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May 13, 2022

Via: Email

Mr. Clarence Qian
Director of Development
166 South Service Inc.
1-90 Wingold Avenue
Toronto ON M6B 1P5

Dear Mr. Qian:

Re: 166 South Service Road Development Design Requirements
Project No.: 300055014.0000

1.0 Introduction

This letter provides design requirements and recommendations for the architectural concept plans at your 166 South Service Road mixed-use development in the Town of Oakville. The contents of this letter are based upon:

- Sweeny&Co Architects Inc. May 30, 2022 'Issued For Rezoning drawing set (received May 12, 2022); and
- Halton Region's 'Development Design Guidelines for Source Separation of Solid Waste' (2014).

Halton Region has indicated revisions to their Guidelines (requirements) are underway and expect to be issued mid-2022. We are not certain as to the grandfathering of the 2014 requirements for designs that are submitted ahead of the updated version, but it was explained to Burnside that the Region will communicate to applicants; new guidelines are expected prior to replacing the current guidelines. It should be noted that the requirements below apply for each building, with the exception of the shared staging and loading areas.

2.0 Requirements

1. Commercial (retail and office) wastes must be stored separate from residential wastes as they cannot utilize the Region's waste collection services. Private waste collection is required for your commercial tenants. To accommodate this, we recommend:

    a) Commercial / office waste storage room(s) should be located on the ground floor, or on an underground level (P1 for example), with easy access to the loading area. For the currently proposed commercial floor space, we recommend a room be established for each tower. Based upon LEED recommended Storage & Collection

of Recyclables sizing, the commercial waste storage rooms for each tower should be sized as follows to provide sufficient receptacle storage space:

- Tower 1 should be a minimum of 42 m^2 in size,
- Tower 2 should be a minimum of 23 m^2 in size, and
- Tower 3 should be a minimum of 23 m^2 in size.

b) Commercial / office wastes may be temporarily stored in a closet within the respective units and transported when full, or at the end of the day to their respective commercial waste storage room.

2. Residential waste will need to be compacted for this development due to the proposed number of units for each tower. Since compactors pose health and safety risks to the public (residents), the residential waste storage rooms must be locked. Access to these rooms must be limited to facility maintenance staff who would be trained regarding the use of waste management equipment.

3. **Burnside notes during our preliminary review, the single (shared) loading area for this development does not meet the Region's requirements for a waste loading area. The loading area design will need to be refined based upon the following requirements:**

   a) The minimum required 'head-on' approach for the collection truck to the collection point is 18 m. If this 18 m head-on approach is not possible, the collection area must be designed such that the collection truck does not need to back up more than 18 m (from front tire to front tire). A turnaround area allowing for a three-point turn of not more than one truck length is an acceptable option to the Region.

   b) The Region's collection truck has an inside turning radius of 13 m. The Region requires the radius be clearly annotated on the Site Plan and Collection Vehicle Turning Figures. Simply showing the AutoTurn/vehicle movement paths is not accepted by the Region.

   c) The Region does not permit that their waste collection truck drivers exit the collection vehicle during collection. The current loading/staging area layout does not meet the Region's Guidelines, as provided in Appendix 4 (enclosed). Since one (shared) loading area will be used for the entire development, this means that the staging area will need to be large enough to stage the largest quantity of waste containers that will be collected at once (recycling bins), per Table 1 below.

   The architect and transportation consultant should advise on the most appropriate location and layout for the staging and loading area. The Region's requirements may be difficult to address without displacing other site/building features. Burnside is ready to discuss alternate options to the staging area layout and/or collection operations once a final staging/loading area location and layout has been provided.

4. Based upon the number of residential units provided within the reviewed drawing set, the development will require the number of containers indicated in Table 1 below.

Table 1: Estimated Minimum Container Requirements

Tower No.	Residential Units	Waste Stream Container Types & Quantity†				
		Recycling Front-Lift Bins		Organics 360 L Carts	Garbage Compaction Bins	
		4 yd^3 (recommended)	6 yd^3 (optional)		3 yd^3 (recommended)	4 yd^3 (optional)
Tower 1	484	9	6	20	9	7
Tower 2‡	760	14	9	31	15	11
Tower 3‡	462	9	6	19	9	7

† Minimum requirements (count). An additional container would provide service for tower residents when bins are awaiting collection.

‡ Towers 2 and 3 share a podium and units from the shared podium have been separated into Tower 2 and 3 for planning purposes.

§ Enclosed is an excerpt from the Region's Guidelines outlining standard bin sizes. Standard sizes of bins vary between manufactures/suppliers.

5. The grade of the collection point must be level. The grade of the loading area must not be greater than 2% any direction.
6. The entire path travelled by the collection vehicle must also be certified to support a minimum of 35 tonnes. This must be shown on your drawings, with the load capacity certified by your (Structural) Engineer.
7. The Region's design guidelines state that the collection point must have a minimum 'all-clear' overhead clearance of 9.0 m. It should be noted that the 9.0 m value is a typo within the Guidelines, and the actual minimum overhead clearance height is **7.5 m**, which must be clearly shown on the Site Plan drawings. This has been explained through discussion with Halton Region's Multi-Residential Waste Diversion Coordinator, Andrew Suprun. Anything below this must be approved by the Region in advance. Recent discussion with the Region led us to believe such approval is unlikely.
8. Double doors (minimum 2.2 m width) must be provided to access the residential, retail, and bulky waste storage rooms, along any path which the bins must travel to reach the Staging/Loading Area.
9. A contiguous area of 10 m^2 for the storage of residential bulky wastes is required for each building. This space can be accommodated within the residential waste storage room, or it may be a separate room. Double doors are required for this space and any corridors through which the bulky waste will travel to reach the Staging/Loading Area.
10. All waste storage rooms must have a hose bib and floor drain for washing and cleaning of the room and waste containers.
11. The air exchange rate for waste storage rooms must be a minimum of one-cubic foot per minute per square foot of floor space (1 CFM/ft^2)[1]. The height of the room should be at least 3.2 m, to allow flexibility for tri-sorter models.

[1] Per American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62.

3.0 Recommendations

While not required by Halton's (current) Guidelines, Burnside recommends the following to provide future waste management flexibility and follow current best practices.

1. Cabinet space be provided in all residential kitchen units for the segregated collection of recyclables, organics, and garbage.

2. A 2 m by 1 m space in the waste storage room, with appropriate shelving, be allocated for collection of Hazardous and Special Products (HSP) and electronic waste by appointment.

3. To increase efficiency and reduce the likelihood of workplace injuries caused my moving waste bins, building staff may use a bin-puller to move the bins from each building into the staging area. Bin-pullers generally require 2 m^2 (1 m by 2 m) of space and a standard 120v outlet for charging in the location where they are stored (generally within the residential waste storage room).

4. Chute Intake Room design(s) should be reviewed to ensure compliance with the Ontario Building Code, Ontario Fire Code and any other relevant codes or guidelines, including accessibility.

Yours truly,

R.J. Burnside & Associates Limited

Zack Moshonas
Project Manager
ZM/CJ:cv

Christian Jordan, B.Sc.
Solid Waste Technologist

Enclosure(s) Excerpt from Appendix 2 – Halton Guidelines
Appendix 4 – Halton Guidelines

Excerpt from Appendix 2 of Development Design Guidelines for Source Separation of Solid Waste (June 2014)

Dimensions for Front End Garbage Receptacles

Container Size	Width	Height	Depth
2 Cubic Yard Bin	2.03 m	0.92 m	1.02 m
3 Cubic Yard Bin	2.03 m	1.22 m	1.12 m
4 Cubic Yard Bin	2.03 m	1.22 m	1.37 m
6 Cubic Yard Bin	2.03 m	1.52 m	1.68 m
8 Cubic Yard Bin	2.03 m	2.03 m	1.63 m

Width is a standard measurement.
Height and Depth are subject to change depending on the manufacturer.
Measurements are to be used as a guideline only.

Appendix 4 Front-End Collection Specification