SECTION 11 82 00 – CHUTE – DISPOSAL SYSTEM

This section is based on a system produced by:

Wilkinson Chutes Canada ®
Toronto, Ontario, CANADA
416-746-5547

Part 1 GENERAL

1.1 RELATED DOCUMENTS
A. The general provisions of the contract, including General and Supplementary Conditions and Division 1, General Requirements, apply to the work specified in this section.

1.2 DESCRIPTION OF WORK
A. Work Included: Furnish and install where shown on plans 24" (610 mm) disposal chute as manufactured by Wilkinson Chutes Canada ® as specified below. (other sizes available)
B. Integrated Products in this section include:
   1: WCC Garbage Compactor by Wilkinson Chutes Canada ®

1.3 SYSTEM OPERATION
The Municipal (or governing authority) waste disposal system, determines the requirements for chutes and compactors in conjunction with Waste Management & Development / Redevelopment Regulations. Planning for adequate disposal (or Waste Diversion “recycling”) including residential units on floors below the chute termination point should be considered. For Mixed use buildings (commercial retail space) it may be necessary to create separated facilities.

1.4 SUBMITTALS
A. Catalog Cuts: Before the Chute Disposal System is delivered to the job site, submit catalog cuts to the Architect in accordance with these specifications, showing all details of installation and assembly and all requirements for work by other trades.
B. Product Data: Manufacturer’s product specifications, standard details and recommendations for project conditions; indicate selected sizes and installation details specific to the project.
C. Shop Drawings:
   1. Plans: Scale 6 mm to 300 mm; indicate locations, dimensions, and required associated construction activities.
   2. Elevations/Sections: Scale 6 mm to 300 mm; indicate locations, dimensions, and required associated required construction activities.
   3. Details: Scale 6 mm to 300 mm; indicate:
      a. Shop drawings specific to project conditions
      b. Interface with chute system compactor(s) containers or adjacent construction and other non-related equipment
      c. Dimensions and tolerances
      d. Products required for installation of the Chute / Compactor & Containers System, but not supplied by the equipment manufacturer.
D. Quality Assurance/Control Submittals:
   1. Contractor’s Certification that:
      a) Products of this section are manufactured & distributed by Wilkinson Chutes Canada ®.
      b) Manufacturer’s certification that installer of manufacturer’s product is approved.
      c) Applicable standards: National Fire Protection Association (NFPA/82), and the Ontario Building Code standards as referenced herein.
E. Close-out Submittals:
   1. Operation and Maintenance Data:
   3. Warranty Documents: Issued and executed by the manufacturer and installer of the system.

1.5 QUALITY ASSURANCE

A. Qualifications:
   1. Manufacturer: Minimum five (5) years-documented experience producing products specified in this section
   2. Installer: Approved by the Manufacturer, and having a minimum of five (5) years experience.

B. Pre-Installation Meetings:
   1. Convene at job site a minimum of seven (7) calendar days prior to scheduled beginning of construction activities of this section to review requirements of this section.
   2. Require attendance by representatives of the following:
      a) Recycling Diverter System / Chute and Compactor manufacturers or designated representatives.
      b) Installer of this section
      c) Other entities directly affecting, or affected by, construction activities of this section.
      d) Notify Architect four (4) calendar days in advance of scheduled meeting date.

C. Workmanship shall be of highest quality, in accordance with the best standard practice for in installation of this equipment. Execute work in accordance with drawings, specifications, and manufacturer’s printed directions.

D. Requirements of Regulatory Agencies:
   a. Comply with the requirements of the Underwriters Laboratory Canada (cU. L.®)
   b. Design equipment to comply with Provincial and local Municipal Health; Development + Waste Management Department requirements.

1.6 RELATED WORK BY OTHERS SPECIFIED ELSEWHERE

A. The following work is excluded from the scope of work in this section 11 82 00 and is included in other divisions of the specifications for inclusion in the scope of work of others.

   1. Electrical Standards: The following electrical circuits, with disconnects are required and are to be installed by others as shown on the plans (onsite construction electrician to connect compactor and master control panel after installation.)
      a. Round or square floor slab openings for chute riser.
      b. Roof opening(s), Curb and flashing at the roof.
      c. Water supply and valves to flushing and fire sprinkler heads
      d. Installation of the plumbing access door provided under this section is to be by the forces erecting the shaft enclosure walls.
      e. Installation of the plumbing thru wall doors provided under this section is to be by the forces erecting the walls.

1.7 WARRANTY

Manufacturer’s warranty: Furnish manufacturer’s standard two (2) year warranty from date of temporary certificate of occupancy or similar, locally mandated permission to use the project common areas for their intended use. Warranty shall apply to defects in product workmanship and materials. Wilkinson Chutes Canada® carries a twenty (20) year warranty on the chute liner, excluding offsets.

Part 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable manufacturers: WILKINSON CHUTES CANADA® as distributed by Wilkinson Chutes Canada®, Toronto, Ontario, CANADA. Telephone: 416-746-5547

B. Substitutions: Not permitted.

C. Components:
1. The chute shall be a minimum 610 mm (24") diameter of 16ga, satincote steel with a two section fully welded **sloping throat intake area**, as manufactured by Wilkinson Chutes Canada®. The chute throat shall be a sloped dual angle section below the door opening. This design **minimizes damage and accumulated debris** (trapped materials) above the throat, in the intake area. The chute is installed with 4 sided floor frames to support and align the liners.  
**OPTIONAL** - Waffle Style Sound Isolator Mounts (or alternate product specified) at each floor support frame.

2. **Intake Doors:** **Stainless** steel, 15" inches wide x 18" inches high (380 mm x 450 mm), bottom hinged, hand operated self-closing positive latching doors, with optional top hinged baffle, bearing 1½ hour, „U. L.®“ (Underwriters Laboratories “B“ Label) designation, and rated for a 250°F (121°C) maximum door temperature rise over 30 minutes, with stainless steel trim in a „U. L.®“ approved, “B” Label, 1½ hour assembly.

3. **Discharge:** Wilkinson Chutes Canada Fire Rated type “AC” open end chute discharge door with a 74°C. (165°F) fusible link at the bottom of the chute discharge will close automatically when the ambient temperature reaches 165°F. (74°C) as required by city or provincial building and/or fire codes. Unit with „U. L.®“ rating (as described above).

4. **Vent:** Chute shall extend full diameter through roof to metal top 100% screened vent cap 1016 mm (40") above roof level with counter flashing.  
Roof Curb 915mm (36") x 915 mm (36") x minimum of 203 mm (8") high is required for flat roof conditions (provided by others).  
**OPTIONAL** - **Stainless Steel for aggressive environments.**

5. **Sprinkler System:** Chute shall be protected internally by automatic sprinklers, 12.5 mm (1/2") sprinkler head above highest intake. Additional 12.5 mm (1/2") sprinkler heads at every second intake (counting from the top down), with a mandatory sprinkler located at the lowest service level (or as required by local code). A 19 mm (3/4") IPS flushing spray head is included above the upper floor chute liner section.  
**OPTIONAL** - **Disinfecting & Sanitizing Unit** for installation in line to the flushing spray head (above the highest intake door of the chute). Provide FB-5060 406 mm (16") wide x 406mm (16") high side-hinged, hand operated, self-closing, self latching, „U.L.®“ 2 hour fire rated, painted steel access door. **(Installed by forces erecting the enclosed shaft wall).**
- Fluid and Connection to flushing spray head. **(Back flow prevention valve and electric control switch by others).**

6. **OPTIONAL** - Offsets (bends) in the chute, if **required** shall be made the same diameter as the chute of 16ga. satincote steel and with **12ga. Steel Reinforcing Impact Area.** Offsets are not to deviate more than 30° off the vertical axis of the chute, with adequate supports.  
**Vibration Mounts as specified.**

7. **OPTIONAL** - Sound Dampening: **Site Installed - Microlite XG Wrap; or Factory installed - V-Damp 3680 or Antivibe DL,** applied to the exterior of the chute sections only.

8. **Stationary Apartment Compaction Unit:** AP-7227 (or other model as specified) fully integrated into Master Control Panel, Photoelectric cycle control. Hydraulically operated, **76mm (3") Cylinder bore and 38mm (1 1/2") Cylinder Rod.**
- The compaction **Body:** **Top; Sides & Floor and Ram:** **Top; Sides; Bottom Plate & Reinforced Face are 6.35mm (1/4") steel plate.**
- Bridge Angle is 102 mm 4" x 75 mm 3" x 12.5mm (1/2") angle & a 6.35mm (1/4") Drop Plate.
- Cycle time is 50 sec – Capacity per Hour 18 Cu. Yards. Charge Box capacity .32 Cubic Yards.  
- Clear Top Opening 27" x 22" – Ram Face 27" x 16" ht. Ram Penetration is 102 mm (4").  
- Normal Ram Face Pressure is 23 P.S.I. & Maximum 26 P.S.I.
- The hopper is made 3.400 mm (10ga) steel plate with 6.35mm (1/4") slope to take the impact of falling refuse.**

**Alternative compactor models are available as required by the site layout.**

9. **Garbage Compaction Containers:** Capacity 3 cubic yards, Front End (FE) loading, overall length 2032 mm, overall width 1219 mm, overall height 1473 mm. Reinforced Floor & Lift Pockets, fully welded bottom and sides, reinforced 10 gauge steel plates. Steel Containers will be **12 gauge sides, 10 gauge bottom: channel; caster pads & charging doors & 7 gauge pockets** or custom made containers to suit system and space needs. Designed to mate with standard AP-7227 compaction unit. (or as specified). Standard “hold down bar” on double steel lids.

**WILKINSON CHUTES CANADA**  
Telephone: 416-746-5547 / 1 866 535 0558 Fax: 416-743-5632
• **Casters & Wheels:** Standard Casters 2 rigid & 2 swivel (with Locking Face Brakes) 150mm (6") diameter x 51mm (2") - (1255 mm 3/8” Forged Plate Steel c/w 9.525 mm ½” Axle 1600# capacity) - with “Wide Crown” Polyolefin Wheels.

• **OPTIONAL Casters:** XHD – Long Distance Towing / Underground Rooms - 150mm (6") diameter x 63.75 mm (2-1/2") with 14.29 mm ¾” Axle; Dual Greaseless Precision Ball Bearings & 2000# capacity) – “Wide Crown” Flex Compound Polyurethane Wheels.

**OPTIONAL - Bulk “Open Top” Garbage &/or Recycling (non compactor) Containers:** As required by the Municipal (or governing) authority. Industry standard Front End (FE) Loading 3 cubic yard (or as specified) containers (or 95-gallon/360L containers) for commingled recyclables or custom made containers to suit system and space needs. Steel FE bins (gauges specified as above), complete with reinforced floor and lift pockets and 150 mm (6") diameter x 51 mm (2") wide “crown” - 2 rigid and 2 swivel (with Locking Brakes) – **Standard Casters as above.**

**OPTIONAL - Organic Containers:** As required by the Municipal (or governing) authority. Industry standard Front End Loading 2 cubic yard (or as specified) containers (or 35-gallon/120L containers) for commingled recyclables or custom made containers to suit system and space needs, Complete with reinforced floor and lift pockets and 150 mm (6") diameter x 51 mm (2") wide “crown” - 2 rigid and 2 swivel (with Locking Brakes) **H.D. “Wide Crown” Flex Compound Polyurethane Wheels.**

### 2.2 FABRICATION

**A. The Disposal Chute System** shall be fully factory assembled and all joints, except those required separating the sections for shipment and installation shall be **welded or lock-seamed tight.** The floor **intake doors shall be bolted** in place on the two section sloping throats formed into the chute. All chute sections shall flash inside the sections below and there shall be no **bolts, clips, or other projections inside the chute** to snag the flow of material. Pre-positioned support frames shall assure proper intake levels and there shall be an expansion joint in the chute between all support joints. **Discharge hoppers and offsets, where required, shall be reinforced and separately supported in the impact area.**

### Part 3 EXECUTIONS

#### 3.1 EXAMINATION

**A. Verification of conditions:**

1. **Area in which system is to be located is correct size and location, and is prepared for installation of mixed use chute and components.**

**B. Installer’s examination:**

1. **Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if conditions under which construction activities of this section are to be performed are unacceptable.**

2. **Beginning construction activities of this section before unacceptable conditions have been corrected is prohibited.**

3. **General Contractor shall verify and record chute alignment with installer immediately following installation.**

#### 3.2 INSTALLATION

**A. Install mixed use chute and recycling diverter / compactor systems in accordance with shop drawings and manufacturer’s printed installation instructions.**

#### 3.3 DEMONSTRATION

**A. Arrange demonstration of system operation, conducted by manufacturer’s representative, to Owner’s maintenance personnel.**

* END OF SECTION *

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