Staff Report

To	General Committee
Subject	Design Principles to Support Livability, Municipal Operations and Road Safety
Date	March 19, 2025
Ward	All
From	M. Banfield, RPP, Executive Director of Development Services
Executive Member Approval	M. Banfield, RPP, Executive Director of Development Services
	B. Araniyasundaran, P.Eng., PMP, General Manager, Infrastructure & Growth Management
CAO Approval	M. Prowse, Chief Administrative Officer
Staff Report #	DEV011-25

Recommendation(s):

1. That the following design principles be employed in the Zoning By-law and City Standards to support livability, municipal operations and road safety:

   a. Private Snow Storage – new residential developments shall provide private snow storage.

   b. Public Snow Storage – new residential developments shall provide public snow storage.

   c. Residential Subdivision Municipal Winter Maintenance – new residential developments are to be designed for conventional snow removal operations.

   d. On-Street Residential Subdivision Parking – new residential developments are to be designed with greater availability of on-street parking.

   e. Private Residential Subdivision Parking – new residential developments are to include driveways with increased length.

   f. Collector & Arterial Streets Access Management – access onto collector and arterial streets is to be restricted.

2. That the design principles be phased in as follows:

a. New Applications: All new applications will need to comply with the design principles.

b. Existing Applications in Progress: Applicants who have completed rezoning and are working toward draft plan of subdivision approval will have 12 months after Council approval to submit their plans without needing to comply with the design principles.

c. Draft Approved Plans: All current draft plan approval dates will remain effective. Should further extensions to the draft plan approval be sought, the design principles will be in effect and may require amendments to the approved draft plans that are not registered.

Executive Summary:

This report outlines a series of design principles to enhance livability and road safety for new residential developments. During the early planning process for the Salem and Hewitt's communities, developers requested revised Zoning By-law standards as well as reduced municipal right-of-way standards to create a more compact urban community. These revisions included narrower lot frontages, reduced building setbacks and narrower municipal right-of-ways including the introduction of laneways. For context, these revisions permit greater density than what is permitted in the City of Toronto for a similar land use context.

As these communities have been built and occupied, the cumulative impact of the Zoning By-law revisions and City standard reductions has become evident, leading to challenges related to insufficient private and public snow storage, the need for specialized snow removal, lack of on-street parking availability, insufficient driveway lengths, and road safety concerns, creating operational inefficiencies and concerns from residents. The most acute issues are associated with portions of developments that have employed the R5 and RM3 Zoning By-law standard permitting lot frontages as narrow as 4.5 metres coupled with reduced municipal right-of-ways, specifically the laneway right-of-way design standard.

To address these issues, staff are proposing design principles that will be reflected in the new Zoning By-law and revisions to City Standards. These principles aim to ensure that new residential developments provide adequate space for both private and public snow storage, support conventional snow removal operations, and improve access to parking. Additionally, the principles propose limiting residential driveway access onto collector streets to improve road safety by reducing hazards from vehicles reversing from driveways onto busier streets and minimizing conflicts between vehicles and cyclists.

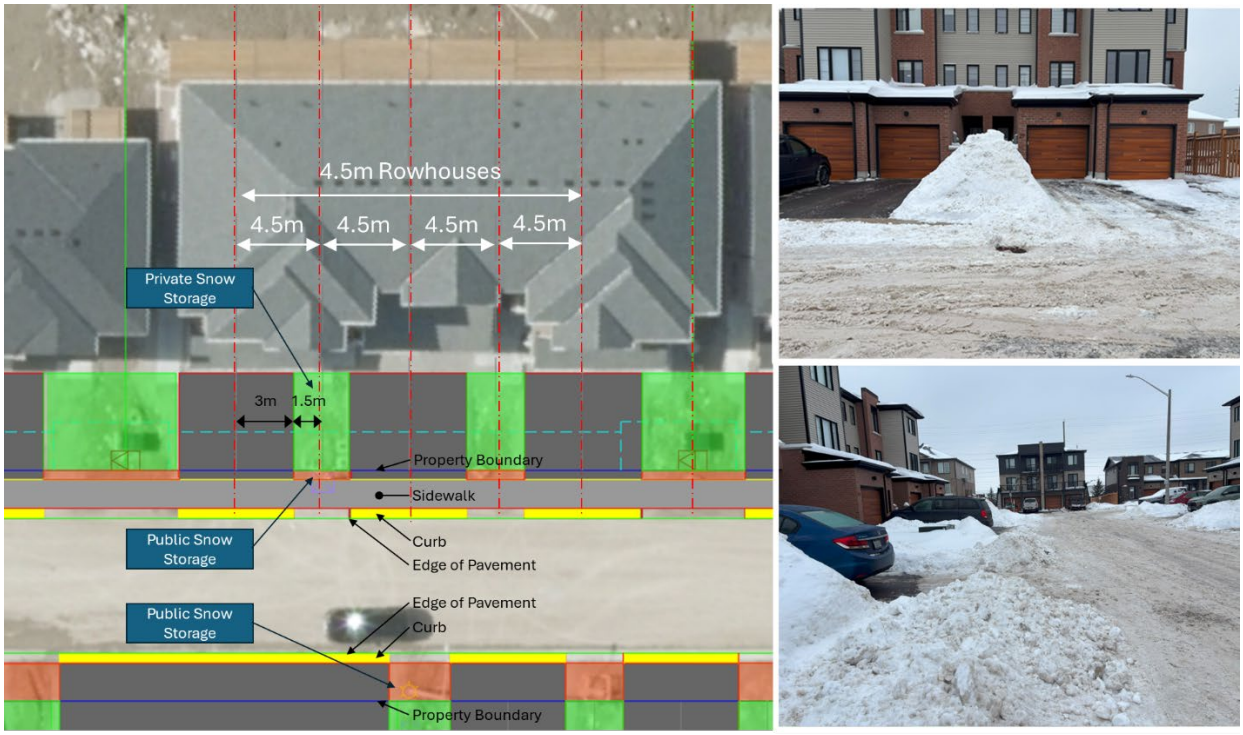
By implementing these design principles, the City can proactively address the emerging challenges associated with compact urban development. These measures aim to balance urban design objectives, practical livability needs as well as service delivery, ensuring that new residential communities remain safe, accessible, and functional for all users.

Key Findings:

Matter 1: Private Snow Storage in Suburban Residential Developments

Private snow storage is space available to place/store snow removed from private residential driveways and walkways. This space is typically the non-driveway portion of a residential unit's front yard.

Historically, there has been very little discussion about private snow storage issues as residential lot frontages and setbacks have been sufficiently large to accommodate snow storage requirements; however, with the revised Zoning By-law standards, residential units built to the RM3, and particularly, the R5 standard do not have sufficient private snow storage. The R5 standard allows 4.5 metre lot frontages, with driveways typically built to 3.0 metres in width, resulting in only 1.5 metre width of front yard space available for snow storage and 3.0 metre separation between driveways (driveways are commonly placed in pairs as illustrated). The image below illustrates the available snow storage with a 4.5 metre lot frontage with private snow storage areas shaded in green and public snow storage areas shaded in red (**Appendix A** includes additional figures and photos illustrating different lot configurations and snow storage).



Design Principle – Private Snow Storage

Residential developments are to be designed to accommodate private snow storage. Based on observations of lot configurations in the Salem and Hewitt's communities as well as more recently completed residential developments in the City's built boundary, lots employing frontages and setbacks similar to the previous RM2 zoning standard allows for a compact built form while providing a functional lot configuration with a reasonable amount of private snow storage.

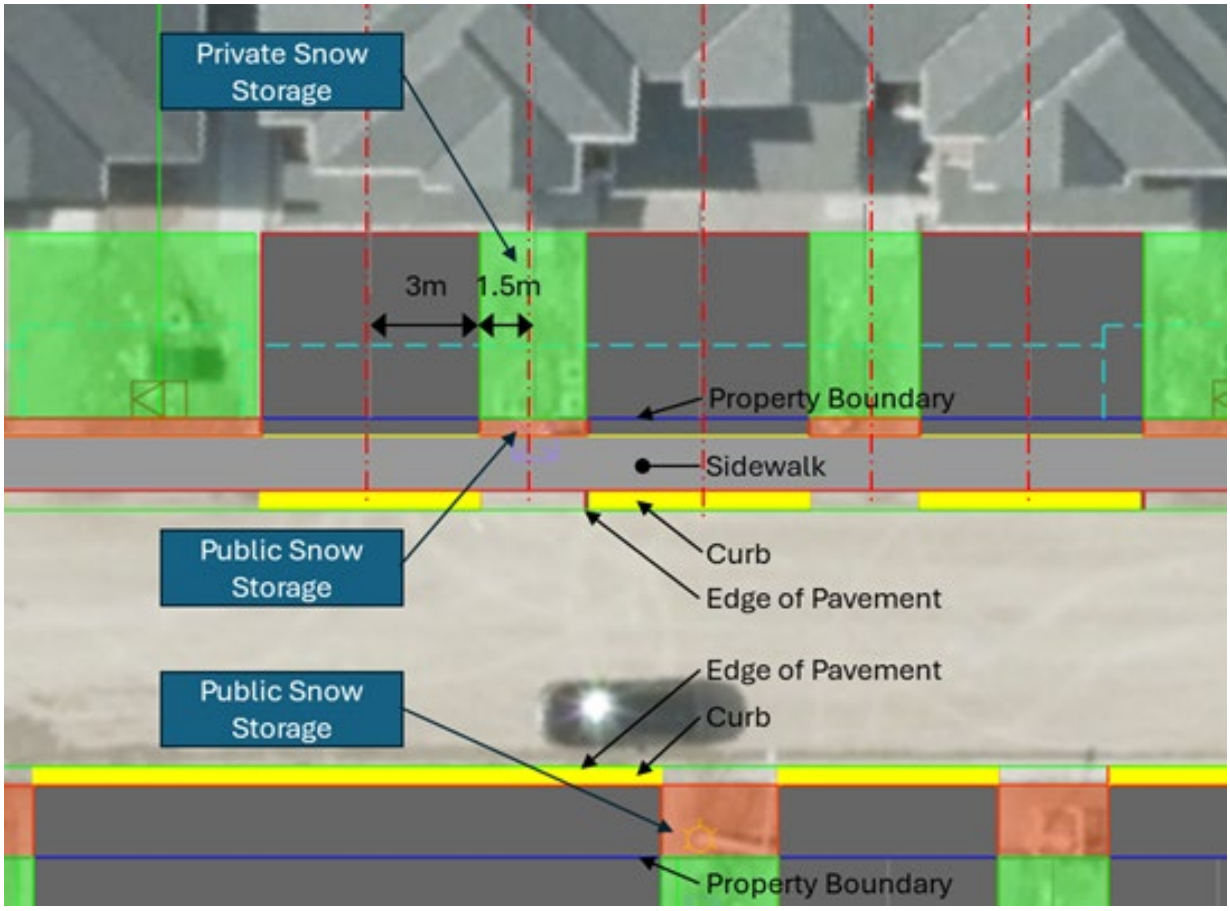
As part of the Zoning By-law update, staff are proposing to implement the following minimums to address this matter:

Zoning	**Previous Zoning By-law (Town-house)**	**Revised Zoning By-law Standards: Salem & Hewitt's Communities**		**Proposed Minimums to Provide Private Snow Storage**
		R5	**RM3**	
		Street Townhouse	**Back-to-Back Townhouse**	
Lot Frontage (min)	6.0m (5.3.4.2)	4.5m	5.5m	6.0m
Front Yard Setback to an Attached Garage	7.0m	N/A	N/A	6.0m
Front Yard Setback to Dwelling Unit (min)	4.5m (5.3.4.2)	3.0m	3.0m	6.0m
Front Yard Setback to Dwelling Unit (rear access, min)	Not Applicable			3.0m
Rear Yard Setback to Dwelling Unit (Rear Access, min)	Not Applicable			7.0m
Driveway Width	Max 60% of Lot Frontage (2.7m min)			Max 50% Lot Frontage (≤ 8m width, 3m min) Max 60% Lot Frontage (> 8m width, 6m max)

Matter 2: Public Snow Storage in Suburban Residential Developments and Municipal Snow Removal Operations

Public snow storage is space available to place/store snow removed from the municipal right-of-way. This space is the boulevard portion of the municipal right-of-way. Snowplow windrows are typically placed onto the boulevard and remain there until the end of the winter season (where it eventually melts).

The revised zoning standards being employed in portions of new residential developments within the Salem and Hewitt's Communities (generally areas built to the RM3 and R5 standard) coupled with the use of reduced City standards (laneways) do not provide sufficient public snow storage. There is no functional public snow storage on the sidewalk side of the right-of-way and insufficient public snow storage on the non-sidewalk side of the right-of-way. The image below illustrates the snow storage areas.



The lack of public snow storage does not allow conventional winter maintenance operations. The Operations Department must perform snow lifts, which are costly, labour-intensive and disruptive operations requiring a large contingent of staff and heavy equipment. They also cannot be completed until the remainder of the City's street network has been cleared and the human and fleet resources are available, which may be 24 hours to 48 hours following a weather event, making access into and out of these areas difficult for residents. **Appendix B** includes photos of the specialized snow removal operation to clear snow in areas with revised zoning and reduced City standards. **Appendix C** includes cross-section figures detailing snow storage and photos of

laneways under winter conditions. A comparative analysis of conventional snow clearing operations and specialized snow removal (using snow lifts) are detailed in the following tables.

Conventional Snow Removal vs. Specialized Snow Removal Per Kilometre Costs

Operation Element	**Conventional Snow Removal (per km)**	**Specialized Snow Removal (snow lifts, per km)**
Equipment	1 plow truck	7 dump trucks 1 loader with blade 1 loader with blower 2 pickup trucks (traffic) 1 sidewalk plow/blower
Other Roles	NA	2 spotters 1 lead hand 1 supervisor
Total Staff Complement Required	1	16
Time to Complete 1km	0.13 hours (8 minutes)	3 hours
Total Staff Time	0.13 hours (8 minutes)	48 hours (370x)
Total Staff Cost	$6	$2,420
Equipment Cost	$15	$3,480
Total Cost Per Km Per Occurrence	$21	$5,900 (280x)

1 - Conventional snow removal – via traditional snowplow windrowing snow on to boulevard
2 - Specialized snow removal – via lift, where snow is removed and hauled to the City's Operations Centre, this is a similar operation as performed in the downtown

Annual Snow Removal Costs - Local street with lot frontages ≥ 6 metres and Laneways with lot frontages ≥ 4.5 metres

	Local Street with Lot Frontages ≥ 6m (per km)	**Laneway with Lot Frontages ≥ 4.5m (per km)**
Annual Snow Events	25	25
Annual Snow Events Requiring Lifts	0	8
Annual Conventional Snow Removal Costs Per Km	$525	$525
Annual Specialized Snow Removal Costs Per Km	NA	$47,200 (8 x $5,900)
Total Annual Snow Removal Costs Per Km	$525	$47,725 (90x)

The annual cost to provide winter maintenance for areas of subdivisions employing the RM3 and R5 zoning standards is significantly more costly (90x) than compared to areas of subdivisions with larger lot frontages and local streets.

Design Principle – Public Snow Storage & Residential Subdivision Municipal Winter Maintenance

Residential subdivisions are to be designed to facilitate conventional snow removal operations. To address this requirement, the following will be implemented:

- The recommended Zoning By-law changes identified in Matter 1 – this will provide both private snow storage and public snow storage by increasing separation between residential driveways.
- Residential units are to front municipal right-of-ways designated as streets.
- The use of laneways will be limited to residential units with rear access (including multi-unit buildings).
- The public laneway design standard will be revised to include public snow storage.

Matter 3: On-street Residential Subdivision Parking

Residents in suburban developments have an expectation that there is reasonable access to short-term on-street parking (differing from long-term vehicle storage). There is significantly less on-street parking available in the Salem and Hewitt's communities due to cumulative impacts of Zoning By-law and City standards reductions, these include:

- Utilization of the laneway standard in lieu of a local street (the laneway standard does not permit parking as the laneway width was designed to provide vehicle access only; it is not wide enough to accommodate both parked cars and provide the necessary clear width for fire/emergency access.

- A reduction in the local street municipal design standard coupled with revised Zoning By-law standards and overall increased density necessitated the need to restrict on-street parking to one side of local streets; this was required to allow residents to be able to manoeuvre in and out of driveways and provide the necessary clear width for fire/emergency access.

Staff reviewed parking restrictions on local streets to allow parking on both sides. This would require the right-of-way to be widened from 18 metres to 20 metres and the pavement width from 8 metres to 10 metres. Staff recommend maintaining the current 18 metres local street right-of-way as widening the local street cross-section may create an environment more conducive to higher vehicle speeds.

<u>Design Principle – On-Street Residential Subdivision Parking</u>

Residential subdivisions are to be designed to facilitate on-street parking where it can be done safely and does not disproportionately impact other modes of transportation. To address this requirement, the following will be implemented:

- The recommended Zoning By-law changes identified in Matter 1 – this will increase driveway separation allowing for more opportunities on-street.

- Residential units are to front municipal right-of-ways designated as streets – this will preclude the use of a laneway in-lieu of a local street (laneways do not permit on-street parking).

- The use of laneways will be limited to residential units with rear access (including multi-unit buildings).

- The minor collector design standard will be reviewed to assess the inclusion of on-street parking.

Parking restrictions associated with the Overnight Parking By-law, required at intersections, horizontal curves, etc. will still be in place.

Matter 4: Private Residential Subdivision Parking

Residential driveways in suburban developments should accommodate typical vehicles. The revised Zoning By-Law standards employed in the Salem and Hewitt's communities permitted a minimum driveway length of 5.5 metres, a reduction from 7.0 metres This reduction has resulted in complaints from residents as not being sufficient to accommodate common vehicles.

Vehicle lengths of top selling vehicles in Canada are included in **Appendix D.**

Design Principle – Private Residential Subdivision Parking

Residential subdivisions are to be designed to provide driveway lengths that provide a range of options to purchasers while providing clearances to the building face and sidewalk. To improve clearances and accommodate popular small vehicles (i.e. compact utility vehicles), the minimum driveway length is recommended to be increased to 6.0 metres from 5.5 metres. This will provide 0.65 metre (~ 2 feet) clearance to both the building face and sidewalk edge.

As part of the Zoning By-law update, staff are proposing to implement the following minimums to address this matter:

Zoning	**Previous Zoning By-law**	**Reduced Zoning By-law Standards: Salem & Hewitt's Communities**		**Proposed Minimum Driveway Length**
		R5	**RM3**	
		Street Townhouse	**Back-to-Back Townhouse**	
Driveway Length – (min)	7.0m	5.5m	5.5m	6.0m

Matter 5: Collector & Arterial Street Access Management

In 2023, as part of a standards update, the cycling infrastructure on collector streets was changed from on-street bicycle lanes to off-street cycle tracks (see **Appendix E** for cross-section drawing illustrating the cycle track location). This shift moves cyclists closer to the edge of the right-of-way. With short driveways, parked vehicles are situated very near the sidewalk and closely together, creating poor sightlines between drivers (reversing out of their driveways) and pedestrians and cyclists. While pedestrians move more slowly, allowing for better reaction time, cyclists travel much faster, posing a hazard.

Additionally, residential driveways on collector streets are similarly problematic due to the conflicts created by drivers reversing onto streets with higher traffic volumes and travel

speeds. This problem is particularly concerning during the winter season when sightlines are blocked by snowbanks.

Design Principle – Collector & Arterial Street Access Management

Residential subdivisions (and development in general) are to be designed to provide reasonable access management to support safe streets for all users. As part of the Zoning By-law update, staff are proposing to implement the following requirements:

- Residential units permitted on minor and major collector streets are:
  - Cluster rowhouses (minimum 30m lot frontage)
  - Rear-access rowhouses
  - Rear-access semi-detached, detached homes
  - Low-rise buildings (minimum 30m lot frontage)
- Restrict the creation of additional driveways in the built boundary (i.e. through severances or other infill redevelopment) on minor / major collector streets and arterial streets.
- Maintain the prohibition of residential driveways on arterial streets in new subdivisions.

Balancing Development and Functional Needs

Concerns have been raised regarding the impact on the development community; however, these changes are necessary to address functional challenges, long-term municipal costs, and safety concerns. **The proposed design principles aim to create more sustainable and livable communities while reducing the ongoing operational burden on municipal services.**

To minimize the impact on development timelines, a phase-in period has been proposed:

- **New Applications**: All new applications will need to comply with the design principles.

- **Existing Applications in Progress**: Applicants who have completed rezoning and are working toward draft plan of subdivision approval will have 12 months after Council approval to submit their plans without needing to comply with the design principles.

- **Draft Approved Plans**: All current draft plan approval dates will remain effective. Should further extensions to the draft plan approval be sought, the design principles will be in effect and may require amendments to the approved draft plans that are not registered.

This phased approach ensures a balanced transition, allowing developers time to adjust while upholding the municipality's commitment to functional road design, safety, and operational efficiency. Note that the phased approach will continue to permit developments to be constructed with the issues identified in this report.

Impact on Housing Affordability

The development community has noted that laneways and narrow lot frontages are necessary to support affordability. The industry is providing less expensive housing options, but the cumulative impact of revised Zoning By-law standards and reduced City standards have negatively impacted livability for residents and are not creating truly affordable housing by definition.

Financial Implications:

The design principles will reduce future operating costs as specialized snow removal will no longer be required. The following table identifies the quantity of laneways presently registered, draft approved and under review with the total annual specialized cost premium:

Approval Status	Length (km)	Additional Annual O&M Costs for Specialized Snow Removal for Laneways
Registered	2.62	$124,000
Draft Approved	1.12	$52,900
Under Review	1.66	$78,400
Total	5.39	$255,300

Alternatives:

The following alternatives are available for consideration by General Committee:

Alternative #1 – General Committee could choose to not implement the design principles. This alternative is not recommended as the revised Zoning By-law and reduced City standards are negatively impacting liveability, road safety and resulting in higher operating and maintenance costs.

Alternative #2 - General Committee could alter the proposed recommendation by reducing the phase-in period. Although this alternative is available, this would increase developer costs due to the need to redesign portions of developments that are non-compliant with design principles and may impact project financing.

Strategic Plan Alignment:

Affordable Place to Live	**X**	The design principles will alleviate pressure on the operating budget, helping to reduce future property tax rate increases.
Community Safety	**X**	The design principles improve community safety by eliminating the need for snow lifts in suburban residential areas and employing access management on collector streets.
Thriving Community		Not Applicable
Infrastructure Investments	**X**	The design principles will make it easier to get around by supporting conventional snow removal operations.
Responsible Governance	**X**	The design principles demonstrate financial stewardship by ensuring new development can be maintained in a cost-effective manner.

Additional Background Information and Analysis:

Not Applicable

Consultation and Engagement:

There has been ongoing consultation with the development community around zoning and laneway standards regarding livability issues, both through the new Zoning By-law statutory consultation and bi-annual meetings with the development community.

Environmental and Climate Change Impact Matters:

The following environmental and/or climate change impact matters have been considered in the development of the recommendation:

The design principles recognize the winter climate that the City experiences and ensures new development is designed in a manner that is compatible with conventional winter maintenance practices.

Appendix:

Appendix A – Private Snow Storage Photos
Appendix B – Specialized Snow Removal Operations
Appendix C – Public Snow Storage - Right-of-Way Figures & Photos
Appendix D – Common Vehicle Lengths
Appendix E – Collector Street Right-of-Way Standards – Cycle Track Location

Report Author:

Brett Gratrix, Senior Project Manager – Transportation Planning, Development Services

File #:

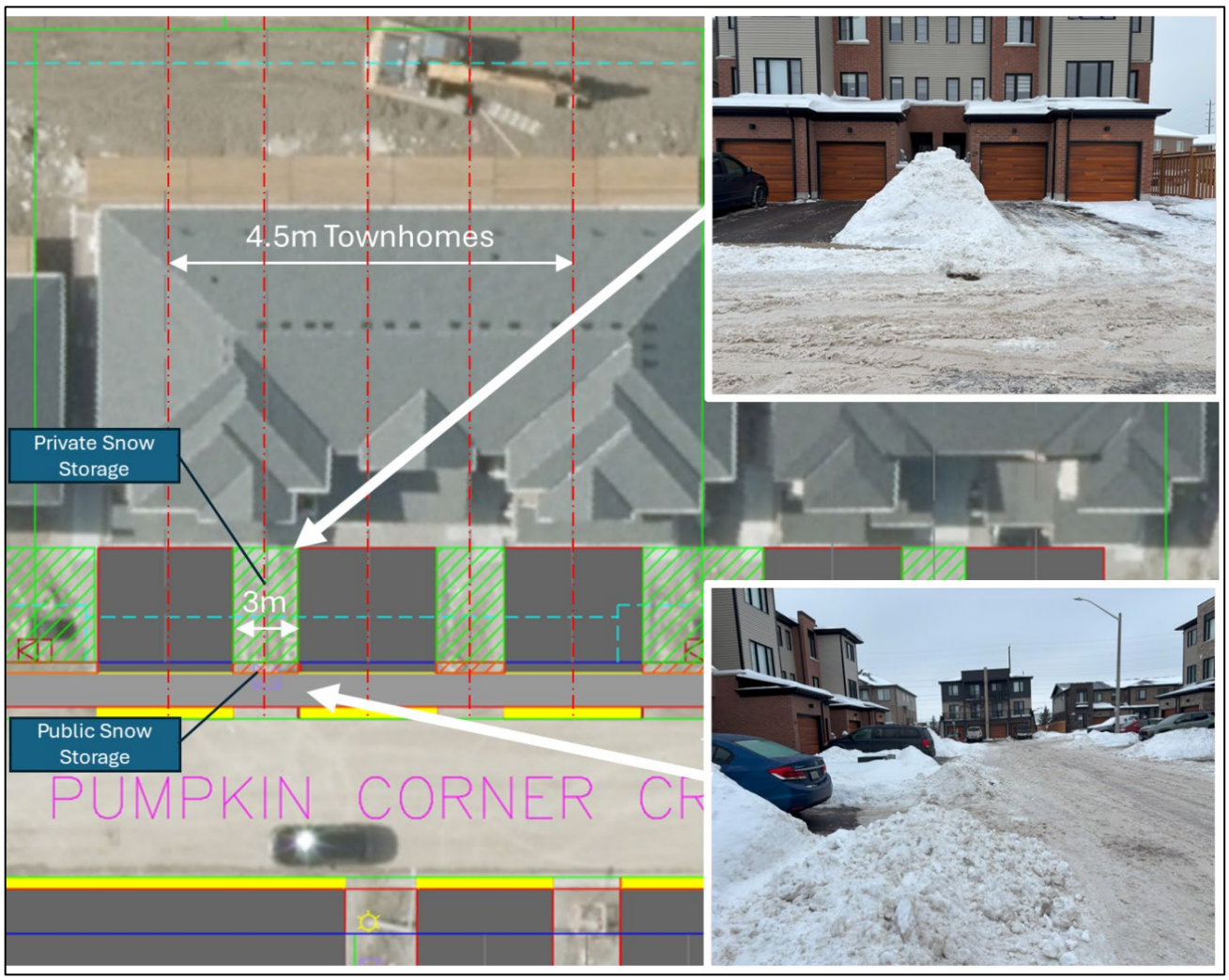
Not Applicable

Pending #:

Not Applicable

Appendix A – Private Snow Storage Photos

4.5 metre Lot Frontage on Laneway (Photo taken 2025-01-31)



This drawing illustrates a 4.5 metre residential unit on a 12 metre laneway. There is no functional public snow storage on the sidewalk side of the laneway. There is limited public snow storage on the non-sidewalk side. There is insufficient private snow storage.

4.5 metre Lot Frontage on a Laneway – Pumpkin Corner Crescent (Photo taken 2025-01-31)

This photo illustrates the insufficient snow storage associated with the 4.5 metre lot frontages. Most visible is the lack of private snow storage. Residents cannot physically add more snow as the pile exceeds the angle of repose resulting in the pile encroaching into the driveway. More difficult to observe is the sidewalk and curb. The lot configuration and right-of-way design do not provide snow storage.

4.5 metre Lot Frontage on a Laneway – Hay Lane (Photo taken 2025-01-31)

This photo is another example of a 4.5 metre lot frontage with insufficient snow storage. These units have slightly longer driveways as the sidewalk is not located on this side of the street.

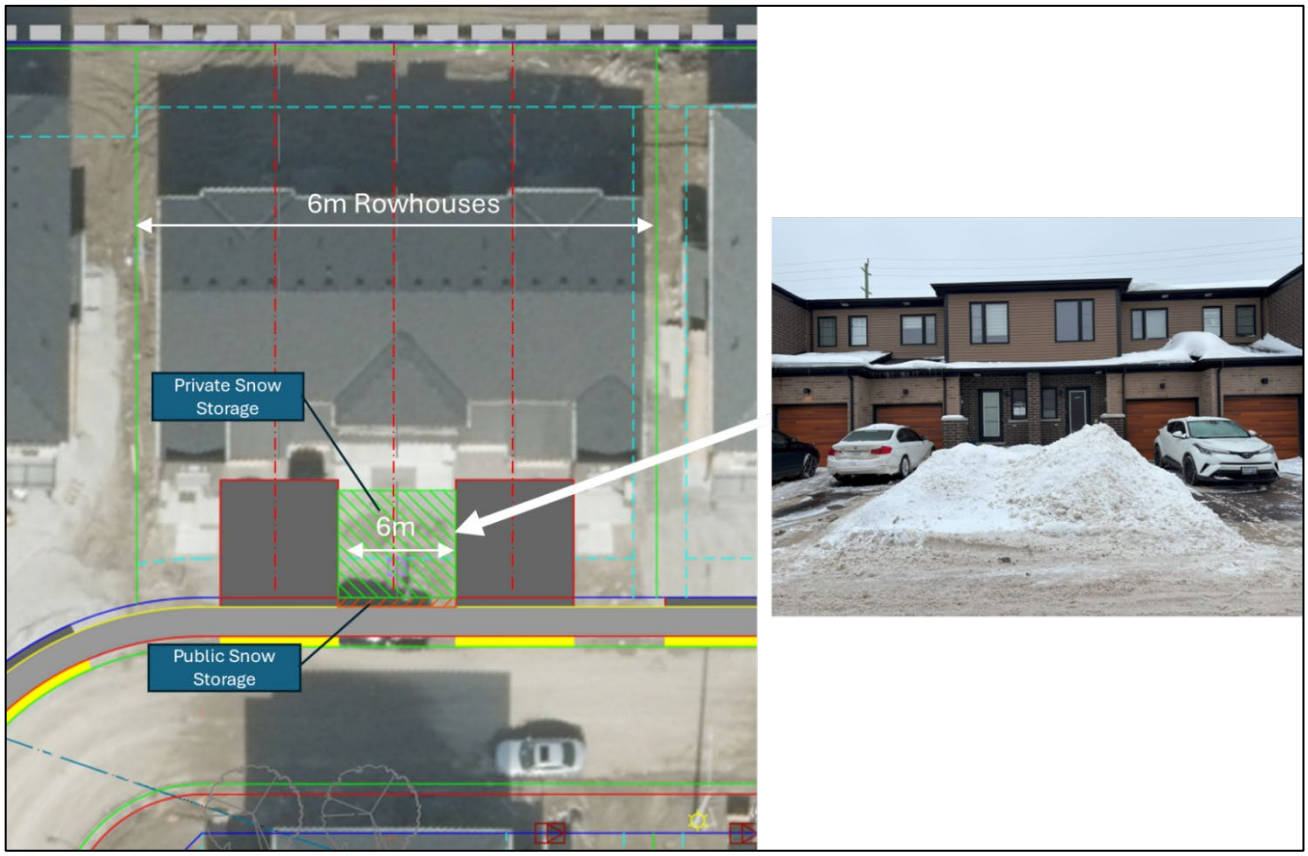
4.5 metre Lot Frontage on a Laneway – Hay Lane (Photo taken 2025-01-31)

This photo is taken at the same location as the previous photo from a different perspective. This photo illustrates the encroachment of the accumulated snow into the driveway and the constrained access ino the unit.

4.5 metre Lot Frontage on Laneway (Photo taken 2025-02-18)

This drawing illustrates a 4.5 metre residential unit on a 12 metre laneway after the Family Day weekend snowfall.

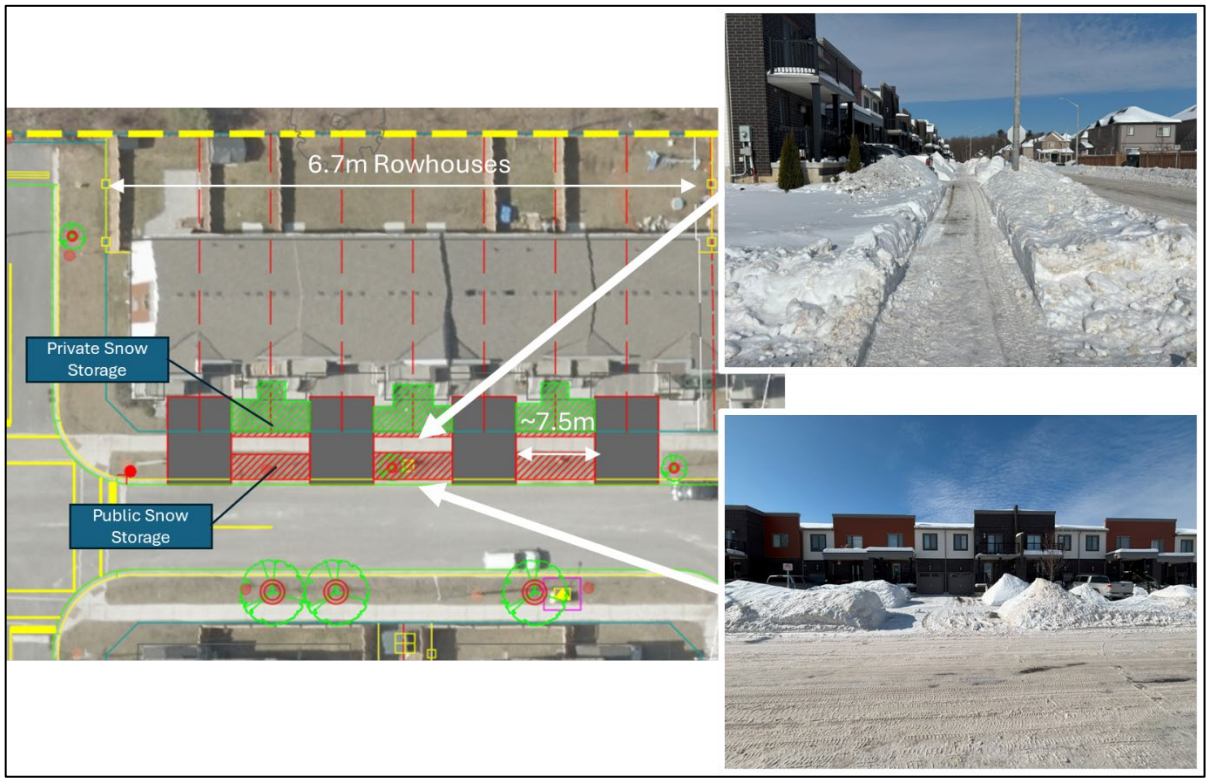
6 metre Lot Frontage on Laneway (Photo taken 2025-01-31)



This drawing illustrates a 6.0 metre residential unit on a 12 metre laneway. There is no functional public snow storage on the sidewalk side of the laneway. There is limited public snow storage on the non-sidewalk side.

There is sufficient private snow storage between units. This lot configuration on a local street would provide sufficient public snow storage.

6.7 metre Lot Frontage on Local Street (Photo taken 2025-02-12)



This drawing illustrates a 6.7 metre residential unit on an 18 metre laneway. There is functional public snow storage. There is sufficient private snow storage between units.

This illustration was shown as no 6.0 metre residential units fronting a local street are presently captured by the City's aerial imagery.

6 metre Lot Frontage on a Laneway – Pumpkin Corner Crescent (Photo taken 2025-01-31)

This photo illustrates sufficient private snow storage associated with the 6.0 metre lot frontages; however, the laneway design does not provide snow storage on the sidewalk side of the street. The 6.0 metre lot frontage on a local street configuration provides sufficient public snow storage while still allowing a smaller lot frontage.

Appendix B – Specialized Snow Removal Operations

12 metre Laneway – Snow Lift on Pumpkin Corner Crescent (Photo taken 2025-01-31)

This photo illustrates a snow lift operation on a laneway. Snow lifts require the following steps to complete:

1) An operator uses a loader with a blade to move snow to the middle of the laneway. This requires multiple passes.

2) An operator uses a loader with a snow blower to blow that snow into dump trucks. The operator also does additional passes to cut back snowbanks to expose the sidewalk and the edge of the street on the opposing side.

3) Dump trucks haul the snow to the City's Operation's yard on Ferndale Drive. The roundtrip distance is 28 kilometres and requires 50 minutes to complete. Multiple dump trucks are required to minimize downtime waiting for an empty dump truck to return.

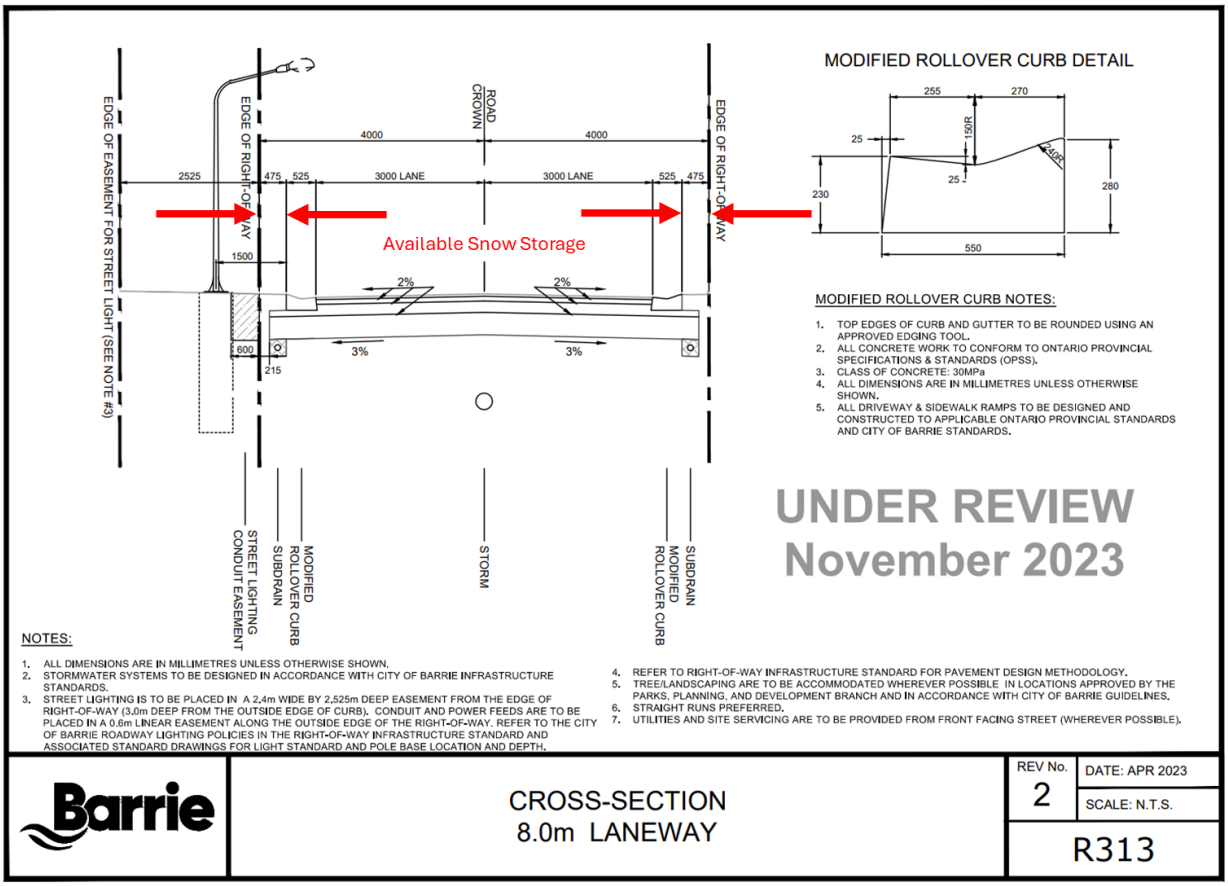
4) When snow blowing operations are occurring, one staff member walks in front of the snow blower to look out for visible debris and ensure the operator's path is clear of pedestrians, playing children, pets, etc. The staff member further ahead of the snow lift operation is monitoring traffic activity. When snow lift operations are occurring, there are staff members and pickup trucks at each end of the street to provide a soft closure to manage auto and pedestrian traffic.

12 metre Laneway – Snow Lift on Silo Mews (Photo taken 2025-01-31)

12 metre Laneway – Snow Lift on Silo Mews (Photo taken 2025-01-31)

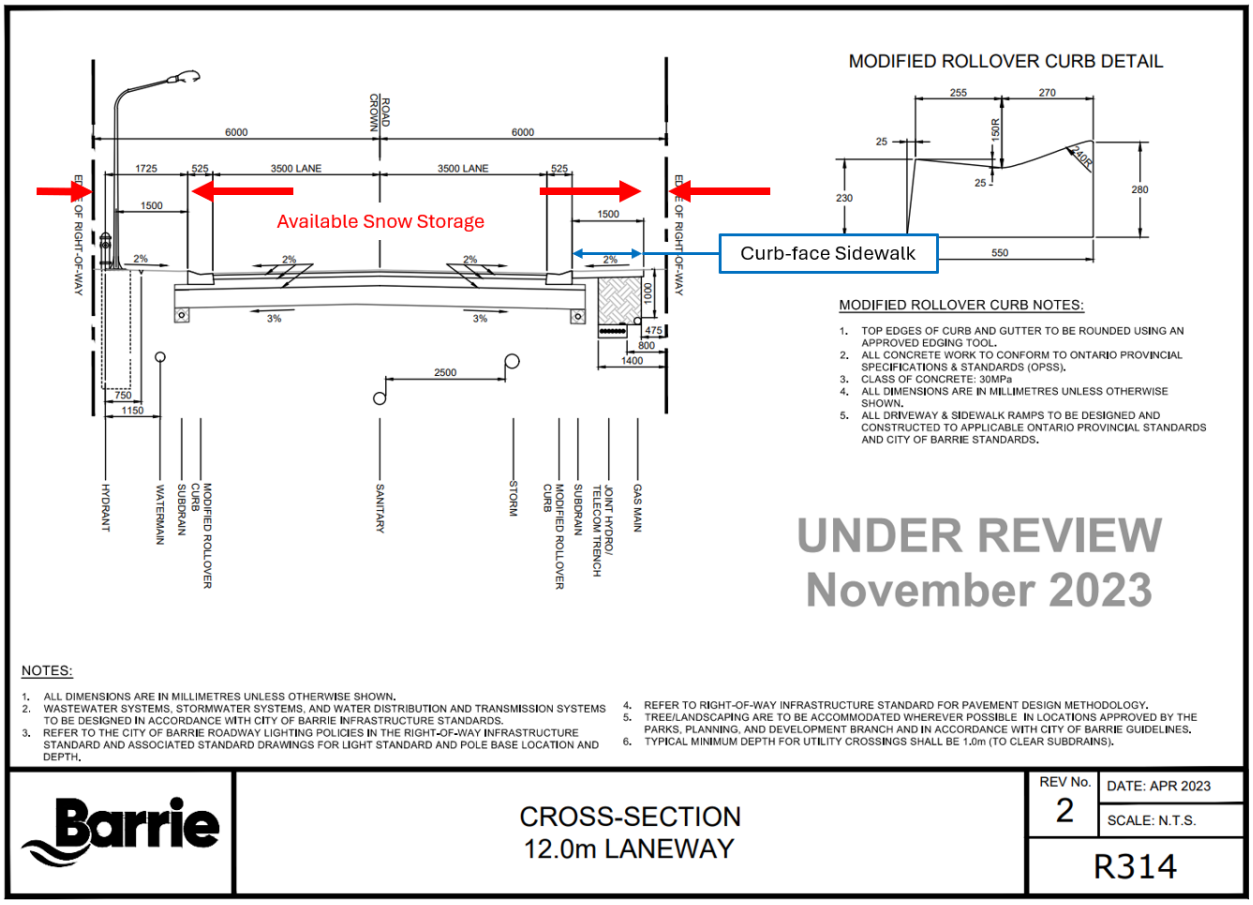
This photo illustrates the same snow lift with a member of the public interacting with the operations. Staff stop snow lift operations to allow motorists to safely pass. Heavy equipment operations in residential areas are not desirable.

BSD R313 – 8.0 metre Laneway Standard



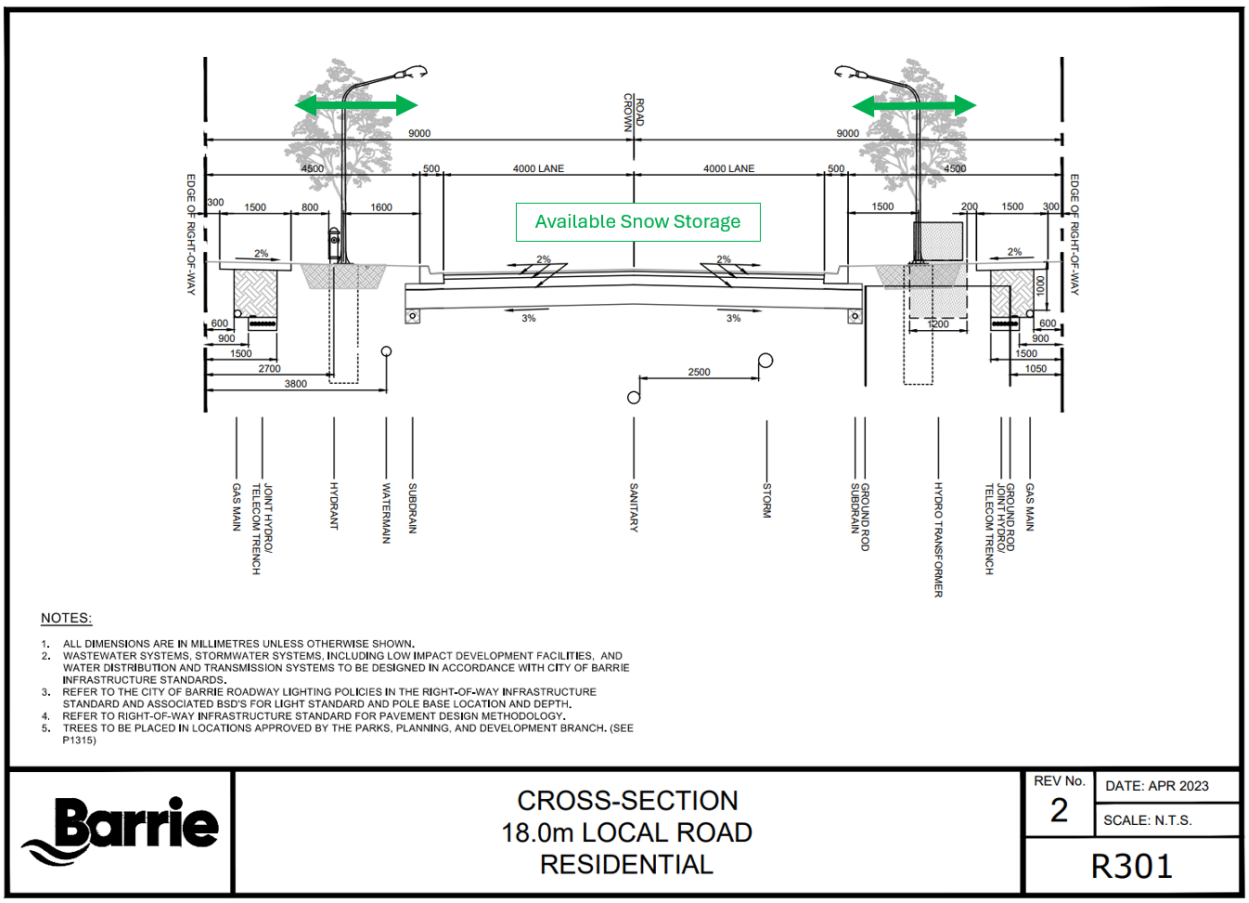
This standard illustrates the 8.0 metre public laneway standard. This cross-section does not include functional public snow storage.

BSD R314 – 12.0 metre Laneway Standard



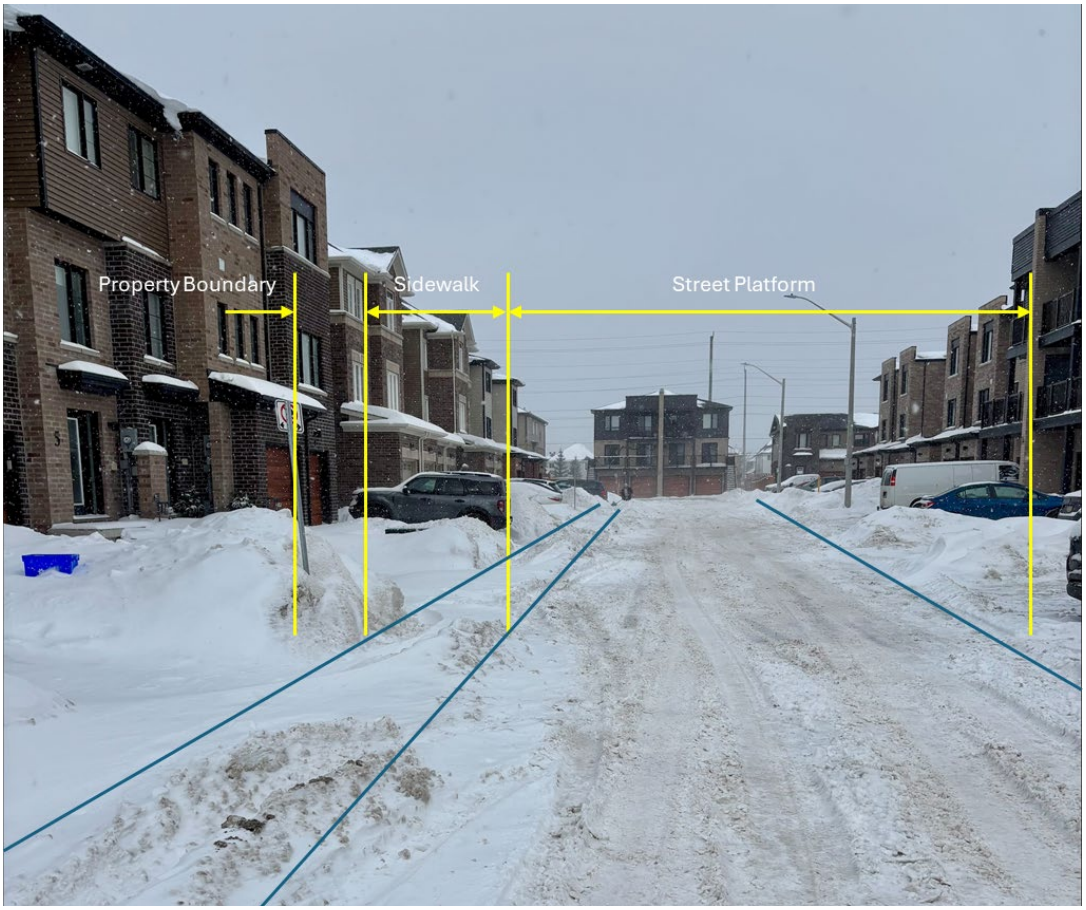
This drawing illustrates the 12.0 metre public laneway standard. The cross-section does not have functional snow storage. The storage area on the non-sidewalk side of the laneway is impacted by the narrow lot frontages. There is no functional snow storage on the sidewalk side of the laneway.

BSD R301 – 18.0 metre Laneway Standard



This drawing illustrates the 18.0 metre local street standard. This cross-section has adequate snow storage.

12 metre Laneway - Pumpkin Corner Crescent (Photo taken 2025-01-29)



12 metre Laneway - Pumpkin Corner Crescent (Photo taken 2025-02-18)

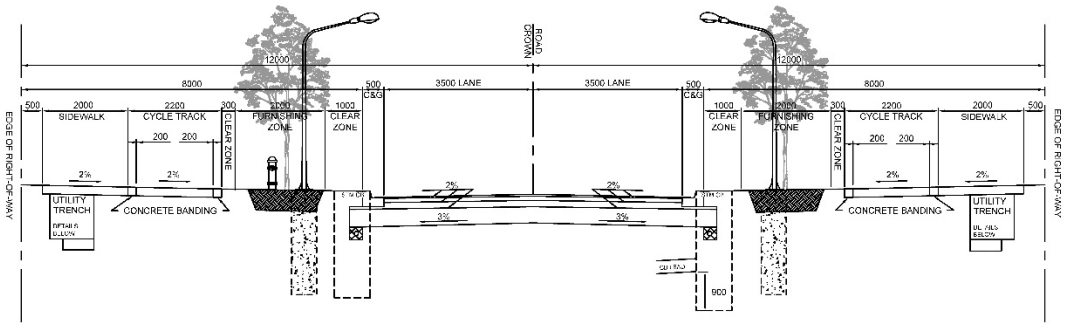
12 metre Laneway – Andean Lane (Photo taken 2025-02-18)

Appendix D – Common Vehicle Lengths

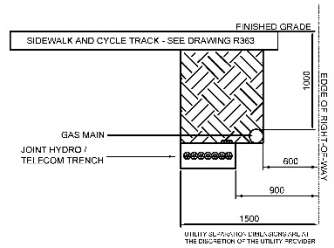
Top ten selling vehicles in Canada for 2024 and length:

Vehicle	Length
Ford F-Series	5.90 m (1/2 ton, crew cab, short bed)
Toyota Rav4	4.60 m
GMC Sierra	5.90 m (1/2 ton, crew cab, short bed)
RAM 1500	5.92 m (1/2 ton, crew cab, short bed)
Honda CR-V	4.70 m
Chevrolet Silverado	5.90 m (1/2 ton, crew cab, short bed)
Nissan Rogue	4.65 m
Honda Civic	4.70 m
Ford Escape	4.58 m
Hyundai Kona	4.39 m

Appendix E – Collector Street Right-of-Way Standards – Cycle Track Location



UTILITY TRENCH DETAILS



Notes:

1. REFER TO INFRASTRUCTURE DESIGN STANDARD R300A FOR FULL DETAILS ON RIGHT-OF-WAY DESIGN REQUIREMENTS.
2. ALL DIMENSIONS ARE MILLIMETRES UNLESS OTHERWISE SHOWN.
3. THIS CROSS SECTION REPRESENTS A MID-BLOCK SEGMENT OF THE SHOWN STREET. SEE APPLICABLE INTERSECTION DRAWINGS FOR DETAILS ON LANE WIDTHS, MEDIANS AND OTHER REQUIREMENTS.
4. THE CLEAR ZONE REPRESENTS AN AREA THAT IS FREE FROM ANY ABOVE GROUND FURNISHINGS, UTILITIES AND OBSTRUCTIONS.
5. WIDENINGS MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE REQUIRED TURNING LANES.
6. CATCH BASIN FRAME & GRATES SHALL BE SIDE INLET AS PER OPSD 400.082.
7. BANDING ON BOTH SIDES OF THE CYCLE TRACK SHALL BE 200mm STAMPED CONCRETE WITH TRANSVERSE SCORE LINES AT 200mm INTERVALS.
8. THE FURNISHING ZONE SHALL BE DESIGNED TO ACCOMMODATE STREETLIGHTS, FIRE HYDRANTS. TREES, BENCHES, PARKING METERS, OTHER UTILITIES, ETC AS REQUIRED.
9. WHERE TREES ARE PROPOSED THEY ARE TO BE PLACED IN LOCATIONS APPROVED BY PARKS PLANNING AND DEVELOPMENT BRANCH (SEE P1315) WITH A ROOT BARRIER SYSTEM (LB-18 OR EQUIVALENT) IF ROOT BALL EDGE IS WITHIN 1.0m OF CYCLE TRACK.

Barrie

MINOR COLLECTOR
24.0m CROSS-SECTION

REV No.	DATE: FEB 2024
6	SCALE: N.T.S.
	R303