# Bronte Village Mall Redevelopment Waste Management Plan

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### Contents

1.0	Definitions	2
2.0	Scope of Work	
3.0	Provincial and Municipal Regulations	
3.1	Ontario Regulations	
3.2	Halton Region	
W	/aste Room Design Requirements	
	ollection Vehicle Dimensions Required for Site Plan Approval	
D	isposal Programs and Acceptance Criteria	4
D	ocuments for Submission	6
C	ommencement of Waste Collection Services	7
1.0	Waste Generation Analysis	7
4.1	Generation Calculation Methodology	7
4.2	Waste Generation per Building:	8
4.3	Waste Generation – Building A & B Combined:	8
4.3	Waste Generation by Stream	9
5.0	Proposed Handling Equipment – Waste Disposal Rooms	9
5.1	Equipment Rightsizing	9
5.0	Proposed Handling Equipment – Restaurant	11
7.0	Proposed Handling Equipment – Retail (Rexall)	13
3.0	Proposed Handling Method – Townhomes	14
9.0	Proposed Waste Disposal Chute System	15
Fi	gure 1 – Sorter Layout Drawings	16
9.0	Common Areas Disposal Receptacles	18
9.1	Types and Locations - Considerations	18
10.0	Other Design Considerations and Recommendations	21
Appen	dix A: Application for Waste Collection Services.	24
Appen	dix B: Supplementary Waste Plan	31
Appen	dix C: Drive Through Agreement	35
Appen	dix D: Supplementary Waste Plan – Plans & Information	39
\ nnon	div E: Chuta Systam Quata for Dasign - Evample	47



### 1.0 Definitions

**Non-Recyclable Waste:** for the purpose of this report this term commonly referred to as "Garbage" encompasses materials not accepted into the recycling programs offered by Halton Region.

**Garbage:** means non-recyclable waste represented in "Grey" areas on the literature and signage for Halton Region's residents and commercial use, and are materials that are not recyclable. Please see Page 5 for a full detailed list of materials accepted into this recycling program.

**Blue Box Recycling:** means a single-stream recycling program that accepts all mixed fibres (paper, boxboard, carboard) and mixed containers (plastics, glass, metals) into one recycling program. Please see Page 4 for a full detailed list of materials accepted into this recycling program.

**Green Cart Recycling:** means a recycling program that accepts organic food waste and compostable paper materials. Please see Page 5 for a full detailed list of materials accepted into this recycling program.

**Bulk Items**: means any household item larger than 1 metre (39 inches) in any dimension, or weights in excess of 22.7 kilograms (50 pounds) as determined by Halton Region.

### 2.0 Scope of Work

The Waste Management Plan is intended to clarify and adhere to provincial and regional requirements; provide solutions and considerations specifically for Bronte Village Mall Redevelopment; outline and illustrate the criteria for waste management; and establish the plans for handling of waste materials.

### 3.0 Provincial and Municipal Regulations

### 3.1 Ontario Regulations

#### **Organic Food Waste**

In June of 2016 'Bill 151: Waste Free Ontario Act 2016' comprised of two schedules; 1) The waste Diversion Transition Act and 2) The Resource Recover and Circular Economy Act was passed. This progressive environmental legislation will allow Ontario to reduce its overall disposal, costs, and greenhouse gas emissions related to waste. In accordance with the act, an Organics Action Plan is under development to divert more organic waste from landfills. This plan will be posted for public consultation in 2017 and a policy to be implemented in spring 2018. A ban on organic materials being disposed in landfill is anticipated to be in full effect by 2022.

#### Source Separation Regulation 103/94:

Recycling at multi-residential buildings is mandatory in the province of Ontario. Ontario Regulation 103/94 is the Provincial legislation that requires property owners to operate a building recycling program if the building has



six or more units, and it is located in a municipality with a population of at least 5,000. The legislation requires the implementation of a 'Source Separation' Program within multi-unit residential buildings.

A source separation program includes activities to separate recyclables from other waste at the source (point of generation). Activities must include the provision of facilities for the collection, handling and storage of recyclables, including suitable containers for tenants to deposit their recyclables. These containers must be conveniently located, properly sized, and adequately contain the recyclable materials. Reasonable effort must be made to ensure that full use of the program is made. The program must be communicated to all employees and tenants to ensure that source separation procedures, responsibilities and equipment use are properly understood and followed. New employees should be informed of the program and trained in its operation.

The Ministry of the Environment is responsible for enforcement of Regulation 103/94. Inspections of multiresidential buildings are conducted by the Ministry's Compliance Branch who has authority to issue fines to property owners for non-compliance.

### 3.2 Halton Region

### Waste Room Design Requirements

Guidelines have been prepared in accordance with Section 192 of the ROP (Regional Official Plan).

The design for the internal management and handling of Waste, shall ensure:

- That Recyclable Material and Organic Waste systems are as convenient to use as Garbage systems;
- That Collection Point locations for Waste are accessible to all residents/occupants and do not hinder residents/occupants from participating in Recyclable Material and Organic Waste Programs and comply with Ontario's Accessibility for Ontarians with Disabilities Act;
- That all applicable health and safety considerations are incorporated into the design for workers handling or moving Waste Receptacles and comply with the Ontario Health and Safety Act; and
- That the Developer has established an ongoing Management and Maintenance Program for the proposed Waste Management System that will ensure the continued operation of the proposed system (i.e. cost considerations, sustainability).
- An example of an acceptable internal management and handling of Waste design would include:
- A central location on the ground floor that all Recyclable Material, Organics and Garbage are taken to; a one chute room that all Recyclable Material, Organic Waste and Garbage are taken to (i.e. tri-sorter, two chutes with bi-sorter or three separate chutes); or another design that is acceptable to the Region.
- The dedicated storage area must be adequate to store Waste for a minimum of one week based on minimum capacity requirements.
- A clear and accessible area of 10 square meters within the building that can be used for the storage of larger items such as Bulk Waste, shall be included in the design.
- The Waste storage area shall be constructed to prevent pests.
- The storage area shall be constructed of a material that may be easily cleaned and shall have an area to wash Waste receptacles including a water hose connection and floor drain, to the satisfaction of the Region.
- The Waste storage area shall have adequate and well maintained mechanical ventilation.
- The Waste storage area must have a mechanism to cool the room during periods of hot weather (i.e. air conditioning) to suppress odours.



- The Waste storage area shall have sprinkler and fire prevention systems in accordance with all Ontario Fire Code and Ontario Building Code requirements.
- Should the design require a compactor for garbage, the compactor must be secured at all times with no
  general access. A garbage compactor system may be used with or without a chute system such as
  through a small garbage access door from the Recyclable Material/Organic Waste room.
- Internal Waste storage areas must be at ground level with direct access to the Waste Collection Point through double doors which are a minimum of 2.2 meters in width, to allow for movement of Waste receptacles. These double doors should open directly to the external Collection Point.

### Collection Vehicle Dimensions Required for Site Plan Approval

For Front End collection, the site plans must accommodate vehicle types 2 and 3. Site plans will also require a minimum overhead clearance of 9.0 meters.

2.	Recycling	Length Width Height Turning Radius	9.65 m 2.44 m 3.69 m (bucket up 5.08 m) 13.0
3.	Front End	Length Width Height Turning Radius	9.7 m 2.7 m 3.8 m 11.50 m

### Disposal Programs and Acceptance Criteria

Halton Region offers three main disposal programs:

1. Blue Box Recycling (Single Stream Recycling)





2. Green Cart Recycling (Organic/Compost Materials)



3. Garbage (Non-Recyclable Waste Materials)





Halton Region offers a Waste Diversion Guide for resident detailing recycling solutions for other waste streams such as:

- Household Hazardous Waste
- Medications and Sharps
- Battery Recycling
- Paint and Stain
- Electronics
- Tires
- Plastic Shopping Bags
- Methods on how to reduce waste
- Places to take reusable items for donation

Please visit <u>halton.ca/apartment</u> for the complete Waste Diversion Guide for Residents and a Waste Diversion Guide for Property Managers/Owners.

#### **Documents for Submission**

Development Application Requirements (Halton Region Waste Guidelines)

As part of the development application review process, Bronte Village Mall Redevelopment shall submit to Halton Region Public Works Department a completed Supplementary Waste Plan (Appendix B). The Waste Plan shall clearly indicate the following:

- The total number of Residential units;
- The total number of Residential floors;
- Proposed route the Waste collection truck would travel on site, including where applicable, the route
  the Waste collection truck would travel from the municipal road to the Collection Point and back to the
  municipal road;
- A representative scaled drawing showing the configuration of Waste containers, compacting and sorting equipment in the internal Waste handling room(s) (i.e. the centralized internal storage/handling room(s) on the ground floor and if applicable, each floor);
- A representative scaled drawing showing the flow of Waste receptacles from the Waste storage room to the outdoor Waste collection loading area, if applicable;
- The Waste collection loading area(s), including a scaled drawing showing the configuration of the required number of Waste containers if applicable; and
- Detailed drawings of any external enclosures including a representative scaled drawing showing the configuration of the required number of Waste receptacles, if applicable.
- The number of Recycling Receptacles and Organic Material Receptacles required;
- The size and number of Front End garbage collection bins required;
- The Region reserves the right to re-evaluate development applications if more than three (3) years have elapsed from the time of the initial review, prior to final approval. In the event that changes occur to the Region's policies or changes to Waste collection operations, the re-evaluation may result in changes to meet the current design requirements.

The supporting plans and information is provided and detailed in Appendix D.



#### Commencement of Waste Collection Services

Bronte Village Mall Redevelopment will be fully responsible for collection and disposal of all Waste until Bronte Village Mall Redevelopment is able to confirm to the Region that the development has reached 90 per cent occupancy and that a Waste collection truck is able to safely and consistently perform collection services without obstruction or delay, to the satisfaction of the Region.

Bronte Village Mall Redevelopment shall submit an Application for Waste Collection Services to Halton Region Waste Management Services (Appendix A), which is a supplementary application to the Development Application, once the construction has commenced and prior to attaining 90 per cent occupancy.

Where a Waste collection vehicle is required to access private property in order to collect Waste materials, the property owner must first enter into a Drive Through Agreement with the Region (Appendix C). If the property owner does not enter into such an agreement, then the property will not be eligible for Region Waste collection services and will be required to provide private Waste collection service, in accordance with the Region's standard collection model, at their own expense.

### **Drive Through Agreement**

A Drive Through Agreement must be completed for collection services. This means an agreement between Halton Region and a property owner that permits Halton Region and/or its agents full access to the external property for the purpose of waste collection services. The Owner agrees to provide Halton Region and its agents full, unobstructed access for the purpose of performing waste collection services on private property and shall hold-harmless and indemnify Halton Region and its agents from any losses (except those which may arise from its gross negligence) that may result during normal operations.

### 4.0 Waste Generation Analysis

### 4.1 Generation Calculation Methodology

The waste generation data is determined by calculating the volume of all waste materials generated on an annual, daily and per residential unit basis. The analysis was conducted to accurately determine the expected generation values for the following waste streams as per the disposal program and acceptance criteria outlined by Halton Region:

- Non-Recyclable Waste (Garbage)
- Single Stream Recycling (Blue Bin)
- Organics/Compost Materials (Green Cart)

The waste generation was calculated per building to determine the appropriate equipment needs for the handling and disposal of each disposal program. Sample data using waste generation volumes for properties of the same type and relative size were used in the following calculations.



### 4.2 Waste Generation per Building:

Proposed Property - Bronte Village Mall Redevelopment Building A - Oakville				
Number of Residential Units 246				
Waste Stream	Generation MT/Year	kg/Day	kg/Unit/Year	
Total Blue Bin Generation	46.143	126.420	187.575	
Cans, Glass & Plastics	16.048	43.968	65.237	
Mixed Paper Fibres	30.095	82.452	122.338	
Organics/Compost	29.971	82.111	121.831	
Non-Recyclable Waste	5.693	15.597	23.142	
<b>Total Building Generation</b>	81.807	224.128	332.548	

Proposed Property - Bronte Village Mall Redevelopment Building B - Oakville				
Number of Residential Units	240			
Waste Stream	Generation MT/Year	kg/Day	kg/Unit/Year	
Total Blue Bin Generation	45.018	123.337	187.575	
Cans, Glass & Plastics	15.657	42.896	65.237	
Mixed Paper Fibres	29.361	80.441	122.338	
Organics/Compost	29.240	80.108	121.831	
Non-Recyclable Waste	5.554	15.216	23.142	
<b>Total Building Generation</b>	79.811	218.661	332.548	

### 4.3 Waste Generation – Building A & B Combined:

Proposed Property – Building A & B Combined				
Number of Residential Units	486			
Waste Stream	Generation MT/Year	kg/Day	kg/Unit/Year	
Total Blue Bin Generation	91.161	249.757	187.575	
Cans, Glass & Plastics	31.705	86.863	65.237	
Mixed Paper Fibres	59.456	162.893	122.338	
Organics/Compost	59.210	162.219	121.832	
Non-Recyclable Waste	11.247	30.813	23.142	
Total Building Generation	161.618	442.789	332.548	



### 4.3 Waste Generation by Stream

### Non-Recyclable Waste (Garbage) Generation per Day

Non-Recyclable Waste (Garbage)			
Estimated Waste Generation   Generation kg/day Based on Capture Rate			
28.53	78.16		

Estimated amount of material entering the non-recyclable waste stream assuming only 70% of recyclable materials are captured in the Blue Bin program and the Green Cart Program.

### Organics/Compost (Green Cart) Generation per Day

Organics/Compost Materials (Green Cart)		
Estimated Capture Rate of 70% (MT)   Generation kg/day Based on Capture Ra		
20.98	57.48	

Estimated amount of organic/compost material assuming a capture rate of 70% in the Green Cart Program.

#### Single Stream Recycling (Blue Bin) Generation per Day

Singe Stream Recycling (Blue Bin)		
Estimated Capture Rate of 70% (MT)   Generation kg/day Based on Capture Rate		
32.30	88.49	

Estimated amount of single stream recycling material assuming a capture rate of 70% in the Blue Bin Program.

### 5.0 Proposed Handling Equipment – Waste Disposal Rooms

### 5.1 Equipment Rightsizing

### **Non-Recyclable Waste Equipment Consideration**

**Equipment:** 3-yard steel container

Quantity: 2 containers per building

<u>Capacity:</u> Approximated 800 kg of compacted material at a 4:1 ratio (capacity and weight varies depending on material composition); 2 x 800 kg = 1,600 kg

<u>Pickup Frequency:</u> One container of compacted material will be picked up once a week per building. Note: pickup frequency may vary during move in times and holiday seasons due to high generation of waste materials from such activities.



<u>Additional Considerations:</u> Halton Region does not provide this type of equipment, must be purchased. Containers of this size typically range around \$1,000.00 per container. Ensure container is on casters for easy portability.

### **Organics/Compost Materials (Green Cart) Equipment Consideration**

Equipment: 95-gallon totes

Quantity: 4 totes per building

<u>Capacity:</u> Approximately 182 kg/totes of organics/compost materials (capacity and weight varies depending on material composition);  $4 \times 182 \text{ kg} = 728 \text{ kg}$ 

<u>Pickup Frequency:</u> Based on the generation volumes of these material, the totes would be picked up twice a week, limiting the need for additional totes and the storage of organic/compost materials.

<u>Additional Considerations:</u> Halton Region would provide the 95-gallon totes for each building. Consider purchasing smaller (32-gallon) organic totes for amenity areas where food is prepared/served (e.g. Party Room).

#### Singe Stream Recycling (Blue Bin) Consideration

Equipment: 3-yard steel container

Quantity: 4 containers per building

<u>Capacity:</u> Approximately 90 kg of loose material (capacity and weight varies depending on material composition);  $4 \times 90 \text{ kg} = 360 \text{ kg}$ 

<u>Pickup Frequency:</u> Based on the generation of these materials, the containers are to be picked up twice per week, limiting the need for additional container and reducing costs.

<u>Additional Considerations:</u> Halton Region does not provide the type of equipment recommended. As such the property would be responsible to purchase/supply the containers. The cost for this size of container is approximately \$1,000.00. Container should be placed on casters for easy portability and health and safety considerations for personnel responsible for maneuvering the equipment.

#### **Bulk Items**

Option 1:

Equipment: 6-yard per building, picked up on call (based on Halton Region)

Quantity: 1 per building

Capacity: 6 yards of loose bulk materials (capacity and weight varies on the bulk material composition)

<u>Pickup Frequency:</u> on call, when container becomes full a call must be made to request a pickup for disposal. Expect higher frequency rates during the residents move in period.

<u>Additional Considerations:</u> Ensure container is on casters for easy portability. The service for the bulk item removal will be at the expense of the property.



#### Option 2:

Halton Region will provide a roll-off container for the collection and removal of bulk items twice a year. This will require internal storage of bulk items until an appropriate quantity is accumulated to warrant a roll-off.

### 6.0 Proposed Handling Equipment – Restaurant

Responsibility for waste management including: collection, source separation, disposal, haulage and handling equipment will be the responsibility of the restaurant tenant. The equipment requirements may vary based on the needs of the restaurant tenant occupying the space. Ensure that the allocated waste area/room space will be of appropriate size to accommodate the proposed handling equipment.

### **Non-Recyclable Waste Equipment Consideration**

Equipment: 3-yard steel container

Quantity: 1

<u>Capacity:</u> Approximated 150 kg of loose material (capacity and weight varies depending on material composition); 50 kg/yard x 3 yards = 150 kg capacity.

<u>Pickup Frequency:</u> Depends on the type of restaurant tenant occupying the space as well as the restaurants generation volumes and peak times of operating. This information will need to be determined by restaurant tenant. The haulage requirements/frequency will be the responsibility of the restaurant tenant.

<u>Additional Considerations:</u> This type of container requires 80" x 42" of floor space. Total floor space required: 23.33 square feet.

#### **Corrugated Cardboard Consideration**

Equipment: 3-yard steel container

Quantity: 1

<u>Capacity:</u> Approximated 60 kg of loose material (capacity and weight varies depending on material composition); 20 kg/yard x 3 yards = 60 kg capacity.

<u>Pickup Frequency:</u> Depends on the type of restaurant tenant occupying the space as well as the restaurants generation volumes and peak times of operating. This information will need to be determined by restaurant tenant. The haulage requirements/frequency will be the responsibility of the restaurant tenant.

<u>Additional Considerations:</u> This type of container requires 80" x 42" of floor space. Total floor space required: 23.33 square feet.



### **Organics/Compost Materials Consideration**

Equipment: 64-gallon totes

Quantity: 4 totes

<u>Capacity:</u> Approximately 70 kg/totes of organics/compost materials (capacity and weight varies depending on material composition);  $4 \times 70 \text{ kg} = 280 \text{ kg}$ 

<u>Pickup Frequency:</u> Depends on the type of restaurant tenant occupying the space as well as the restaurants generation volumes and peak times of operating. This information will need to be determined by restaurant tenant. The haulage requirements/frequency will be the responsibility of the restaurant tenant.

Based off of the type of material, the totes should be picked up twice a week, limiting the need for additional totes and the storage of organic/compost materials.

<u>Additional Considerations:</u> One 64-gallon tote requires 32" x 29" of floor space. Total floor space required: 6.45 square feet.

### **Single Stream Recycling Consideration**

Equipment: 95-gallon totes

Quantity: 4 totes

<u>Capacity:</u> Approximately 48 kg/totes of single stream recycling materials, assuming more cans, glass and plastics versus paper fibres (capacity and weight varies depending on material composition); 4 x 48 kg = 192 kg

<u>Pickup Frequency:</u> Depends on the type of restaurant tenant occupying the space as well as the restaurants generation volumes and peak times of operating. This information will need to be determined by restaurant tenant. The haulage requirements/frequency will be the responsibility of the restaurant tenant.

Based off of the type of material, the totes should be picked up twice a week, limiting the need for additional totes and the storage of single stream recycling materials.

<u>Additional Considerations:</u> The haulage for the restaurant will be the responsibility of the restaurant tenant. One 95-gallon tote requires 37" x 29" of floor space. Total floor space required: 7.46 square feet.

Total area required for waste handling equipment = 60.57 square feet.

### **Used Cooking Oil Considerations**

Handling of used cooking oil can be both messy as well as a slip and fall health and safety hazard. Having a fully contained tank installed inside the restaurant would be the best solution to eliminate spillage hazards and messy clean ups. This storage and removal method would eliminate the need to transfer the used cooking oil to another location, deeming in clean and safe for both employees and properties.

The tank system requires an exterior 2" pipe connection to allow the driver picking up the oil to directly attach the hose and pump out the used cooking oil. The pipe is also fitted with a lockbox to eliminate any potential theft of the used cooking oil material.

The tank should be located at an exterior wall for external access to the back of house of the restaurant. The trucks removing the used cooking oil are typically equipped with 100 feet of hose and would have no problem accessing the pipes to remove the material. Most of these companies providing this service will provide



specifications for the tank, piping and installation requirements. Determining the equipment needs, installation requirements and haulage is typically the responsibility of the restaurant tenant.

The use of containment tanks yields higher rebates, reduces truck traffic and lessens pick up frequency as the tank capacity is between 1200 lbs to 2500 lbs of used cooking oil.

The amount of used cooking oil generated will depend on the type of restaurant that occupies the space. For example, a Wild Wing would generate more of this material due to the constant frying of chicken as compared to a restaurant with a more diverse menu with less fried foods.

The haulage requirements and frequency for this material will be determined by the type of restaurant tenant and an assessment by the hauler of the tenant's needs. Typical, pickup of used cooking oil is completed around 4am to minimize disturbance to local residents and during reduced traffic times.

### **Design Considerations:**

- Doors are a minimum of 2.2 metres wide to accommodate the transfer of waste handling equipment to exterior for pickup.
- Must be ground level for transferring the equipment.
- Total area required for waste handling equipment = 60.57 square feet.
- Area Required for Used Cooking Oil Tank 34" x 34" = 8 square feet

### 7.0 Proposed Handling Equipment – Retail (Rexall)

Rexall will have a dedicated exterior fenced in space to house the proposed handling equipment. The equipment for the perspective disposal programs will be privately serviced and managed by Rexall Staff.

### **Non-Recyclable Waste Equipment Consideration**

Equipment: 4-yard steel container

Quantity: 1 container

<u>Capacity:</u> Approximated 200 kg of loose material (capacity and weight varies depending on material composition); 50 kg/yard x 4 yards = 200 kg

<u>Pickup Frequency:</u> One container of loose material will be picked up once a week. Note: pickup frequency may vary due to high volumes of waste generation during peak operating times.

Additional Considerations: Halton Region does not provide service to commercial retail space.

#### Organics/Compost Materials (Green Cart) Equipment Consideration

Dependant on the type of retail tenant and product/service offered – whether organic food waste is generated.

Equipment: 64-gallon totes

Quantity: 2 totes



<u>Capacity:</u> Approximately 70 kg/totes of organics/compost materials (capacity and weight varies depending on material composition);  $2 \times 70 \text{ kg} = 140 \text{ kg}$ 

<u>Pickup Frequency:</u> To be determined once the space is occupied and will be depend on the type of tenant and the generation of organic/compost materials. Consider starting with a collection schedule of once per week.

Additional Considerations: Halton Region does not provide service this type of retail space.

#### Singe Stream Recycling (Blue Bin) Consideration

Equipment: 4-yard steel container

Quantity: 1 container

<u>Capacity:</u> Approximately 90 kg of loose material (capacity and weight varies depending on material composition);  $1 \times 90 \text{ kg} = 90 \text{ kg}$ 

<u>Pickup Frequency:</u> This will depend on the type of tenant occupying the space and the generation of single stream recycling materials. Consider starting with a collection schedule of once per week.

Additional Considerations: Halton Region does not provide service this type of retail space.

### 8.0 Proposed Handling Method – Townhomes

The townhome residents will have access the disposal chute in Building A by entering through the entrance located right off the central driveway.

Consider implementing a central collection area that is easily accessible for the townhome residents. The central collection area must provide equipment to handle the single stream recycling and non-recyclable waste. Dependent on space constraints and the determined location of the collection area, it would be suitable to have 2 x 3-yard containers; one container to handle single stream recycling and the other to handle non-recyclable waste. This type of equipment will align with the equipment selection of the waste disposal rooms and Halton Region specifications for collection. The handling containers should be swapped out once per week for collection by Halton Region, typically the day of scheduled collection service.

Ensure the townhome collection point is designed in a manner that promotes easy access for the residents as well as easy maneuverability for the handling equipment. If the central collection area is an exterior application then consideration to obstructions (curbs, landscaping etc.) and design elements must be considered.

Consider a method that will allow for internal storage for the handling or organic/compost materials for the townhomes. Storing organic/compost materials externally posses concerns for vermin and aesthetic issues with mess/spillage of material in the area. Having an organic/compost solution at the source is necessary to not deter residents from disposing of this material due to inconvenience.



### 9.0 Proposed Waste Disposal Chute System

#### **Recommendation:**

A Tri-sorter chute system will enable the property to comply with source separation requirements, including the segregation of organic and compostable materials, particularly when considering the impending regulations banning the disposal of organic materials from landfill. The tri-sorter chute system will satisfy the disposal needs of three main waste streams:

- 1. Non-Recyclable Waste (Garbage)
- 2. Single Stream Recycling: Mixed Containers & Mixed Fibres (Blue Bin)
- 3. Organics and Compost Materials (Green Cart)

#### Tri-Sorter Equipment Specifications:

- Height Clearance of 2900mm (114") to 3200mm (126") dependent if the system is a center unit, end unit or corner unit. (Potential plan layouts attached).
- Designated Layout Space Requirements: up to 4100mm (161.5") by 4800mm (189")
- Electrical: Main power supply of 208/575V, 3 Phase 60 Hz. Control Panel 110 AC & 24 VDC. Chute Door control voltage if 24 VDC.

Complying with the equipment specifications mentioned above during the design phase will eliminate any problematic situations down the line, determining the waste collection rooms to be sufficient. Engaging a company specializing in chute systems during the building design phase is preferred to ensure that space requirements, infrastructure and equipment specifications are clearly identified and implementation of the system is successfully achieved. (See Figure 1 for a generic scope of work and additional equipment specifications).

#### Considerations:

Companies specializing in chute systems will provide sorter equipment layout drawings (Design Proposal) specifically tailored for each building and will provide consultative services, typically with the Lead Architect.

Generic design fee proposals are provided in Appendix E as a reference for consulting with a chute system company. Companies may waive or allow for negotiation of fees if awarded the full project.

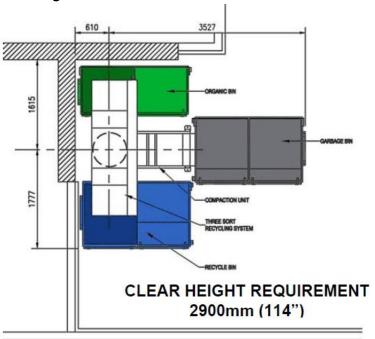
#### **Associated Costs:**

- 1. Chute System Design Fee Proposal \$500.00 \$1,900.00 (depending on services/scope of work)
- 2. Tri-Sorter Chute System Varies per application
- 3. 3-yard Bins for Chute System \$1,000.00 per bin

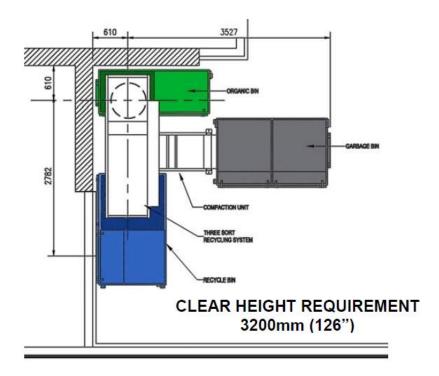
Note: Costs provided are rough estimates as actual costs will vary based on the specific application and by service provider.



Figure 1 – Sorter Layout Drawings

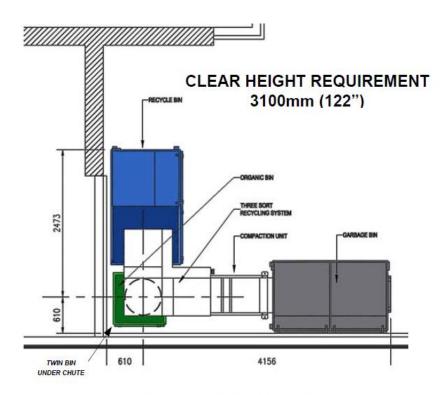


### **CENTER UNIT**



### **END UNIT**





### **CORNER UNIT**



### 9.0 Common Areas Disposal Receptacles

### 9.1 Types and Locations - Considerations

Several areas throughout the property will require two-stream disposal receptacles for both interior and exterior common areas to accommodate the disposal of non-recyclable waste (garbage) and single stream recycling (blue bin). The specific areas that will require a two-stream disposal receptacle are:

- Exterior:
  - Outside the main lobby entrances
  - Court Yard
  - Underground Parking at elevator entrances (outside each vestibules)





- Interior:
  - All Amenity Spaces
  - Screening Rooms
  - Pool Area, traditionally near entrance





The receptacles can be located within the general vicinity of the above-mentioned areas, in order to not obstruct or conflict with other potential design elements and/or furniture design layouts. Interior lobby area receptacles are not warranted as the exterior receptacles located at the lobby entrance negate the need for interior receptacles, maintaining the aesthetics of the lobby. The use of external receptacles only has proven successful in many applications and help to keep the interior lobby areas clean and odour free.

Exterior organic/compost disposal receptacles for use by the general public is not recommended and should be avoided due to potential vermin related issues.

Preferred locations for organic/compost receptacles are any areas where food is prepared and/or served, such as:

- BBQ Areas (if present)
- Amenity Areas/Rooms containing kitchens (e.g. Party Rooms)
- Guest Rooms (if kitchenettes are present)





The mail room would require a single stream "Recycling Only" (blue bin) receptacle as this area will generate a considerable amount of paper fibres from mail/newspaper/flyers. The absence of a non-recyclable waste (garbage) receptacle will ensure that no recyclable paper material is entering the non-recyclable waste stream.



#### **Pet Waste Disposal Considerations**

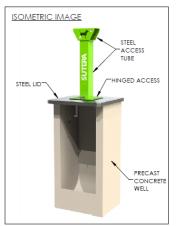
Pet waste is considered non-recyclable waste in Halton Region and is required to enter into the non-recyclable waste stream (garbage). Pet waste can pose odour concerns when placed into common area non-recyclable waste receptacles. A self-contained disposal receptacle specifically for pet waste is recommended. Consider having at minimum of two pet waste receptacles located at Building A and Building B. An additional receptacle could be located in the court yard, as this is typically where residents will take their pets.



### PRODUCT SPECIFICATION



MODEL:
PET WASTE CONTAINMENT: STEEL LID - STEEL ACCESS TUBE - PRECAST CONCRETE WELL



### <u>SPECIFICATIONS</u>

- Steel Lid
- Hinged Access
- Precast Concrete Well;
   Will not float out of
  - the ground
- Precast weight = 3328 lbs
- Waste Containment Capacity = 0.71 cu.yd.



### **Cigarette Disposal Considerations**

Cigarette waste is considered non-recyclable waste in Halton Region and is required to enter the non-recyclable waste stream (garbage). Providing designated cigarette butts receptacles will help to reduce the amount of litter resulting from cigarette butts being discarded on the ground and requiring constant property maintenance. Cigarette specific disposal receptacles also ensure that the contents are safely secured minimizing the risk of fire that could occur using other standard disposal receptacles that may contain potentially flammable materials.



### 10.0 Other Design Considerations and Recommendations

#### **Hose Bib & Floor Drains**

Outfit each waste disposal room with a hose bib and floor drain. Providing access to water will support cleaning and sanitation of the waste handling equipment as well as the walls and floors of the room.

Provide a hose bib within 60 metres (197ft) of the storage/collection area and loading area to ensure a water supply is readily available for area cleaning. There are no specific hose bib or floor drain requirements for Halton Region.

#### **Market Square and Parkette**

These areas will be maintained and serviced by the Town. Waste generated and collected from these locations will not enter the waste streams managed by Bronte Village Mall Redevelopment.

### P1 Parking Garage Waste Disposal Room

The waste collected at Building A – P1 Parking Garage will be transported by a designated operations staff member via ATV to the central collection point at Building B for collection service by Halton Region. Please reference the map in Appendix D for a representation of the flow of waste materials from Building A to Building B central collection point.



### **Prioritizing Waste Management**

Prioritize Waste Management through implementing Waste Management Best Practices.

Properties that make Waste Management a priority in their buildings, experience continuous year over year improvements in both their capture and diversion rates. Information, communication and awareness is the foundation of any successful Waste Management endeavour. This is one of the most effective ways to create a thorough understanding and participation among both lease holders and tenants of both the waste and recycling programs available as well as proper waste and recycling disposal practices.

Regularly interact with both lease holders and tenants through face-to-face engagement activities and written communication. This is one of the most important initiatives and effective ways to encourage acceptable waste management practices, program participation and increased capture rates. Ensure all signage is in good condition and placed in easily identifiable locations and on receptacles, including: elevators, chute/waste rooms, recreational spaces, information boards, etc.

#### Best practice communication initiatives include;

- Clear signage, emails, memos, postings on website.
- Signage in multiple languages used throughout your building (based on demographics)
- Door-to-door tenant communications.
- Interactive lunch and learns with a waste-free lunch or BBQ provided.
- Tenant recognition/rewards (i.e. coffee cards) for tenants that are actively and positively participating in the recycling programs.
- Provide new tenants with information documents about the waste and recycling programs and disposal practices for the building (reference Halton Region Waste Diversion Guide for Residents).

### **Receptacle Signage Design**

Receptacle Signage – should contain up-to-date acceptance criteria; easy to understand information including words and images; signage material is in good condition and affixed to an easily identifiable location on all collection/disposal receptacles.

A container/receptacle program should consist of the following:

- a. Ensuring recycling receptacles are sized for volume/generation and are the most available/accessible. Majority of materials generated are recyclable.
- b. Signage and labelling should at all times be clear and consistent regarding the specific waste materials to be discarded into the specific receptacle.
- c. Recycling receptacles should never be lined with black bags, as they may be confused for landfill or be misdirected from recycling to landfill during disposal;
- d. Recycling receptacles should always be adjacent to all non-recyclable waste receptacles;
- e. The receptacles should be colour-coded with bright visible colours (grey-garbage and blue-recycling, green -organic) and associated signage with pictorial recycling guidelines.

### **Environmental Stewardship**

<u>A Green Team</u> or management representative should, as part of their duties, periodically tour the property to monitor the infrastructure of the waste management programs. Ensuring recycling stations



are present and conveniently located throughout the property (including all common areas) will have a direct correlation with the rate of recycling participation. Ensuring that recycling receptacles are available in every area of the property where waste is generated will support proper source separation practices and behaviours.

<u>Environmental Stewardship Champions</u> – this could be done through the creation of Recycling Ambassadors for the property and/or the implementation of a Green Team to encourage tenant participation, generate ideas and solutions to recycling barriers and provide leadership with implementing new program initiatives.

<u>Policies</u> – develop a site-specific Waste Management Policy that includes environmental stewardship and sustainability practices.

<u>Communication, Education and Awareness</u> - develop and regularly distribute emails, memos and postings to clearly communicate the current waste management programs and their acceptance criterial. Be sure to use all forms of education, communication and engagement best practices; including lunch and learns sessions, team meetings, postings on bulletin boards and face-to-face interaction. Ensure all new tenants receive an orientation package and education sessions include information on all waste management policies, practices and programs.



### Appendix A: Application for Waste Collection Services.

Please refer to the following page for the Applications for Waste Collection Services. A working copy of the application will be provided for completion and submission.





### **Application for Waste Collection Services**

New Submission	Change (Specify):		Date:///
The undersigned reques	ts the extended "on-site" wa	aste collection service(s) as pro	ovided by Halton Region.
•	be processed unless the attended are duced current site plan	ached general release form is n.	signed and sealed. All
Applicant:			
Name of person comple	ting this form:		
Position:			
Phone #:			
E-mail:			
☐ I have authority to a	ct on behalf of the property	owner	
Name of Owner:			
Address of Owner:			
Please indicate which se	rvice you require:		
Front-End Garbage C	Collection	Curb side Garbage Col	llection
Semi Automated Red	cycling Collection	Other (Specify):	
Semi Automated Gre	eenCart Organics Collection		
Collection is requested a	t:		
Name of Property:			
Address:			
Contact Person:			
Phone Number:			
E-Mail:			



Details of Location:				
Building Type:		Site Plan Application N	Site Plan Application Number:	
Number of Units:		Number of Floors:		
Condominium: Yes	□No			
HCC #:				
Owned and Rental Units:	Yes No	Halton Community	Yes No	
Number of Pick-Up Location	ons:			
Garbage Containers (for Fr	ont-End Garbage Collecti	on Service Only)		
Number	Size (cubic yards)	Wheeled/ Stationary	Compacted?	
			Yes No	
Enclosures (for Front-End	Garbage and/or Automa	ited Service Only)		
Location on Property		Size		
<b>Garbage Disposal Location</b>	: (check the one that app	lies)		
Chute on every floor		Residents bring to g	round level / outside	
Chute and ground leve	el .	Other (specify):		
Blue Bin Recycling (360L)/(	95Gal.) for Semi Automa	ted Collection		
Current Number of Bins or	n Site:	Number of Bins Reques	ted(1 bin per 7 units):	
<b>Recycling Deposit Location</b>	: (check the one that app	olies)		
Chute on every floor		Recycling Room		
Chute and Recycling Room		Recycling Containers on each floor		
Recycling Underground	d	Recycling Outdoors		
Other (specify):				



### GreenCart Organics (360 L (95Gal.)) Semi Automated Service Only

Current Number of Bins on Site:	Number of Bins Requested (1 bin to 25 units):				
GreenCart Organics Location: (check the one that applies)					
Chute on every floor	Chute and GreenCart Room				
Residents bring to ground level / outside	Other (specify):				
GreenCart container on each floor	GreenCart underground				

### **Important Information**

- Collection area to be signed and kept clear of parked vehicles
- Collection area must be fully cleared of snow and ice and salted during winter months
- Do no place bulky items and white goods (both as defined in the Region's Waste Collection By-law) in front of containers
- Regularly clean and sanitize containers
- All waste must be set out at the collection point for pick up before 7:00 a.m. on your scheduled collection day

Personal information on this form is collected pursuant to section 2 of By-Law No. 30-96, A By-Law to Govern the Collection of Waste, and will be used to process your application for private property waste collection services and to administer the Region's Waste Management Services Program. Questions about the collection of your information can be directed to: Manager of Waste Management Planning and Collection, 1151 Bronte Road, Oakville, ON L6M 3L1, 905-825-6000 or toll free, 1-866-442-5866, ext. 8288.



### For Office Use Only

Application Inspected By:	Date of Inspection:	
		YYYY/ MM / DD
Service Start Date://	Zone:	Call- ahead required:
YYYY / MM / DD		Yes No
Garbage Collection Days:	Recycling Collection Day	s:
	Green Cart Collection Da	ays:
Comments		



### Appendix B: Supplementary Waste Plan

Please refer to the following page for the Supplementary Waste Plan. A working copy of the application will be provided for completion and submission.





### **Supplementary Waste Plan**

New Submission	Change (Specify):		Date:		_/
Applicant:			•	•	
Name of person completi	ng this form:				
Position:					
	t on behalf of the property				
Name of Owner:					
Address of Owner:					
Details of Location:					
Building Type:		Site Plan Application Num	ber:		
Number of Units:		Number of Floors:			

### Please provide the following:

- 1. Proposed route the waste collection truck would travel on site, including where applicable, the route the waste collection truck would travel from the municipal road to the collection point and back to the municipal road.
- 2. A representative scaled drawing showing the configuration of waste containers, compacting and sorting equipment in the internal waste handling room(s) (i.e. the centralized internal storage/handling room(s) on the ground floor and each floor, if applicable to ensure compliance with Section 1.3.7;
- 3. A representative scaled drawing showing the flow of waste as it leaves the resident's unit to the waste storage room, and from the waste storage room to the outdoor waste collection loading area, collection point or enclosure. This representation will depict the convenience of waste diversion (Blue Bin recycling and Green Cart organics) over garbage disposal.
- 4. A representative scaled drawing showing the waste collection loading area(s), including the configuration of the required number of waste containers.
- 5. Detailed drawings of any external enclosures including a representative scaled drawing showing the configuration of the required number of waste receptacles, if applicable.
- 6. The number of recycling receptacles and organic material receptacles required as per Section 2.1. "Waste Capacity Requirements";
- 7. The size and number of front end garbage collection bins required as per Appendix 2;

Personal information on this form is collected pursuant to section 2 of By-Law No. 30-96, A By-Law to Govern the Collection of Waste, and will be used to process your application for private property waste collection services and to administer the Region's Waste Management Services Program. Questions about the collection of your information can be directed to: Manager of Waste Management Planning and Collection, 1151 Bronte Road, Oakville, ON L6M 3L1, 905-825-6000 or toll free, 1-866-442-5866, ext. 8288



### For Office Use Only

Application Inspected	l By:	Date of Inspection:	// YYYY/ MM / DD
Service Start Date:	// YYYY / MM / DD	Zone:	Call- ahead required:
Comments			



### Appendix C: Drive Through Agreement

Please refer to the following page for the Drive Through Agreement. A working copy of the application will be provided for completion and submission.



## THE REGIONAL MUNICIPALITY OF HALTON PUBLIC WORKS

Mail to:

The Regional Municipality of Halton

Director of Waste Management Services

1151 Bronte Road

Oakville, ON L6M 3L1

### **Drive Through Agreement**

Applicant's Name:		
Owner's Name:		
Address:		
City:	Postal Code:	
Telephone:	Fax:	
Property Type:		
(i.e. Townhouse Complex, Apartment Building, C	Commercial)	
Property Address:		

#### Note:

Pursuant to Regional By-law No. 123-12 (A Bylaw to Govern the collection of Waste in the Region of Halton), the undersigned is hereby requesting the Region or its Contractor to provide waste collection services to the above private property.



The undersigned acknowledges that he or she has read, understood and agrees to all the following conditions:

#### **TERMS AND CONDITIONS:**

- 1. The applicant, owner or where applicable, it signing officer.
  - (a) shall ensure that the aforementioned private property remains at all times unobstructed, and accessible to waste collection vehicles and their operators; and
  - (b) shall ensure that the aforementioned private property is safe for the purpose of waste collection vehicles and their operators.
  - (c) Grants the Region or its Contractor full access rights onto the aforementioned private property for the purpose of waste collection.
- 2. The owner, or where applicable, its signing officer, agree to indemnify and hold harmless the Region against all actions, suites, claims and demands, direct or indirect, which may be brought against or made upon the Region and it's officers, employees and agents and against all loss, costs, charges, damage or expenses whatsoever which may be incurred by the Region, directly or indirectly as a consequence of any employee of the Region or its Contractor or, any waste collection equipment entering the aforementioned private property.
- 3. The owner, or where applicable, its signing officer, grants the Region full power to settle any actions, suits, claims and demands described in a paragraph two above on such terms as the Region may consider advisable.
- 4. The owner, or where applicable, its signing officer, agree to pay to the Region on demand all moneys paid by the Region pursuant to any settlement described in paragraph three above and, also such sums as shall represent the reasonable costs of the Region or it's solicitors in defending or settling any such actions, suits, claims or demands
- 5. The release and Indemnity described in paragraphs two, three and four above shall apply to and bind the undersigned, their heirs, executors, administrators, successors and assigns.
- 6. Where this application involves waste collection from a condominium property, the Release and Indemnity described in paragraphs two, three and four above shall apply to and bind condominium corporation.
- 7. The applicant understands that the Commissioner of Public Works or its agent may terminate the collection of waste from the above private property at any time for whatever reason he or she deems appropriate.
- 8. The owner, or where applicable, its signing officer, shall ensure that in the event of change in ownership for the above private property, they will inform the new owner of this application and request the new owner to contact the Region of Halton's Waste Management Division as soon as ownership of the above private property is assumed.



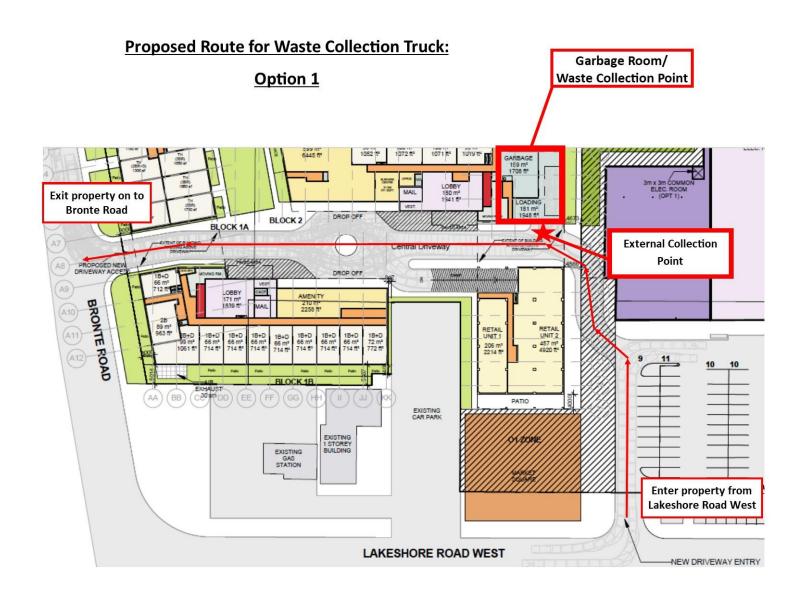
Applicant's Signature:
Owner's Signature:
(if corporation, signing officer/seal)
Date:
Approved By:
,
Director, Waste Management Services
, c
Date:
Approved By:
,
Commissioner, Public Works
Date:



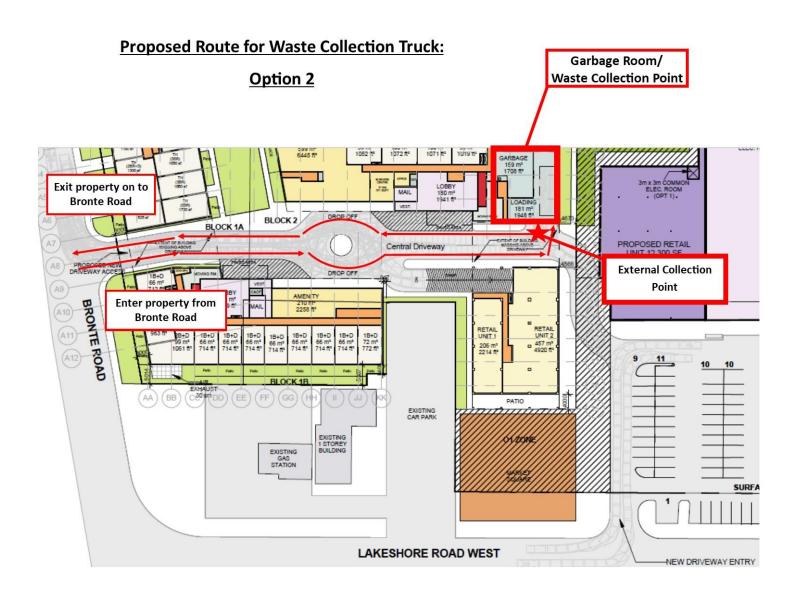
### Appendix D: Supplementary Waste Plan – Plans & Information

Please see the following pages.



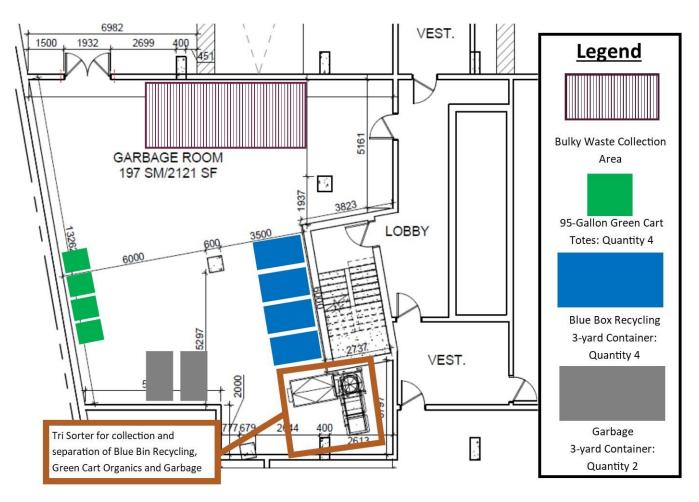






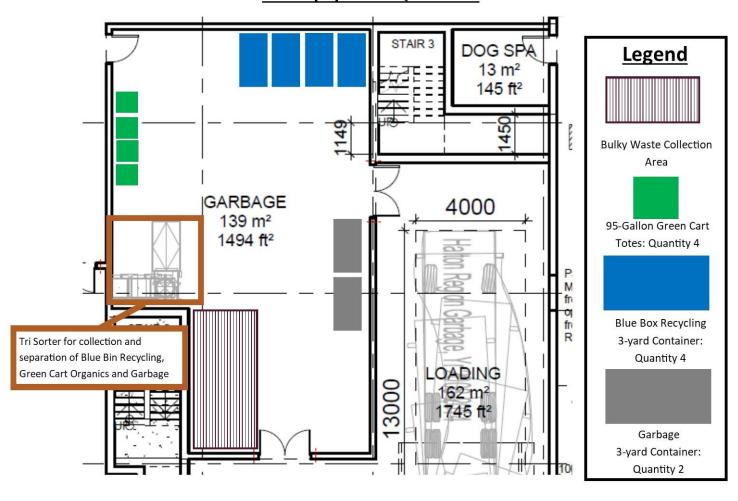


# Building A—Waste Disposal Room Proposed Layout/Configuration and Equipment Quantities



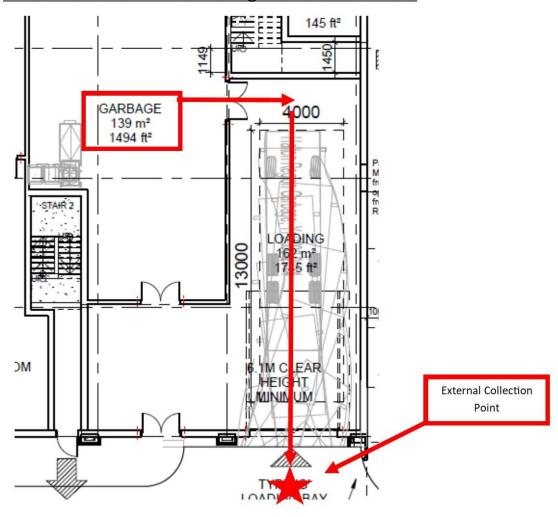


### <u>Building B—Waste Disposal Room Proposed Layout/Configurations</u> <u>and Equipment Quantities</u>



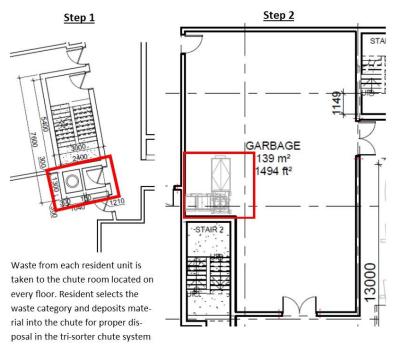


### **Waste Collection Room & Loading Area Collection Point**

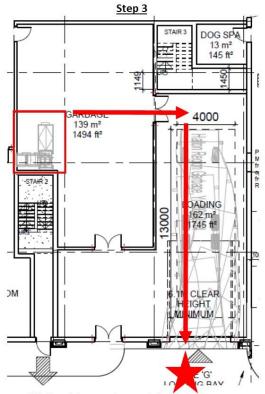




### <u>Waste Flow Diagram</u> From Resident Unit to Collection Point



The disposed waste travels down the chute system into the selected waste stream. Once bins are full they are swapped out for an empty bin.

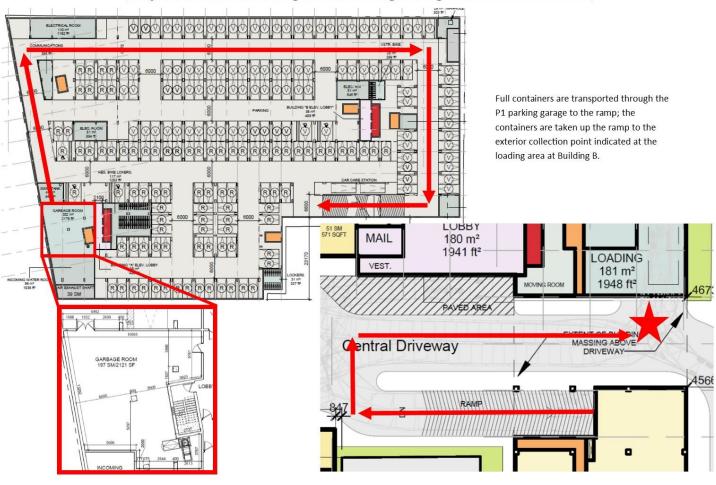


All full containers are transported through double doors from the garbage room to the loading area on collection day, then transported to the external collection area.



### **Waste Flow Diagram**

### **Disposal Room Building A P1 Parking Garage to Collection Point**





### Appendix E: Chute System Quote for Design – Example



23 Racine Rd. Toronto, ON M9W 2Z4 C: 416 678-2428 F: 416 743 5632 E: dougking@metrogroupcan.com

Company		
Address	St. #	
***	, Ontario M5A 1A4	Municipa
Attention		Министран
<u>utline:</u> Fe arameter	e proposal for Chute & Waste Management Equipment (WME) Layout  S Include: Reviewing Residential areas: Container Storage; Staging Areas & Bulk Storage Space.  mes Front End Load (FEL) truck collection! - Does not include vehicle route design - (traffic const	ultant sco
	WORK - Description of Services Rendered	FEE + T
1. Wa	will engage with <b>Lead Architect</b> to provide the following advice:	
1. 100	THE STRUGGE THAT RESIDENCE TO PROVIDE THE INTOTHING MATICAL	\$ 500.00
	TEAM LEAD Architect to supply current Residential Waste Management Equipment	(Per bldg
	(WME) "HIGHLIGHTED" PLAN & SECTION CAD & PDF drawings, for expert review of	
	the proposed equipment areas & layouts.	TERMS
	- This includes: WME Room (where chute terminates); Bulk & Bin Storage areas.	50% du with orde
	<ul> <li>If areas provided are insufficient / problematic, we will give a reason why &amp; suggested</li> </ul>	With Orde
	solution. 1 additional follow up CAD revision included.	
2.		50% on
	If Chute Offsets "vertical re-alignments" are shown, Architect (or Project Manager) must	completion
	indicate degree of offset angle & written explanation why it is necessary! -	
	Client internal review includes explanation of <u>all site conditions that apply</u> &	
	proposed changes to eliminate-reduce them by Architect TEAM LEAD & Development V.P.	
	Your final review must include confirmation that all site conditions & proposed	
	<u>changes</u> are understood by Senior Architect / Project Management V.P. or Owner.	
	• We will provide comment of the breakdown total(s) for the Residential space(s) required as	
	shown by the CAD & PDF Drawings.	
	Our Chute / WME Layout shows recommended containers & placement in WME Room.	
NOTE: Bu	Ik Storage & Bin Staging / Truck Collection areas are not part of this scope of work.	
	<ul> <li>You will may require Traffic Consultants to respond on your behalf with both the "Lower &amp; Upper Tier"</li> </ul>	
	(Governing) Municipal Development Requirements.  We can coordinate with other Consultant team(s) as agreed to on a case by case basis.	
	Total Cost	\$ 500.0
		+ Tax
Sign	Total Cost  proposal - Return by E-mail / Fax — we will then proceed with your project design required.	+ ~
	I agree to outlined terms above and authorize service outlined.	
int Name		
me manie	/ / 201 Signature:	





23 Racine Rd. Toronto, ON M9W 2Z4 C: 416 678-2428 F: 416 743 5632 E: dougking@metrogroupcan.com

### Residential Building - WME Design Fee Proposal

	-Limited Part		Date:	October-7-16	
Address:	Ave , Ontario,				
	, Ontario,				
Attention:	Mr. <u>r.com</u>		Project:	St. <i>M</i>	<i>lunicipal</i>
Tel:	X	Cell:	Ref #:	16	
arameters : RAFT SPA Re	Include: Residential Bui esidential WM form prepa	Waste Management Equipme Iding Area Review: Chute/Wi aration for submission. Recon truck collection! - does not i	IE Room & Bin Storage , nmended equipment / o	/ Staging Area & perational outline	Bulk spaces package.
	ORK - Description of				FEE + Tax
Vill engage w TEAM LEA "HIGHLIG Includes: " " " " " " " " " " " " " " " " " " "	AD Architect to supply GHTED" PLAN & SECTI WME Room (where che We will provide a brear recommended, as per DRAFT version of the (SPA) – final submission of the control of the submission of the collection areas: Bulk Stora You will may require Traffer" (Governing) Municipal	cto provide the following advicurrent Residential Waste Mon CAD & PDF drawings, foute terminates); Bulk & Bin Skdown of the Residential sparupper Tier" (Governing) Mon Municipal Residential form(s) on to be completed by archited NOTES: prical re-alignment" is propositation why it is necessary! In ust include explanation operational reduce them by Sr. insufficient / problematic, we AD revision redeating included Operational Protocols for Winge & Bin Staging are not part of this fic Consultants to respond on your pertaining to the specific Collections for Consultant team(s) as agrees the c	anagement Equipment (or expert review of equiptorage areas.  ce (s) required and containing Development Recapplicable for WM Site Fact/client.  ed the Architect must in clude all site conditions the Architect / Project V.P. conditions the Architect / Project V.P. conditions the Architect of all site conditions the Architect of Architect is a condition of all site conditions the Architect of Project V.P. conditions the Architect of Project V.P. conditions the Architect of Project V.P. conditions the Staff review/comment.  Scope of work.  behalf to both (or either) the for NEW Developments.	oment layouts.  Ininers Ininer	\$ 1,900.00 (Per bldg.)  TERMS 50% due with order  50% on completion
	-			Total	\$1,900.0
					+ Tax

