

**SECTION 11 82 00
SOLID WASTE HANDLING EQUIPMENT**

University Contact: UD Assistant Director of Grounds:
Office (302) 831-2797
UD Landscape Planner: Office
(302) 831-1817

PART 1 – GENERAL

Information in this Section is to be followed unless otherwise directed by University of Delaware (UD) Owner Representative and UD Grounds Representative (Assistant Director of Grounds or Landscape Planner).

1.1 SUMMARY

- A. This section contains information about Compactors, Dumpsters and Toters for both municipal solid waste and single stream recycling.

1.2 REFERENCES

- A. 4E DIVISION 32 _323500 Screening Devices
- B. 4E DIVISION 32 _321000_Bases, Ballasts and Paving_Vehicular

1.3 DESIGN REQUIREMENTS

- A. All new buildings or major additions to existing buildings shall receive, as a part of the project's scope of work and budget, a compactor or dumpster with paved pad and enclosure screening.
- B. Project budget is to provide Grounds Services with(12) additional keys to any compactor installed.
- C. UD Facilities Ground Services is to be consulted prior to the design, addition or major modification of existing buildings that already have or will employ a refuse collection system to select most appropriate method of collection and to select best location for facility.
- D. UD Facilities Ground Services is to be consulted about truck access, site requirements and logistics during preliminary conceptual design development, and during subsequent design development stages.
 - 1. Site logistics need to accommodate both rear loading and front loading turning radius of refuse collection trucks.
 - 2. Weight of trucks when full: Up to 80,000 lbs. for front loading trucks (paving in areas where trucks service the container need to be designed to accommodate this weight).
 - 3. Overhead Clearance: 20' minimum.
 - 4. Operator controls are located on passenger side of truck for rear loading trucks.

- E. Equipment needs for areas with Limited Access/Space:
1. In situations with limited access/space but with **low building occupancy or use**, containers such as 90-gallon toters may be utilized.
 2. In situations with limited access/space but with **high to medium building occupancy or use**, a self-contained, rear loading compacting dumpster shall be used in lieu of a standard dumpster
- F. Recyclables and regular trash are separated and require MSW and SSR Dumpsters and/or Toters. Appropriate space needs to be allocated during design development to accommodate both types of waste collection needs.
- G. A suitable sized pad/apron and enclosure with *No Parking* sign must be provided. See also **4E DIVISION 32 323500 Screening Devices** for enclosure standards and details, **4E DIVISION 32 _ 321000_Bases, Ballasts and Paving _ Vehicular** for pad details.
- o Dumpster pads and apron should be concrete, but the apron needs to be large enough to accommodate rear tire axles of collection vehicles. Base should be constructed at a minimum as per Heavy Traffic detail included in **4E DIVISION 32 _ 321000_Bases, Ballasts and Paving _ Vehicular**.
- H. 6 CY rear loading dumpsters to be designed and engineered for use with a compactor and capable of withstanding pressures as per specifications for the Marathon RJ-160 Compactors. When they are utilized for providing trash collection at dining halls or other large/heavy volume, generators shall be provided as part of the design.
- I. For Dumpsters with Compactors Utilized at Dining Halls:
- o 2 metal wear plates (3/8" X 8" X 8') are to be bolted down to the concrete pad for dumpster to travel on when dumpster is being collected and reattached to the compactor.
 - o A 3" x 3" x 3/8" angle iron shall be secured across the pad where dumpster contact and pivot when starting the process of tipping into the collection truck. Angle iron shall be secured into the concrete slab with a minimum of 3/4" grade 8 bolts 4" long, set on 10" centers.
 - o Generators, in heavy use locations, shall be provided as part of the design.
- J. Water Spigot Hookup and Hose Storage: Spigot should be a frostless hydrant located in the back corner of enclosure with space for hose storage (exact location of spigot TBD in field).
- K. Drainage should be provided in accordance with City of Newark requirements for storm and sanitary water.

L. Pads and Aprons:

1. Pad dimensions will depend upon the number of containers being installed, and will be determined on a project by project basis.
2. Minimum depth = 17'
Width will vary depending upon whether the enclosure is for 1 or 2 dumpsters.

M. Concrete:

1. Base:
 - 6" depth concrete
 - 5,000# strength with 6" x 6" wire
 - 10" CR with construction fabric installed as per detail for Heavy Paving (**4E DIVISION 32 _ 321000_Bases, Ballasts and Paving_Vehicular**)
2. For Marathon Compacting Dumpsters:
 - Concrete Pad to be a minimum 5000PSI, steel reinforced 6" thick.
3. Concrete pad shall match existing grades wherever possible. If not possible due to site conditions, concrete pad should be no higher than 4" above surrounding grades.

N. Enclosures:

1. Refer to **4E DIVISION 32 323500 Screening Devices**

PART 2 – PRODUCTS

2.1 COMPACTORS AND COMPACTING DUMPSTERS

A. Marathon Horizontal Compactor

- Model: RJ-160
- Motor: 10HP 3 Phase Motor
- Hydraulic Pump: 10GPM
- PSI:1850
- Cycle Time: 36 second

1. One (1) side feed doghouse with interlock switch, bolted on unit.
2. One (1) stationary compactor Installation. Installation practices in accordance with ANSI Safety Standards.
3. Prior to installation:
 - 3-phase fused electric disconnect within 6 feet of pad.
 - Concrete Pad to be a minimum 5000PSI, steel reinforced 6" thick.

***Compactor with Dumpster.
Location: Kent Dining Hall***



Manufacturer Contact:

Mid-Atlantic Waste Systems
Division of THC Enterprises, Inc.
T: 800-338-7274 / F: 410-820-9916
www.mawaste.com

B. GALBREATH – PACK MAN

- **Model:** PM6R
- **Description:** rear-loading, self-contained
- **Motor:** 3hp 208/230/460v 3 phase, remote power unit with 12' hoses and weather cover. Installed secured to concrete pad. See CSI#
- UL listed controls and cabinet, key on-off switch, start and stop buttons, spring assisted loading door with interlock spring loaded trash retainer teeth.
- **Color:** Painted Dark Green
- Installed at UD Facility.
- Suitable live electrical disconnect must be installed (by others) within 6' of power – unit to be located prior to delivery of dumpster.

Galbreath Pack Man

Location: South side of Bob Carpenter Center



Manufacturer Contact:

Waste Equip
T: 977-468-9278
www.wastequip.com

2.2 Standard Dumpsters

- **Capacity:** 6 or 2 CY
- **Access:** rear loading, non-compacting
- **6 cy Outside Dimensions:** 52" high x 77-1/2" wide x 127" long
- **Color:** painted dark green or blue
- **Floor and Bottom Skid:** 10 gauge hot rolled flat sheet steel
- **Sides:** 12 gauge hot rolled flat sheet steel
- **Trunion Bar:** 2" D. solid steel w/ 3' D. washers on each end
- **Top Trim:** 3" x 5" x 7" gauge
- **Lids and Hinges:** 6 plastic lids mounted on swing away mounted hinge assemblies
- **Lifting Hook:** 3/4" x 2' 1/2"
- **Drain Plug:** 1-1/2"

Manufacturer

Paulsonbilt, Ltd.
 1000 West 11th Avenue
 Coatesville, PA 19320

Phone [610] 384-6112
 Fax [610] 380-0797

Any Changes or Substitutions must meet or exceed this manufacturer's specifications.

6 CY Standard Dumpsters



2 CY Standard Dumpster



2.3 Toters – for single stream recycling and solid waste collection

1. All toters must be compatible with current campus solid waste collection equipment.

- o Capacity : 90-gallon
- o Color: green

Location: West of Mitchell Hall



2. Recycling Toters

- o Capacity: 90-gallon
- o Color: Blue



Manufacturer:

University Grounds Department to be contacted to supply toters, as per project needs, at project expense.



END OF SECTION