



BUILDINGS BULLETIN 2018-011

OTCR

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Related Bulletin(s): BB 2015-008

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Purpose: This document establishes acceptance criteria for multi-point gravity pneumatic waste transport systems as an alternative material in the NYC Construction Codes.

Related Code/Zoning Section(s): BC 708 AC 28-103.8
BC 1213 ZR 12-10 'Accessory Use'
AC 28-113.2

Subject(s): Waste handling system; Multi-point gravity pneumatic waste transport system; Refuse chutes; Compactor room

Background

Multi-point gravity pneumatic waste transport systems (waste handling systems) are not specifically prescribed in the NYC Construction Codes. Sections BC 1213.3 and 708.13 of the 2014 New York City Building Code prescribes the use and protection of refuse chutes, and access rooms for waste handling systems. BC 1213 prescribes requirements for refuse compactors for certain multiple dwellings in Groups I-1 and R-2. Where waste handling systems are designed in accordance with the requirements of this bulletin established by the Office of Technical Certification and Research (OTCR), they are considered acceptable alternatives to code-prescribed refuse compactors pursuant to 28-113.2.2.

Description

A waste handling system is a multi-point gravity pneumatic waste transport system consisting of gravity chutes, pneumatic transport piping, and collector discharge areas.

The gravity chute is installed with a discharge valve, an air source at or near the bottom of the chute, and an air control damper used to provide connection to the pneumatic section of the waste handling system. The portion of the waste handling system starting at the discharge valve and terminating at the collector discharge area is sealed. Waste is transported through the sealed system on a pre-programmed schedule or when the system detects it is full.

Design Requirements

Waste handling systems shall comply with NFPA 82.

Uses

Waste handling systems are used to collect trash from all waste streams, except for hazardous waste. All waste is transported to a collector discharge area where it is sorted as to waste stream including separated recyclables, compacted, and placed into containers for transport by the NYC Department of Sanitation or private collection service (see 'Requirements by other NYC Agencies' Section 2). Waste handling systems that serve buildings and structures located on the same zoning lot shall meet the definition of "accessory use" in accordance with ZR 12-10 and comply with Section (2)(b) of the Conditions of Acceptance Section of this bulletin. Waste handling systems that serve buildings and structures located on multiple zoning lots shall comply with Section (2)(c) of the Conditions of Acceptance Section of this bulletin.

Restrictions

1. Hazardous waste streams are not permitted to be processed by waste handling systems.

Evaluation Scope

NYC Construction Codes

Evaluation Criteria

Pursuant to AC 28-113, the Office of Technical Certification and Research (OTCR) recognizes waste handling systems designed, installed and maintained in accordance with NFPA 82¹ *Incinerators and Waste and Linen Handling Systems and Equipment*, and the conditions of this Bulletin.

A NYS PE or RA shall provide a letter certifying that the waste handling system complies with NFPA 82. The letter shall be scanned and included in the Departments' BSCAN Virtual Job Folder as part of the project record. The Department reserves the right to request this documentation to determine that the waste handling system complies with the standard. Installations without this letter are not in compliance with the conditions of this bulletin.

Conditions of Acceptance

Waste handling systems shall comply with the NYC Construction Codes and the following applicable provisions:

1. Design
 - a. Gravity refuse chutes shall comply with NYC Construction Codes including but not limited to Sections BC 708.13 and 1213; and all applicable sections of NFPA 82.
 - b. Waste is sorted, compacted and/or containerized in the collector discharge area. Therefore, gravity chutes are not required to comply with compactor requirements in accordance with BC 1213.2.
 - c. Opening in a shaft enclosure, including those from access rooms and termination rooms, shall be protected in accordance with Section BC 715.
 - d. An approved automatic fire sprinkler system shall be installed at the top of the gravity chutes, in chutes access rooms, and their termination rooms in accordance with BC 903.2.11.6.
 - e. Pneumatic transport piping and collector discharge area shall comply with all applicable sections of NFPA 82, including Section 6.4.
 - f. All pneumatic transport piping not directly buried by fill material shall be enclosed with a fire-resistant-rated construction. The enclosure shall be continuous and have a fire resistance rating of not less than two hours if the building is four or more stories and not less the 1 hour if the building is less than four stories in height.
 - g. The waste handling system shall include a supervisory control panel which is a computer system, housed in the collection discharge terminal collection station. The supervisory control panel shall continuously monitor and regulate the system.
2. Filing
 - a. Waste handling systems must be filed and permitted by the Department. Applications filed with the Department shall require examination and approval. Professional certification or Directive 14 filing is not permitted.

- b. Waste handling systems that serve buildings and structures located on a single zoning lot shall require a restrictive declaration filed in accordance with Buildings Bulletin 2015-008. The Plumbing System Restrictive Declaration agreement shall be used, and modified accordingly, for the waste handling system.
- c. Waste handling systems that serve buildings and structures located on multiple zoning lots shall require a restrictive declaration filed in accordance with BB 2015-008. The standard approved form for the Plumbing System Restrictive Declaration agreement shall be modified accordingly for shared use of the waste handling system among the identified multiple zoning lots. Pursuant to Section (IV)(A)(1)(b) of BB 2015-008, plan examiner shall refer the agreement to the Borough Commissioner for referral to the DOB General Counsel for review and approval. The approved agreement may then be recorded at the Office of the City Register in accordance with BB 2015-008. The Certificate of Occupancy for each building that shares the waste handling system shall reference the restrictive declaration of the waste handling system, and include the city register number issued by the Office of the City Register, or if in Richmond County, the reel and page numbers.

3. Installation

- a. The installation of waste handling systems shall comply with NYC Codes and Rules of the City of New York, approved construction documents/plans and manufacturer instructions.
- b. The waste handling system shall be installed and used in accordance with NFPA 82.

4. Special Inspections

Pursuant to section BC 1704.14, the installation of the waste handling system shall be subject to special inspection requirements of Chapter 17 of the Building Code and Department Rules covering special inspection. Special Inspectors of waste handling systems shall:

- a. Maintain the same qualification requirements prescribed for mechanical systems (BC 1704.16) as defined in 1 RCNY section 101-06, Appendix A.
- b. Have duties and responsibilities in accordance with, but not limited to, 1 RCNY section 101-06, Section BC 1704.16.2 and verify compliance with the conditions of this Bulletin, and
- c. Complete a statement of special inspection within which this letter shall be referenced under the Special Inspection Item for 'Alternative Materials' in section 3.0 of the TR1 form.

<input type="checkbox"/>	Mastic and Intumescent Fire-resistant Coatings	BC 1704.12		
<input type="checkbox"/>	Exterior Insulation and Finish Systems (EIFS)	BC 1704.13		
<input type="checkbox"/>	Alternative Materials - OTCR Buildings Bulletin #	BC 1704.14		
<input type="checkbox"/>	Smoke Control Systems	BC 1704.15		
<input type="checkbox"/>	Mechanical Systems			

Use this line to identify **Waste management system**

5. Maintenance

- a. Maintenance of refuse chutes shall be in accordance with the NYC Construction Codes and 1 RCNY 24-01.
- b. Maintenance for waste handling systems shall be in accordance with manufacturer instruction documents and NFPA 82.

6. Labeling

Waste handling systems shall be labeled as per 28-113.4. All shipments and deliveries of materials shall be accompanied by a certificate or label certifying that the materials shipped or delivered are equivalent to those tested and approved.

Requirements by Other NYC Agencies

1. NYC Department of Environmental Protection (DEP)

- a. NYC DEP Air permits will be required prior to construction. NYC DEP requires all permit filing to be submitted online through the Clean Air Tracking Systems. A professional engineer is required to file this type of permit. Use the following link to create an account www.nyc.gov/dep/cats. Some helpful information about the work permit application can be viewed via this link <http://www.nyc.gov/html/dep/pdf/air/ind-wp-application.pdf>. For additional information or questions, please contact airpermit@dep.nyc.gov.

2. NYC Department of Sanitation

- a. Waste handling systems require collection service from the NYC Department of Sanitation or private collection service. Owners must inform the NYC Department of Sanitation (DSNY) or private collection service that the collection service is specific to a waste handling system and provide data on the waste load expected at the discharge termination collection station. To obtain service from DSNY, the owner shall send a letter requesting collection service for the new terminal collection station to the Collection Office via fax at (212) 788-3915 or by mail to:

NYC Department of Sanitation
Attn: New Collection Service
125 Worth Street, Collection Office Rm. 700
New York, NY 10013

3. NYC Fire Department (FDNY)

The following requirements specified by FDNY shall be satisfied:

- a. Installation shall comply with NYC Fire Code (2014) and NFPA 82 (2014): '*Standard on Incinerators and Waste and Linen Handling Systems and Equipment*', in addition to any other relevant codes and standards.
- b. Appropriate signage shall be posted at garbage disposal ports, indicating prohibited waste types (e.g., flammable liquids, compressed gases, chemicals, etc.).
- c. System piping shall be labeled as carrying residential garbage, with direction of flow and associated hazards.
- d. System shall have emergency shutdown capability at all buildings, effectively shutting down the entire waste management system, including all electrical components, yet allowing FDNY to access incident location(s) (e.g., opening system pneumatic valves to extinguish fire with hose stream), all verified with visual confirmations.
- e. System shall be capable of identifying trouble or fire locations.
- f. All system access points (e.g. storage chutes) in buildings shall be 2-hour fire rated and have automatic sprinkler protection. Signage shall be posted inside buildings to direct Fire Department to system access points.
- g. Existing building garbage gravity chutes shall have automatic sprinkler protection.
- h. Terminal-collection station shall be equipped with heat detection near or inside appropriate equipment (e.g., blower's compressors, trash sorters and compactors, etc.), have automatic sprinkler protection, and have fire alarm system connected to approve central station.
- i. Entire system shall be continuously monitored for proper operation, either locally or remotely, with 24/7 emergency contact telephone number.
- j. Air blowers shall be explosion-proof or be of proven design incapable of igniting flammable vapors or liquids.
- k. Air blowers and compressors in terminal-collection station shall have N+1 redundancy.
- l. Entire system shall be connected to emergency power.

Referenced Standards

1. **NFPA 82-2014** Incinerators and Waste and Linen Handling Systems and Equipment.