

Final Report

# Preliminary Solid Waste Management Plan

---

530, 550, 580 Kerr Street and 131, 171 Speers Road,  
Oakville, ON



Prepared for Urban Strategies Inc.

by IBI Group

300–8133 Warden Avenue, Markham ON L6G 1B3 Canada | tel 905 763 2322 | [www.ibigroup.com](http://www.ibigroup.com)

January 31, 2022



**IBI GROUP**  
300 – 8133 Warden Avenue  
Markham ON L6G 1B3 Canada  
tel 905 763 2322  
[ibigroup.com](http://ibigroup.com)

January 31, 2022

Melanie Hare, Partner  
Urban Strategies Inc.  
197 Spadina Avenue, Suite 600  
Toronto, ON M5T 2C8

**FINAL REPORT - PRELIMINARY SOLID WASTE MANAGEMENT PLAN  
FOR DEVELOPMENT AT 530, 550, 580 KERR STREET AND 131, 171 SPEERS ROAD,  
OAKVILLE, ONTARIO**

Dear Melanie,

IBI Group Professional Services (Canada) Inc. (IBI Group) is pleased to submit the enclosed Preliminary Solid Waste Management Plan in support of the phased Official Plan Amendment application for 530, 550, 580 Kerr Street and 131, 171 Speers Road located in Oakville, Ontario.

Should you have any questions or comments, please do not hesitate to contact the undersigned.

Best Regards,

**IBI Group**

Hassan Khech, H.B.A., MCIWM

Encl.  
HK/sk

cc: Izabela Molendowski, Urban Planner (Urban Strategies Inc.)

# Document Control Page

---

<b>CLIENT:</b>	Urban Strategies Inc..
<b>PROJECT NAME:</b>	530, 550, 580 Kerr Street and 131, 171 Speers Road
<b>REPORT TITLE:</b>	Preliminary Solid Waste Management Plan
<b>IBI REFERENCE:</b>	137021
<b>VERSION:</b>	V2
<b>DIGITAL MASTER:</b>	<a href="https://ibigroup.sharepoint.com/sites/Projects2/137021/Internal Documents/6.0_Technical/6.25_Environmental/03_Reports/Waste Management Report/OPA Stage/Final/Waste Management Report Final.docx">https://ibigroup.sharepoint.com/sites/Projects2/137021/Internal Documents/6.0_Technical/6.25_Environmental/03_Reports/Waste Management Report/OPA Stage/Final/Waste Management Report Final.docx</a>
<b>ORIGINATOR:</b>	Samantha Kanemy
<b>REVIEWER:</b>	Hassan Ktaech
<b>AUTHORIZATION:</b>	Hassan Ktaech
<b>CIRCULATION LIST:</b>	Melanie Hare, Izabela Molendowski, Kenny Lamizana, Yiwen Zhu
<b>HISTORY:</b>	Draft Report – for Client Review – January 26, 2022 Final Report – for Submission – January 31, 2022

# Table of Contents

---

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
<b>2</b>	<b>Project Background .....</b>	<b>1</b>
2.1	Proposal .....	1
2.2	Waste Management Design Assumptions .....	3
<b>3</b>	<b>Preliminary Solid Waste Management Plan .....</b>	<b>3</b>
3.1	Waste Generation Estimates .....	3
3.2	Potential Waste Collection Points .....	4
3.3	Waste Collection Vehicle Specifications .....	6
<b>4</b>	<b>Innovative Waste Management Solution .....</b>	<b>7</b>
<b>5</b>	<b>Conclusion .....</b>	<b>7</b>

## List of Tables

---

Table 2.1	Key Statistics .....	2
Table 3.1	Waste Generation Estimates .....	4
Table 3.2	Waste Collection Vehicle Specifications .....	6

## List of Figures

---

Figure 2-1	Comprehensive Development Plan .....	2
Figure 3-1	Off-site Transfer Route .....	4
Figure 3-2	Commercial Areas .....	6
Figure 3-3	Front-End Waste Collection Vehicle .....	7

# 1 Introduction

IBI Group Professional Services (Canada) Inc. (IBI Group) has been retained by Urban Strategies Inc. (USI) to prepare a Preliminary Solid Waste Management Plan on behalf of April Investments Limited (owner of 588 Kerr Street), 527079 Ontario Limited (owner of 530 Kerr Street), Trans County Development Corporation Limited (owner of 131 Speers Road), and Oakville Developments (2010) Inc. (owner of 550 Kerr Street) (together known as the “landowners”). This document is in support of an Official Plan Amendment (OPA) process to permit the redevelopment of lands (hereinafter referred to as the “Proposal”) municipally addressed 530, 550, 580 Kerr Street, 131 and 171 Speers Road (together known as the “subject site”), in the Town of Oakville (the “Town”) and Halton Region (the “Region”).

This report provides an overview of the preliminary solid waste management plan covering the subject site. Aspects such as key waste management principles, estimated waste volumes, and service access will be covered. The report has been developed following review of *Halton Region Official Plan Guidelines: Development Design Guidelines for Source Separation of Solid Waste*.

The overall aim of the plan is to develop a waste management system that is fully integrated and promotes landfill diversion, waste prevention, reuse, and recycling.

## 2 Project Background

### 2.1 Proposal

The Proposal and its implementing OPA aim to deliver a mixed-use, high-density intensification of a large, underutilized area within a planned Growth Area in the Town of Oakville. Based on the 2021 Planning Justification Report published by Urban Strategies Inc., the intent of this Proposal and OPA is to deliver a Comprehensive Development Plan which will enable the delivery of a mixed-use vertical community containing multiple urban development blocks that are connected by an integrated street network. The Comprehensive Development Plan is shown in **Figure 2-1** below.

#### 2.1.1 Mixed-Use Development

A mix of residential, retail, and non-residential uses are planned for the subject site and will be integrated within urban development blocks, as shown in **Figure 2-1**. Mixed use buildings are proposed across the subject site with heights ranging from 8 to 28 storeys, and a total of 1,847 units. Retail frontages have been proposed to include active and non-residential uses. The planned retail component also includes a grocery store. A breakdown of the key statistics and proposed retail and residential Gross Floor Area (GFA) is provided in **Table 2.1** below, as outlined in the 2021 Planning Justification Report for this Proposal.

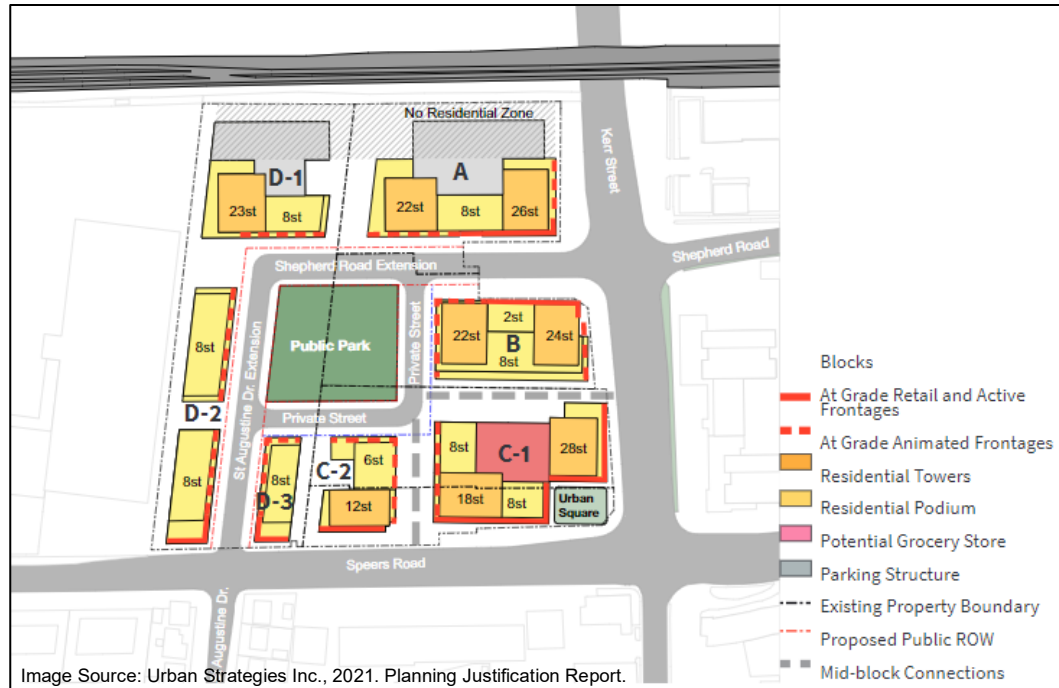


Figure 2-1 Comprehensive Development Plan

Table 2.1 Key Statistics

SITE BY PROPERTY	COMMERCIAL GFA (sq m)	PARKING (sq m)	RESIDENTIAL GFA (sq m)	TOTAL GFA (sq m)	# OF UNITS	TOTAL NFA (sq m)
588 Kerr Street	1,000	6,500	40,000	47,500	430	40,380
550 Kerr Street	1,900	2,800	40,000	44,700	428	34,850
530 Kerr Street + 131 Speers Road	4,000	0	48,000	52,000	516	44,200
171 Speers Road	1,000	5,000	44,000	50,000	473	42,200
<b>Total</b>	<b>7,900</b>	<b>14,300</b>	<b>172,000</b>	<b>194,200</b>	<b>1,847</b>	<b>161,930</b>

Note: FA and NFA for Area A and D includes structure parking within the non-residential zone

### 2.1.2 Street and Block Network

According to the 2021 Planning Justification Report, the proposed street network aims to connect the Proposal to the surrounding urban areas by the extension of Shepherd Road and St. Augustine Drive as public roads and will be integrated onto the subject site through a phased approach. As depicted in **Figure 2-1**, a private road and mid-block connections are also proposed to create connectivity to the proposed central public park. At the subject site's ultimate build out, the private road will frame the park in its entirety and present an opportunity for buildings to front onto the park. A total of seven urban blocks are proposed and will be organized in a manner that frames the street network.

### 2.1.3 Phasing Strategy

Given the large scale of the subject site, the Proposal will commence in phases in response to the existing uses and various ownership parcels. Approaches to phasing will be considered upon submission of future site-specific development applications and should be considered throughout the development of the waste management plan.

Both the public park and street network will be able to function in an interim and ultimate scenario.

## 2.2 Waste Management Design Assumptions

For the purposes of this report, it is assumed that a conventional waste management system will be implemented at the subject site. However, in the case that an alternative waste management system is preferred, **Section 4** will outline a potential alternative option for waste management to be considered.

It is assumed that the conventional waste management system implemented on the subject site will consist of the following components:

- Waste chute systems will be used in the residential buildings.
- Below-grade interim waste storage rooms will be implemented in selected buildings.
- Back-of-house corridors for transfer of commercial waste to storage rooms.
- Joint, grade level, external collection points for residential and commercial waste will be implemented.
- Residential and commercial waste will be transferred to a respective collection point on a scheduled temporal basis.
- Conventional flow of waste transfer from generation to a collection point for external transfer will be utilized.
- Front-end collection vehicles will be used for general waste and recyclable materials.

The assumptions listed above have been used to inform the development of the Preliminary Solid Waste Management Strategy discussed below in **Section 3**.

## 3 Preliminary Solid Waste Management Plan

The Proposal's urban design approach is conceptual and high-level at this stage, and as a result, limited information is available to inform the details of the future waste management system. For this Proposal, a complete and holistic understanding of the waste management system will be addressed through future development applications, and in compliance with relevant policies and guidelines from the Halton Region Official Plan and Town of Oakville Official Plan, when more specific details of the Proposal are known.

### 3.1 Waste Generation Estimates

A Waste Arising Model has been developed to estimate the waste arising from the Proposal. In creating this waste arising model, waste generation estimates were developed.

Waste generation estimates for the residential spaces are based on IBI Group's experience with developing various integrated waste management designs, access to raw data from executing a number of physical waste audits, and consultations with key players in the waste management industry (e.g. waste haulers, relevant NGOs and city officials).

Waste generation estimates for the commercial spaces were derived from raw data gathered during the delivery of waste design services for The Dubai Mall expansion project located in Dubai, UAE. Most tenants within Dubai Mall have an international presence and so operate in a similar fashion to a European or North American retail store. Therefore, it has been assumed that retail outfits in the GTA would generate similar volumes of waste. For this preliminary study, the raw data from the Dubai Mall project will be applied, and during later stages of the project retail waste estimates will be revisited to adopt a local retail waste generation reference point.

Based on the proposed residential and commercial GFAs which have been provided in the 2021 Planning Justification Report (as mentioned in **Section 2.1** of this report) the waste generation estimates for the Proposal are presented in **Table 3.1** below.

Table 3.1 Waste Generation Estimates (Units are in cubic meters/week unless otherwise stated)

SITE BY PROPERTY	RESIDENTIAL GFA (m <sup>2</sup> )	COMMERCIAL GFA (m <sup>2</sup> )	WASTE ESTIMATE – RESIDENTIAL	WASTE ESTIMATE – COMMERCIAL	TOTAL WASTE ESTIMATE	TOTAL COMPACTED ESTIMATE AT A 3:1 RATIO
588 Kerr Street	40,000	1,000	212.00	1.82	213.82	71.27
550 Kerr Street	40,000	1,900	212.00	3.46	215.46	71.82
530 Kerr Street + 131 Speers Road	48,000	4,000	254.40	7.28	261.68	87.23
171 Speers Road	44,000	1,000	233.20	1.82	235.02	78.34
<b>Total</b>	<b>172,000</b>	<b>7,900</b>	<b>911.60</b>	<b>14.38</b>	<b>925.98</b>	<b>308.66</b>

Based on the calculations in **Table 3.1** above, it is estimated that the Proposal will generate approximately 925.98 cubic meters of waste per week. Worth noting is that with proper recycling awareness from tenants and maintenance staff, there is a potential for 60% of this total waste estimate to be diverted (this is based on Oakville’s latest waste diversion rate communicated in the Town of Oakville’s *Living Green Life - Oakville’s Guide to Environmental Stewardship*).

### 3.2 Potential Waste Collection Points

To ensure an effective waste management strategy, efforts need to be directed towards the waste truck service access route into and out of each development block. Measures addressing operational planning, traffic and congestion concerns, visual appearance and vehicle constraints (e.g. height requirement) are to be considered.

The off-site transfer route along with collection points is illustrated in **Figure 3-1** below.

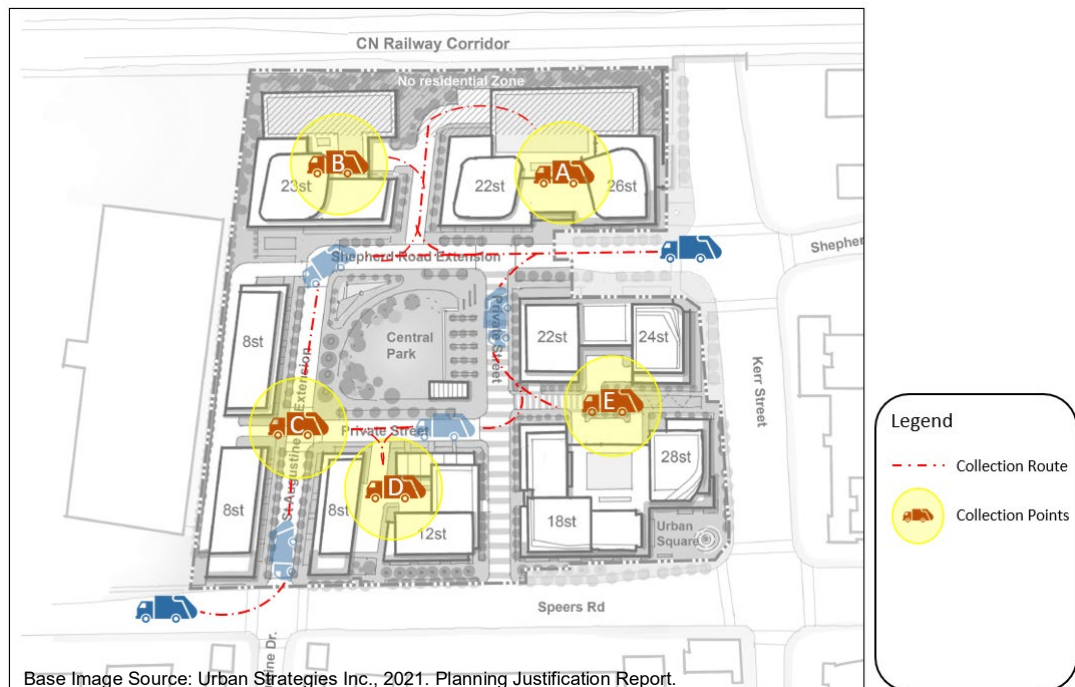


Figure 3-1 Off-site Transfer Route



As demonstrated in **Figure 3-1**, the proposed waste truck service access route is expected to begin at the east end of the subject site, entering at the intersection of Shepherd Road and Kerr Street and concludes by exiting the subject site at the intersection of Speers Road and St. Augustine Drive on the southwest portion of the subject site. Upon exiting, the waste truck would exit heading west along Speers Road towards Highway 403 West. The waste and recoverable material will likely be hauled to Halton Waste Management Site, located approximately 17km northwest of the subject site at 5400 Regional Road 25 in Milton, Ontario.

The eight (8) proposed buildings on the subject site will be serviced by five (5) proposed at-grade collection points, as follows:

- Collection Point A will service the buildings on the northeast portion of the subject site.
- Collection Point B will service the building on the northwest portion of the subject site.
- Collection Point C will service the two (2) buildings on the southwest edge of the subject site.
- Collection Point D will service the two (2) buildings directly below the proposed park.
- Collection Point E will service two (2) buildings on the southeast portion of the subject site.

It is expected that each residential building will have interior and below-grade storage/staging areas, referred to as interim waste storage rooms, where the waste will be collected via a waste chute system and stored during the week. On an assigned collection day, the waste would then be transferred to the appropriate, at-grade, waste collection point. At this stage of the assignment, it is unknown if multiple chute systems will be installed or whether recyclables and organics will be transferred to internal storage areas by tenants, but to manage other streams (e.g. recyclables and organics) and to comply with Halton guidelines, recyclables and organics need to be addressed at source.

The interim waste storage rooms and collection points will likely be shared spaces between residential and commercial land uses. **Figure 3-2** outlines the proposed areas of major animated at grade retail frontages and the location of the proposed grocery store. Based on these locations, collection Points A, D and E will likely be shared spaces for commercial and residential uses. It is expected that all retail locations will have access to each respective collection zone through back of house corridors, to address hygiene and cross-contamination requirements. The respective collection zones will be divided on a scheduled temporal basis for residential use and commercial use.

All five (5) proposed collection points are individually accessible along the route outlined in **Figure 3-1**, via the proposed Shepherd Road Extension, the proposed St. Augustine Drive Extension, and/or the proposed private roads. It is not critical that any given collection order be followed as it is assumed that all roads within the subject site will be designed to accommodate the given waste truck specifications. Waste generation volumes, the number of waste trucks required, the number of collection trips required, and the number of collection days per week will need to be further considered to formulate a site-specific waste collection schedule for the five potential collection points.

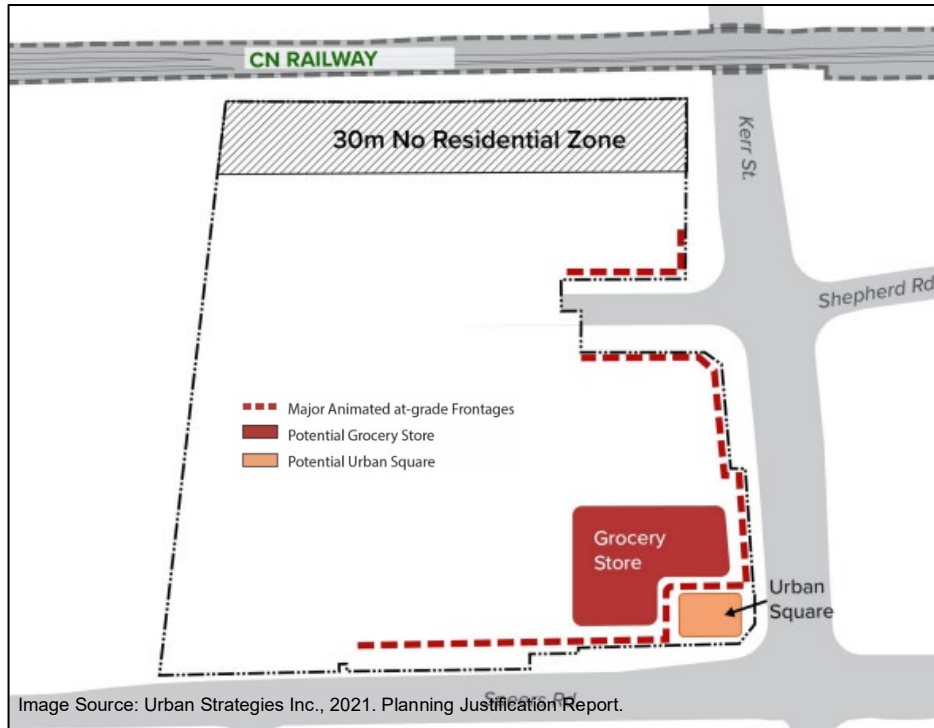


Figure 3-2 Commercial Areas

### 3.3 Waste Collection Vehicle Specifications

Approximate waste collection vehicle specifications have been provided by Halton Region in which best effort should be employed to ensure that similar specifications are accommodated for this Proposal. It is noted that all dimensions provided are estimates only and will vary depending on which waste hauler is retained for the development.

Based on Section 149 of the Halton Region Official Plan and as set out in the Halton Region Development Design Guidelines for Source Separation of Solid Waste, the following specifications for front-end collection will be used for the Proposal’s assumptions.

Table 3.2 Waste Collection Vehicle Specifications

SPECIFICATION	TYPE 2 - RECYCLING	TYPE 3 - FRONT END
Length	9.65m	9.7m
Width	2.44m	2.7m
Height	3.69m (Working height = 5.08m)	3.8m
Turning Radius	13.00m	11.50m

Depending on the retained waste hauler, the need for both a Type 2 and Type 3 vehicle will differ according to the capacity of the trucks used.

**Figure 3-3** illustrates a typical front-end waste collection vehicle.

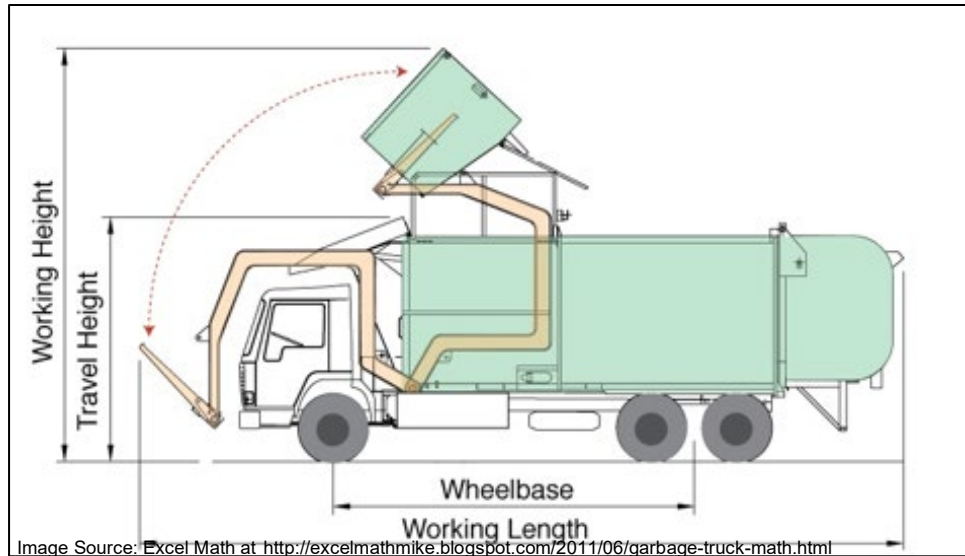


Figure 3-3 Front-End Waste Collection Vehicle

## 4 Innovative Waste Management Solution

An alternate, and more efficient, system to the conventional above-ground waste collection practice is a potential option for the Proposal that could be explored during future development application stages. The underground automated vacuum waste collection system, also known as a pneumatic refuse collection system, is well-matched when planning how waste will be managed in a mixed-use development.

The system is a technology that reduces manual handling and storage bins by transporting waste from buildings through an underground pipe network, connected to a central collection station. There are several examples of such systems in the U.S., Europe and Asia with a few in Canada.

Benefits include fewer waste collection trucks in the immediate vicinity of residential towers and commercial outlets which could result in less noise, pollution, and greenhouse gas emissions. There are some challenges with this system around potential cross-contamination if the materials are not in bags and complexity around ownership and operations of the piped infrastructure.

The consideration of a pneumatic refuse collection system is conceptual at this point in time. In future phases of design development, the feasibility of a pneumatic refuse collection system may be explored and would require collaboration and discussion of alternative standards with Regional staff.

## 5 Conclusion

The report provides a preliminary evaluation of the anticipated waste disposal impacts associated with the construction and long-term occupation of the proposed residential and commercial development at 530, 550, 580 Kerr Street and 131, 171 Speers Road. The Proposal follows waste industry and complies with Halton Region's requirements. Further studies will be required at a later stage of the process.

Based on our preliminary waste generation estimates for the Proposal we have a high-level understanding of the space allotment that would be required to holistically manage all waste and

recyclable materials expected to be generated. To further define and create a fully integrated waste management system, the waste design team will require definition and client input to progress the design further, and this includes:

- Understanding client requirements and aspirations for waste management (e.g. conventional, automated or a fusion of collection systems).
- Once decisions about the waste collection system are understood, design definition of the Proposal will be required to further develop the waste estimates, area specifications, route circulation and many other key waste management elements.

Although it is too early, at this stage, to comment on the implementation of the waste management strategy, it must be said that awareness among tenants and maintenance staff of this Proposal is critical for a successful waste management program. The philosophy behind the strategy should be disseminated and initial guidance for the segregation of the waste at source should be provided to achieve a comprehensive and fully integrated waste management strategy.