project, Findorff project and company management, and WasteCap. The goals of the AFCH recycling program were highlighted and a "Recycling Instructions" information sheet was provided to all project personnel. Recycling signage for the site was delivered in September.

WasteCap felt the project got off to a very good start. Owner and builder commitment to the success of the recycling program was high, and that commitment was emphasized to project workers. A good recycling plan was in place and implemented early. In addition, the program at the site was being overseen by superintendent Cal Heiser and safety coordinator Jeremy White, both of whom had worked on other WasteCap/Findorff recycling projects previously and were therefore familiar with how the program needed to operate to insure success. We were confident the program could achieve its goals.

### **Drywall Recycling**

It was known early in the project that drywall recycling would be important in achieving our recycling goals, so in the fall of 2005 WasteCap began working to find a market for this material. Advertisements were placed the farm classified section of local newspapers in the hope of finding area farmers who could use the drywall scrap as a soil conditioner. This exploration was unsuccessful, so a new tactic was tried.

Through its work with Veridian Homes in Madison, WasteCap was aware of a drywall recycler who delivered the scrap material to farmers in Dane County. WasteCap contacted The Drywall Scrap Company (TDSC) in late 2005 to see if they would be interested in moving the material from the AFCH project to its customers. TDSC said it was interested in providing the service, a decision that set in motion a nine-month series events to get the program set up.

There were two major hurdles that needed to be overcome to implement the drywall recycling program at AFCH. One issue was that The Drywall Scrap Company normally goes into a project late in the day after the drywall hanging crew is finished. They pick up the scrap material, load it in their truck, and sweep up the work areas to make it clean for the following day. Findorff project management could see the advantages of this kind of service, but feared that the non-union TDSC work crew working inside the building would create issues among the union workers on the project. Project manager Jim Yehle eventually resolved the issue by discussing it with union representatives and organizing the work so that union workers would do the cleanup and scrap collection inside the building and transport the scrap to an area outside where the TDSC crew could pick it up.

The other major issue was that the drywall recycling technique utilized by The Drywall Scrap Company – one where the material is used in animal bedding -- was not recognized by the Wisconsin Department of Natural Resources as an acceptable drywall recycling practice. This was something of a house of cards. In order for the project to use TDSC services, which seemed to be the best drywall recycling option available to the project at the time, TDSC needed to obtain a permit (known formally as a “low hazard exemption”) from the DNR. In order for TDSC to obtain the permit, the recycling technique used by TCSC needed to be approved by the DNR and included in their best management practices guidelines for recycling drywall. This took some time and some delicate negotiations between TDSC and the DNR with WasteCap acting as the intermediary, but by the fall of 2006 the necessary permit was issued just in time for the project to begin recycling the drywall scrap in November. The result of this effort was that 140 tons of drywall was recycled.

The AFCH project and J.H. Findorff & Son as a whole should be proud, as WasteCap is, that through its work and commitment to recycling a new drywall recycling practice has been defined and written into DNR guidelines. The new practice reads as follows:

*Indirect Land Application of Drywall Scrap via Animal Bedding Method*

*Clean, new-construction drywall that is free of contaminants may be mixed with organic materials such as straw, corn stalks, other crop residue, sawdust, woodchips, etc. in cattle barns, feedlots, or other areas where cattle are confined in a defined area and where the drywall and other materials will be broken down and become incorporated with manure by cattle walking over them. The resulting mixture of drywall, manure and other organic materials (sometimes referred to as animal bedding) may then be collected and applied to croplands as a fertilizer and soil amendment.*

*The application rate of this material on croplands will be governed by the nutritional requirements of the soil and crops and need not be limited by the amount of drywall contained in the mixture.*

WasteCap believes that DNR acceptance of this recycling practice will have a significant impact on reducing the amount of drywall waste that goes into our state’s landfill in years to come.

**Other Project Notes and Milestones**

- This project adopted a unique approach in that it utilized the services of two waste hauling companies. Pelliterri Waste Systems was used to recycle wood. Waste Management was used to haul the trash and recycle wood, cardboard and metal.
- Despite working with a constricted site where it was difficult to find room for dumpsters, the project managed to achieve a recycling rate in excess of 60 percent.
- In July 2006 WasteCap provided the AFCH project with a copy of its new recycling training video. This short program is intended to help site workers understand the do’s and don’ts of recycling on a construction project. It was actually filmed at the Findorff Epic-Verona project and featured several Findorff employees.

- This project was Findorff project superintendent Cal Heiser's last job. Cal retired in May 2007 after many years of service with J.H. Findorff & Son. WasteCap had the pleasure of working with Cal on this project and the Madison Overture Center. Cal's professionalism and commitment to making the recycling program work played a large part in its success.
- A brief phone interview with project manager Jim Yehle after the completion of construction indicated that he thought the recycling program went well and that the monthly reports were very helpful.

### Project Recycling Results

Material	August Volume (yd <sup>3</sup> )	August Weight (tons)	Total to Date Volume (yd <sup>3</sup> )	Total to Date Weight (tons)
Scrap Metal	0	0	974	116.9
Untreated Wood	30	25	3270	274.96
Concrete	80	40	1380	690
Cardboard	28.8	1	603	20.98
Commingle	3.2	.08	67	1.72
Drywall	0	0	838.04	140.8
<b>Total Recycled</b>	<b>142</b>	<b>43.58</b>	<b>7132.04</b>	<b>1245.34</b>
Trash	210	26.67	4610	738.76
<b>% of waste recycled:</b>	<b>40.34%</b>	<b>62.04%</b>	<b>60.74%</b>	<b>62.77%</b>

**Income/Savings by Recycling: \$20,555.74**