

118200 Facility Solid Waste Handling Equipment

Sections Included In This Standard:

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1.1 GENERAL

Adequate provisions must be made for waste materials handling, and recycling, both on the inside and outside of buildings. While the needs of different buildings vary according to their function and size, the following are generally required:

1.2 WASTE DISPOSAL FACILITIES

- A. Facilities should be designed so as to permit safe and convenient servicing by a standard 36 cubic yard front-end loader garbage truck. Typical facilities require a pad that can accommodate a combination of dumpsters and carts for trash, recycling and compost collection. Larger facilities may require a pad that can accommodate one or more compactor-type waste containers or a combination of compactors, dumpsters and/or and recycling containers.
- B. Due to campus growth and changes in building functions, new structures may need to incorporate provisions for management of waste generated by adjacent facilities. Consult with PPD Solid Waste Coordinator on waste disposal facilities for new structures.
- C. Outdoor facilities shall be located away from public open space and greenways, and shall be hidden from public view by landscaping or an architectural barrier. Facilities located near public areas and the Historic District shall be enclosed with a solid fence or wall, and shall be gated to screen the side with truck access.

1.3 CONCRETE PADS

- A. Single-dumpster pads should be a minimum of 12 feet by 12 feet in order to provide side access to dumpsters by the users and to support the front wheels of the container truck during the dumping operation.
- B. Double-dumpster pads should be a minimum of 22 feet wide by 12 feet deep.
- C. Compactor pads for standard, self-contained compactors should be a minimum of 12 feet wide by 28 feet deep.
- D. Larger or smaller pads may be appropriate if non-standard dumpsters or compactors will be employed or if access needs can be met by alternative means. Consult with PPD Solid Waste

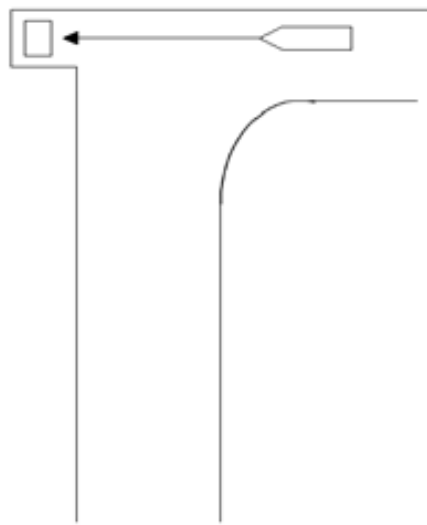
Coordinator for special needs and design considerations.

- E. Pads shall be constructed at a minimum of 6-inch thickness of reinforced 3000 psi concrete with 6 inch, 6% subgrade preparation, with a slope of 1/8 inch per foot for drainage.
- F. Absent special circumstances, dumpster pads shall be equipped with rear bollards to contain dumpsters. Bollards should be a minimum 4-inch diameter concrete-filled steel pipe on 30 inch centers embedded at least 2 feet into concrete and protruding not less than 42 inches. No portion of the bollard shall be less than 6 inches from the edge of the dumpster pad.
- G. Container pad should abut access driveway with a minimum 42 feet of clear space in front of the container pad.
- H. Exceptions to standard pad criteria may be permitted if access drive/roadway geometry afford comparable access and load-bearing capabilities.

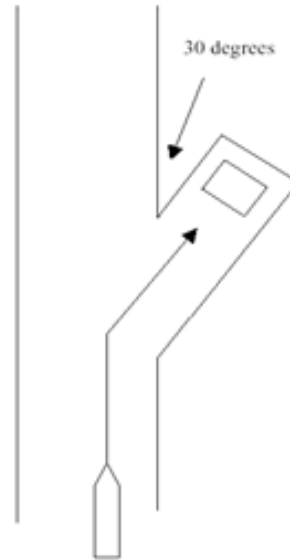
1.4 DRIVEWAY GEOMETRY

- A. Service access must be designed so truck drivers have unrestricted visibility of oncoming pedestrian and vehicular traffic and DO NOT have to back up blindly into traffic. Service driveways should be designed to be free of parked vehicles at all times.
- B. Angle between the line of direction to the concrete pad and the line of travel on the abutting access driveway should not exceed 30 degrees. See sketches.
- C. Driveway area provided for container and truck during dumping must be level (side-to-side, perpendicular to axis of truck), and sloped no more than 1 inch in 12 feet (parallel to the axis of truck) for drainage.
- D. Driveway grades should not exceed 6°. Grades in excess of 9° may not be serviceable during wet or icy conditions.
- E. Driveways should be at least 22 feet in width and capable of supporting vehicles of 65,000 pounds GVW.
- F. If there is only one access driveway, then a turnaround area with 57 feet minimum outside turning radius and minimum 35 foot inside turning radius should be provided for safe exiting of the truck.
- G. Any wires overhanging driveway approach should be no lower than 18 feet.

Preferable



Acceptable



1.5 COMPOSTING AND RECYCLING CONTAINERS

- A. Compactors, dumpsters and carts for recycling /composting shall be provided by the project for all new and major remodel projects. Proper receptacle quantity, type, size, and color shall be coordinated with the PPD Solid Waste Coordinator.
- B. For consistency, durability, and compatibility with servicing equipment, either Schaefer carts are preferred. These can be obtained from UF Solid Waste Coordinator through interdepartmental funds transfer.

Type	Notes	Total Capacity	Supplier	Model #
Blue wheeled cart for paper/cardboard	10 inch plastic snap on wheels, UF hot stamp file #6529	95 gallon	Schaefer Systems	USD95M (BL1)
Black wheeled cart for commingle	10 inch plastic snap on wheels, UF hot stamp file #6529	95 gallon	Schaefer Systems	USD95M (BLK1)
Green wheeled cart for paper towels	10 inch plastic snap on wheels, UF hot stamp file #6529	95 gallon	Schaefer Systems	USD95M (GN3))
Green, heavy-duty, sealed cart for food waste	10 inch plastic snap on wheels, watertight lift bar, UF hot stamp file #6529	65 gallon	Schaefer Systems	UDS65B (GN3)

1.6 SOLID WASTE BINS

- A. DUMPSTERS – shall be provided by the project for managing waste/recycling/composting for the building in accordance with the University’s current services.

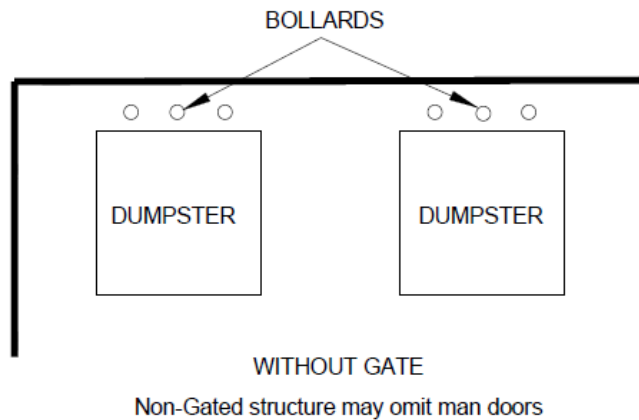
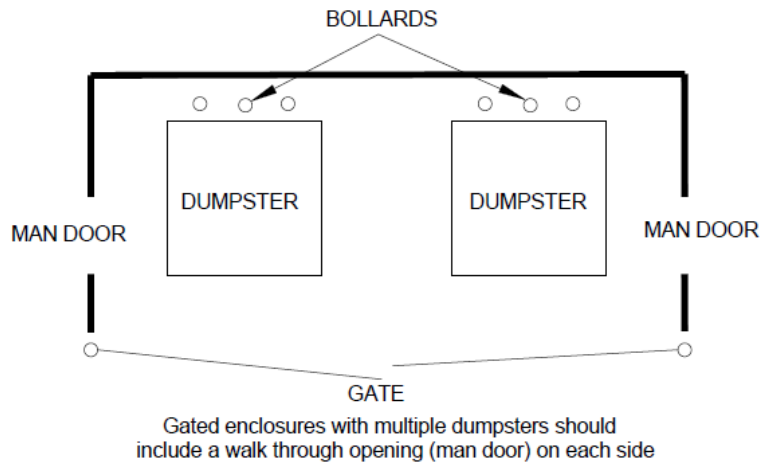
- B. Though size may vary slightly according to manufacturer, the standard dumpster dimensions are as follows: (NOTE: Listed dumpster widths are exclusive of 4 inch wide lifting sleeves on each side.)

Standard front-loader dumpsters	
4-CY capacity	6 foot wide x 4 foot deep x 5 foot tall
6-CY capacity	6 foot wide x 6 foot deep x 5.2 foot tall
8-CY capacity	6 foot wide x 6.5 foot deep x 6.6 foot tall

Wheeled dumpsters (Typically for interior use and rolled out for dumping)	
2-CY capacity	6 foot wide x 3 foot deep x 4 foot tall (w/casters)
3-CY capacity	6 foot wide x 4 foot deep x 4.5 foot tall (w/casters)
4-CY capacity	6 foot wide x 4.5 foot deep x 4.5 foot tall (w/casters)

1.7 **CONTAINER ENCLOSURES**

- A. All enclosures shall be designed to allow sufficient room and access for loading large dumpsters, and should typically also allow room for recycling and/or compost collection bins.
- B. Minimum inside dimensions of a single-dumpster enclosure shall be 11 feet deep x 11 feet wide.
- C. Minimum inside dimensions of a double-dumpster enclosure shall be 11 feet deep x 21 feet wide.
- D. Minimum inside dimensions for a standard self-contained compactor enclosure shall be 27 feet deep x 11 feet wide.
- E. Gates should not protrude into the required inside minimum dimensions.
- F. If the enclosure requires a gate, at least one side entrance must be provided to allow loading (walk-up access) of the dumpster(s) without opening the gate. For double enclosures, allow sufficient room to access the dumpster from both sides.
- G. Side access width must be sufficient to accommodate recycle/compost containers, or at least 32", full clearance.
- H. Service areas shall be designed to prevent the need for pulling or rolling carts up or over a curb.



1.8 PLACEMENT FOR OUTDOOR WASTE DISPOSAL CONTAINERS

- A. Container shall not be placed under low wires or structure overhang with a clearance less than 24 feet.
- B. Container shall not be placed in fire lanes, but should abut.
- C. Container shall not be placed in the access drive.
- D. Container shall not be placed on the inside curve of any access drive.
- E. Container placement should not require the truck to back into a public street or to back a distance of more than 10 feet.
- F. Container placement should not require the truck to cross and block oncoming traffic while servicing, or hide the truck from traffic traveling on a curve. A minimum sight distance should be preserved.

1.9 OUTDOOR RECYCLE/TRASH RECEPTACLES

- A. Sufficient receptacles to accommodate the recycling and trash needs of the building exterior shall be provided by the project for all new and major remodel projects. Some containers may be available through the UF Solid Waste Coordinator through interdepartmental funds transfer. UF is moving toward standardization of color designation for bin panels or signage: blue = commingle, orange = paper/cardboard, black = trash, green = organics/compost.
- B. A two-tier station (commingle recycling, trash) is the recommended style for most locations.
- C. Three-tier stations (commingle recycling, paper, trash) are recommended where people tend to congregate, study, or read.
- D. In areas where food is consumed, such as food courts, paper recycling bins should be avoided. Placement of three-tier stations for trash – commingle – trash is recommended.
- E. Stand-alone trash receptacles should be avoided whenever possible. They should always be placed with a recycle and/or compost bin.
- F. Preferred Specifications are provided below. Variations to these (receptacle type, size, and color) shall be coordinated with the PPD Solid Waste Coordinator. These were chosen to provide uniformity on campus.
 - 1. Black Terra Recycling Centers, dual side-load, 32 gallon capacity. Style and Vendor, Max-R (www.max-R.net) is approved through UF Business Affairs Office and offers a discount to the University (listed in UF system as The Prestwick Group).
 - 2. Two-tier recycling station, with designation for Cans & Bottles and Trash. 39 inches wide x 20 inches deep x 45 inches high, 64 gallon total capacity, SKU #140-460-032-B. Specify front & back openings, standard opening for trash, 2 round holes for bottles & cans.
 - 3. Three-tier recycling station, with designation for Cans & Bottles, Paper and Trash. 57 inches wide x 20 inches deep x 45 inches high, 96 gallon total capacity, SKU #140-470-032-B. Specify front & back openings, standard opening for trash, 2 round holes for bottles & cans, slot for paper.

1.10 INTERIOR RECYCLE/TRASH CONTAINERS

- A. Sufficient receptacles are required to accommodate the needs of the building interior. The number and type of interior bins are determined by the building use but all recycling bins, including in-wall bins, shall be placed in locations such that they are convenient to use, easy to identify, and clearly labeled with appropriate signage. Some containers may be available through the UF Solid Waste Coordinator through interdepartmental funds transfer. UF is moving toward standardization of color designation for container panels or signage: blue = commingle, orange = paper/cardboard, black = trash, green = organics/compost.
- B. Container placement - Recycle bins shall always be placed next to a trash can whenever possible to avoid contamination.
- C. Two-tier recycle stations (Cans & Bottles, Trash) are recommended for staff lounges, shared office spaces, kitchenettes and conference rooms. Stations may also be needed in hallways, eating areas, atriums, graduate student lounges, and general areas where people

congregate.

- D. Three-tier stations (Cans & Bottles, Paper and Trash) may be required in or near areas where paper would be generated, including copy rooms, mail rooms, staff lounges, and shared office spaces.
- E. Restrooms using standard University brown paper towels shall be equipped with appropriate size receptacles for paper towel composting. Smaller receptacles for non-paper towel waste are recommended. Women’s and Unisex bathrooms shall be equipped with approved containers for collecting feminine hygiene products.
- F. Preferred Specifications are provided below. Variations to these (receptacle type, size, and color) shall be coordinated with the PPD Solid Waste Coordinator. These were chosen to provide uniformity on campus.
 - 1. Two or three-tier recycle stations with front and rear disposal access are available in multiple colors and sizes to match building décor and anticipated traffic flow. Both Vendors and styles listed are approved through UF Business Affairs office and offer a discount to the University.
 - 2. “Central Bullseye” is the stand-alone recycling bin available through Busch Systems (www.buschsystems.com). Bin is “blue, 19 gallon capacity. Specify the required “Cans and Bottles Only” sticker. Dimensions are 20.5 inches x 11 inches x 34 inches high, Code #549A.
 - 3. Recycle stations vendor is Max-R (www.max-R.net) (listed in UF system as the Prestwick Group). Styles recommended:

Type	Size	Total Capacity	SKU
Tuscany 2-tier	40 inches wide x 21 inches deep x 40 inches high	52 gallon	#150-460-026-B
Tuscany 3-tier	58 inches wide x 21 inches deep x 40 inches high	78 gallon	#150-470-026-B
Oxford 2-tier	39 inches wide x 21 inches deep x 38 inches high	52 gallon	#100-460-026-B
Oxford 3-tier	58 inches wide x 20 inches deep x 38 inches high	78 gallon	#100-470-026-B

1.11 FACILITY WASTE COMPACTORS AND BALERS

- A. Balers and Compactors - shall be provided for buildings that generate high volume waste or cardboard.
- B. Standard vertical balers are typically 4 foot deep x 6 foot wide x 12 foot tall. Standard self-contained horizontal compactors are typically 24 foot deep x 8 foot wide x 8 foot tall.
- C. For custom compactors and balers, check with PPD Solid Waste Coordinator for dimensions.
- D. Appropriate power shall be provided to equipment. Power provided to compactor shall be the same as existing units on campus to allow current spare compactors and parts to be used.

- E. Baler and compactor operating stations shall be installed in sight of the loading door.
- F. Compactor should operate with a two-step operating cycle to allow discovery of adverse packing conditions.
- G. Area around balers and compactors may need to be fenced and locked to limit access by unauthorized people.
- H. Operating station shall be enclosed with locking cover to prevent vandalism and/or unauthorized operation.
- I. Operation cables should be protected by conduit.
- J. When compactors are installed, power units shall be placed in such a way to minimize trip hazards from electrical wires or hydraulic hoses.

END OF SECTION