

**University of Tennessee, Knoxville  
Recycling Station Standard  
December 2013**

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**I. General Description:**

**UT Recycling collects 4 main recyclable materials from campus buildings:**

- A. Paper**
- B. Aluminum Cans, Steel Cans, Plastics #1-7, and Glass Bottles all mixed together under the title “Bottles/Cans/Plastic”**
- C. Corrugated Cardboard**
- D. Food Waste**

**A. Paper:**

Collected at desk-side in 7-gallon blue recycling containers and in classrooms in 23-gallon blue “Slim Jim” recycling containers. The paper from these two sources is consolidated into 95-gallon rolling carts (“95s”) which are stored inside the building and set outside at ground level (i.e. NOT from a loading dock into the truck) on one designated night each week (either Wed or Thurs) for collection by UT Recycling staff in their own rear-load truck with a semi-automated 2-bar lifter. The truck is up to 35 feet in length and 13.5 feet in height.

Paper is also collected in hallway locations in cabinets with 32-gal round bins on rollers with liners that are pulled and the material taken to the 95-gallon rolling carts that are in a storage room. See sections below on Corridor Niche/Cabinets and Consolidation/Storage Areas for specifications.

**B. “Bottles/Cans/Plastic”:**

Collected in all of the same ways as paper except it is NOT collected at the desk-side. Consolidation containers (95s) are still needed, but they can be fewer in number than for paper at a 3:2 ratio of paper to bottles/cans/plastic. This material is picked up by UT Recycling staff in the same type of truck as for paper, but it is typically just picked up 1x per week on Monday nights.

**C. Corrugated Cardboard:**

Set in hallways at the end of the day and taken by building cleaners to an outdoor collection area. UT Recycling staff collect it from the outdoor collection area of every building every night, M-F. See section below on Outdoor Corrugated Cardboard Collection.

**D. Food Waste:**

Collected in generation areas such as coffee shops and major kitchens on campus, typically in small containers that are then taken to larger containers at the loading dock of the building by kitchen staff. The material is collected from the larger containers outside and taken to the compost site by UT Recycling staff at least twice a week. The containers can be emptied directly into the large rear-loading compactor truck, or swapped out for empty containers.

## **II. Corridor Niche/Cabinets Specifications:**

### **A. Standard Cabinets:**

One (1) 3-section niche/cabinet per 100 office people –OR–

One (1) 3-section niche/cabinet per 100 linear feet of hallway –AND–

One (1) 3-section niche/cabinet outside auditoriums or high traffic-generating areas

Standard niche and cabinet should have 3 sections, two for recycling and one for trash. The cabinets should be sufficient for two (2) 32-gallon round bin on dollies spaced side-by-side for recycling, and one (1) 32-gallon round trash can on a dolly for the trash section. The countertop should be sloped toward the front to prevent people from placing items on the countertop. A headboard at the top of the slope or at the top of the doors to the cabinet should contain vertical signage with labels reading: “Bottles/Cans/Plastic” “Paper Only” and “Trash”

Openings shall be made in sloped countertop for:

“Bottles/Cans/Plastic”: 6” round

“Paper Only”: 2.5” x 18” slot

“Trash”: 12” square

The 32-gal round recycling and trash cans on a dolly are approximately 24” x 24” x 35” (w x d x h)

### **B. Modified cabinets:**

#### **1. Classrooms:**

One (1) 3-section niche/cabinet in each classroom –OR– in large classrooms (over 100 seats) one (1) 3-section niche/cabinet per entrance.

Each section of the cabinet should accommodate a “Slim Jim with Venting Channels” container. Bin dimensions are 22” x 11” x 30” (w x d x h)

Must be able to easily slide full container in and out of cabinet (at least an inch clearance on each side and top. One approach is to put Slim Jims on dolly, which would add approximately 2” x 4” x 5” (w x d x h) for a total of 24” x “15” x 35” (w x d x h), but that is not required.

Openings shall be made in sloped countertop for:

“Bottles/Cans/Plastic”: 6” round

“Paper Only”: 18” x 2.5” (w x d) slot

“Trash”: 12” x 8” (w x d) rectangle

#### **2. Kitchens/Break Rooms**

One (1) 2-section niche/cabinet inside each kitchen or break room- 1 section for “bottles/cans/plastic” and one for “Trash”.

The containers inside the cabinet could be either of the two sizes above in A or B, depending on the size of the kitchen or break room.

### **C. Composting Cabinets:**

This is a new area, so please contact Jay Price at [jayprice@utk.edu](mailto:jayprice@utk.edu) or 865-974-3480 to discuss kitchens and break rooms for millwork cabinets and composting in general. Below are some general guidelines:

IF kitchen or break room has significant volume, AND all compostable materials were being utilized by the staff, there would be 3 sections in a sloped countertop in either of the two sizes above.

“Bottles/Cans/Plastic”: 6” round

“Food and Paper Only”: square or rectangle (NOT slot), depending on size

“Other Trash”: square or rectangle, depending on size

### **III. Consolidation/Storage Area Specifications:**

#### **Storage area for 95s**

**Per 100,000 gsf this area should have sufficient space for six (6) 95s AND with room to maneuver them (i.e. tilt them back and roll them out past one another). The area can be outside in an enclosure with the trash dumpster, on a loading dock, or inside the building. If inside, it should be enclosed with double doors or a garage-style door. There must be ground-level access to the bins- i.e. include a ramp if it is at a loading dock.**

**95-gallon recycling carts (95s) are approximately 30" x 32" x 48" (w x d x h)**

#### **IV. Outdoor Corrugated Cardboard Specifications:**

**These areas should typically be outside near the dumpster or on a loading dock where a large rear-loading recycling truck (up to 35' in length and up to 13.5' in height) can access.**

**Cardboard recycling station per 100,000 gsf will need to hold at least one container that is 17 inches wide by 30 inches deep by 40 inches high with room around the containers to get cardboard in and out (Size 1 below).**

**We will need to look at each building and area to determine where and how many might be needed to meet the needs of the building. A standard office facility can probably get by with just one smallest container per 100,000 gsf, but a facility with a lot of receiving (especially dining facilities) may need more, and may need some in individual spaces in the building with the containers located in a niche.**

##### **Sizes of cardboard containers:**

**Size 1: 17" x 30" x 40" (w x d x h) = approx. 0.4 cubic yards**

**Size 2: 42" x 50" x 52" (w x d x h) = approx. 1.8 cubic yards**

**Size 3: 42" x 50" x 76" (w x d x h) = approx. 2.7 cubic yards**

**Size 4: 84" x 93" x 52" (w x d x h) = 4 cubic yds- semi-automated collection**

**Size 5: 84" x 120" x 52" (w x d x h) = 6 cubic yds- semi-automated collection**

**Size 6: 84" x 141" x 52" (w x d x h) = 8 cubic yds- semi-automated collection**

**Height clearance needed is 14' for Size 6 containers. Container sizes 4 – 6 need to be on the ground (i.e. they CANNOT be on a dock) with access for 35' long truck. Container sizes 2 - 4 can have wheels, which add approximately 6" to the height. Containers larger than 4 cubic yards CANNOT have wheels and must be stationary with a 35' long truck backing up directly to the front of the container and hoisting the container in the air.**

## **V. Food Waste Composting Specifications**

Contact Jay Price at [jayprice@utk.edu](mailto:jayprice@utk.edu) or 865-974-3480 for more information in this regard. This is a newer area for UT, and each case needs to be examined for need.

Generally speaking, small containers are used inside major kitchens for staff to capture material at their stations, and they take their material to a larger container, such as a 35-gallon, 95-gallon, or even rear-load dumpster tucked in a corner of the kitchen or placed outside on a dock or on the ground near a trash dumpster.

Millwork cabinets can also be used in 3-section set-ups with “Food and Paper Only”, “Bottles/Cans/Plastic”, and “Other Trash.”

See section II. C. for more information about composting cabinets.