

# Construction Waste Management Plan

## Carlson Hall Renovation

Whitewater, WI

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### Project Location:

260 CARTER MALL

Whitewater, WI 53190

The construction period is from 10/31/2012 through 10/31/2012

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### Contractor:

**J.P. Cullen & Sons, Inc.**

13040 W. Lisbon Rd.

Brookfield, WI 53005

**Shannon Metoxen, Project Manager**

shannon.metoxen@jpcullen.com

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### I. Facility/Scope of Project

In general the work consists of the entire renovation of 77,300 s.f. building and add an addition of 5,417 s.f. The entire interior of the existing building will be remodeled and receive new MEPF equipment. Existing windows will be replaced and upgrades to the existing structure will be done to increase building efficiency.

### II. Recycling Goal

Reduce, reuse, and recycle materials in order to generate the least amount of waste and methods shall be used that minimize waste due to error, poor planning, breakage, mishandling, contamination, or similar factors and promote the resourceful use of materials to the greatest extent possible.

<b>RECYCLING GOAL - To recycle 75% of waste generated on the site by weight or volume</b>
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### III. Analysis of Proposed Job Site Waste to be Generated

#### A. Projected Construction Waste Materials

- Bottles & Cans
- Cardboard
- Ceiling Tiles
- Concrete
- Glass
- Gypsum Drywall
- Insulation Scrap
- Metal - Metal Studs, Wire, Pipe Cutoffs, Rebar, etc.
- Metal - Structural Steel
- Miscellaneous - Lunch Waste, Floor Sweeping
- Paper - Plans, Office Paper, Newspaper, etc.
- Plastic - Stretch Wrap/Shrink Wrap, Plastic Bags, Packaging, Buckets
- Wood - Dimensional Lumber
- Wood - Pallets
- Wood - Plywood, OSB, Particleboard, and other Engineered Lumber

B. It is estimated that this project will generate 1,932.49 tons or 6,731.44 yd<sup>3</sup> of debris.

#### Project Recycling Estimates by Material

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Material	Estimated %	Estimated Tons	yd3/ton*	Estimated yd3
Solid Waste	17.00%	328.52	5.71	1,875.85
Bottles & Cans	0.50%	9.66	40.00	386.40
Cardboard	4.00%	77.30	20.00	1,546.00
Concrete/Masonry	61.50%	1,188.49	1.43	1,699.54
Drywall	10.00%	193.25	4.00	773.00
Metal	5.00%	96.62	2.00	193.24
Wood	2.00%	38.65	6.66	257.41
<b>Total &gt;&gt;&gt;</b>	100.00%	1,932.49		6,731.44

- US Green Building Council. "LEED Reference Guide for Green Building Design and Construction 2009 Edition, Section 6- Calculations, Table 2- Solid Waste Conversion Factors. Page 360. (Cardboard, Drywall, Mixed Waste, Concrete/ Masonry, Metal, Wood)
- US Environmental Protection Agency. "Measuring Recycling. A Guide for State and Local Governments." September 1997 Appendix B. Standard Volume-to-Weight Conversion Factors pp. 59–62.  
- [www.epa.gov/epawaste/conservation/tools/recmeas/docs/guide\\_b.pdf](http://www.epa.gov/epawaste/conservation/tools/recmeas/docs/guide_b.pdf) (Bottles & Cans, Office Paper)
- Asphalt Pavement Association of Michigan (4,050 lbs/yd3) and LEED EB v. 2.0 Reference Guide (p.256) Table 2 Volume to Weight Conversions (115 lbs per yd2 (1" thickness) or 4,140 lbs per yd3). (Asphalt)
- Reade Advanced Materials, Providence RI 401.433.7000  
- [www.reade.com/Particle\\_Briefings/spec\\_gra2.html](http://www.reade.com/Particle_Briefings/spec_gra2.html) (Concrete/ Masonry)

#### IV. Recycling Service Providers and Targeted Materials

##### Destination

- |                               |                        |
|-------------------------------|------------------------|
| - A1 Fort Atkinson Veolia     | Fort Atkinson, WI      |
| - Alter Metal Recycling       | Green Bay, WI 54303    |
| - Boss Enterprises Inc.       | Delavan, WI 53115      |
| - Deer Track Park             | Watertown, WI 53094    |
| - Gypsum Recycling, Inc.      | Brooklyn, WI 53521     |
| - Hausz Bros., Inc.           | Ft. Atkinson, WI 53538 |
| - Janesville City Compost     | Janesville, WI 53545   |
| - Kienbaum Iron & Metal       | Whitewater, WI 53190   |
| - Lorman Iron & Metal         | Watertown, WI 53094    |
| - Mallard Ridge               | Delavan, WI 53115      |
| - Miller Compressing Co.      | Waukesha, WI 53186     |
| - Napuck Salvage & Supply     | Neenah, WI 54957       |
| - Sadoff Iron & Metal Co.     | Fond du Lac, WI 54936  |
| - Waukesha Iron & Metal, Inc. | Waukesha, WI 53186     |

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### Hauler

- Alter Metal Recycling	Green Bay, WI 54303
- Bower's Demo	Black Creek, WI 54106
- Churchill Trucking	Janesville, WI 53546
- J.P. Cullen & Sons, Inc.	Brookfield, WI 53005
- Miller Compressing Co.	Waukesha, WI 53186
- Napuck Salvage & Supply, Inc.	Neenah, WI 54957
- Sadoff Iron & Metal Co.	Fond du Lac, WI 54936
- Viola Environment Services	Fort Atkinson, WI 53538

## V. Materials-Handling Procedures

### Cans & Bottles - Plastic, Glass, and Aluminum

Place in labeled recycling bins located on job site near break areas. When recycling bin is full, take to larger recycling container outside by other containers. Bottles, jars and cans need to be empty. Bottles and cans will be sorted offsite and recycled. A detailed list of acceptable items will be posted in various locations on the job site.

### Cardboard

Cardboard includes flattened, clean cardboard and boxboard. It does not include waxed cardboard, tissue, paper plates or towels, pizza boxes, or any item that is not paper. Cardboard that is over 50% covered with paint, mud, or other contaminants should be disposed of as trash. Separate plastic and Styrofoam and other items stuck to the cardboard boxes before recycling. Place in designated containers located on the job site. A detailed list of acceptable items will be posted in the trailers and on/near each container. The cardboard and office paper will be sorted, bundled, sold, and made into new paper products.

### Concrete/Bricks

Recycle dry concrete. Concrete/ bricks include concrete masonry units, concrete, and bricks. This will be crushed and used in making new concrete, or as general construction gravel for roadbeds and fill. Trees, branches or other organic matter cannot be placed in this container.

### Metal

Place all scrap metal including wire and painted metal in designated containers located on the job site. Metal will be hauled to a local metal recycler for processing. Place aluminum cans in can & bottle recycling, not in the scrap metal dumpster.

### Office Paper

Paper includes white or colored office paper, plans, newspapers, magazines and other paper. It does not include tissue, waxed paper, beverage cups, paper plates, food wrapping, or paper contaminated with food, mud or other materials. Paper is recycled back into new paper products.

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### Wood

Wood includes packaging wood, pallets, clean dimensional wood, plywood, OSB and particleboard. Dimensional lumber in good condition will be stockpiled for reuse when short-length pieces are needed. Subcontractors are strongly encouraged to reuse as much wood as possible. Scrap wood that is not reusable will be placed in a designated container located on the job site. Nails that are in the scrap wood may be included, but all other materials such as pieces of metal, cardboard or other materials are prohibited. The scrap wood will be chipped for landscape mulch.

### Gypsum Drywall

Drywall in good condition will be stockpiled for reuse and reused as much as possible. If market can be found, unpainted scrap drywall (NO green, brown, blue, or tile backer board) will be placed in roll off containers for recycling. It is very important that the scrap drywall be kept completely free of contaminants including nails, screws and any other material. Scrap drywall will be hauled to a local farmer for use as a soil amendment.

### Packaging

Specify minimal packaging when ordering materials. Find out if returnable packaging is available. Return packaging if possible (pallets, spools for electrical wire, etc.). If returnable packaging is not available, request recyclable packaging.

### Other

All subcontractors are required to take note of what they are throwing away and come up with ways to minimize or eliminate the waste. Minimizing waste is our first priority –for example, returning reusable items (e.g. pallets or unused products) to the material supplier. Our second priority is to reuse – for example, storing reusable products to reuse on future projects. Our third priority is to recycle. If you are generating a large quantity of an item that is not being reused or recycled, please inform (Insert Contractor Name). Your ideas are needed and appreciated to come up with markets for these materials.

## **VI. Meetings to be Held to Address Waste Management and Other Education Methods**

Waste management will be discussed at progress meetings and weekly foreman's meetings.

## **VII. Waste Auditing Procedures**

Dumpsters and recycling containers will be placed in a central location on the project. Materials will be collected in Waste Management dumpsters and will be sorted at their facility and taken to recycling facilities listed above. Each contractor will be responsible for disposing of materials in appropriate containers. All recycling policies on the project will be enforced by J.P. Cullen & Sons, Inc. Any contractor contaminating any loads will be responsible for removing materials prior to hauling of the load. All containers will also be inspected for compliance prior to pickup at the jobsite.

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### VIII. Documentation Procedures

<b>Action</b>	<b>Person Responsible</b>
Perform progress materials tracking (required)	J.P. Cullen & Sons, Inc. – Shannon Metoxen
List frequency of progress reports to be provided	J.P. Cullen & Sons, Inc. – Shannon Metoxen
Perform final evaluation (required)	J.P. Cullen & Sons, Inc. – Shannon Metoxen