

A photograph of a modern, two-story brick infill house. The house features large, dark-framed windows and a prominent brick facade. A large, mature tree with green leaves is in the foreground on the left, casting shadows on the house and the lawn. The house has a concrete foundation and a set of stone steps leading to the entrance. The address number '66a' is visible on the brick wall. The overall scene is bright and sunny, with a clear blue sky.

Urban Design Guidelines for Low-rise Infill Housing



Definition

The Official Plan (OP) defines a low-rise building as a building that is up to and including four (4) full stories tall.

Objectives

The objective of the guidelines is to help create low-rise infill development that will:

- Enhance streetscapes;
- Protected and expand established landscaping;
- Create a more compact urban form to consume less land and natural resources;
- Achieve a good fit into an existing neighbourhood, respecting its character and its architectural and landscape heritage;
- Provide new housing designs that offer variety, quality and a sense of identity;
- Emphasize front doors and windows rather than garages;
- Include more soft landscaping and less asphalt in front and rear yards;
- Create at-grade living spaces that promote interaction with the street; and
- Incorporate environmental innovation and sustainability.

The Official Plan

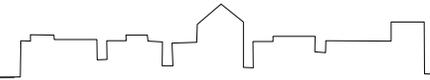
Low-rise residential buildings are the most common built-form typology expected to be built within most areas of Ottawa, particularly in areas designated as ‘Neighbourhood’ in the City’s Official Plan. Low-rise residential infill is anticipated in the Downtown Core-, Inner Urban-, Outer Urban- and Suburban Transects, and may be located within established areas of serviced villages within the Rural Transect. This typology can contribute to the creation of healthy, walkable 15-minute neighbourhoods. These buildings can add a range of housing options for all ages and income groups, including large-sized units suitable for families.

Strategic Directions

Low-rise residential infill can contribute to achieving the strategic directions outlined in Section 2 of the Official Plan and address the cross-cutting issues of “Intensification”, “Energy and Climate Change” and “Healthy and Inclusive Communities”, described in Section 2.2.

Low-rise residential infill will help achieve Ottawa’s intensification objectives outlined in the Growth Management section of the Official Plan, which directs most of the residential growth to occur within built up areas by 2026, and to provide ground-oriented housing options for larger households.

Low-rise residential infill supports the development of a compact and connected city and helps prioritize a shift to energy efficient transportation modes, as this development provides an opportunity for more people to live closer to



existing services and amenities, including transit.

Finally, well designed low-rise residential infill contributes to a high-quality, human-scale urban design that creates a sense of place and a vibrant public realm. Low-rise residential infill supports the evolution of Ottawa’s neighbourhoods into the healthy, complete, 15-minute neighbourhood model outlined in Section 2.2.4 of the Official Plan, or can reinforce mature neighbourhoods that have already evolved to include the necessary components, by adding more density and expanding housing options.

Section 6.3 of the Official Plan indicates that ‘Neighbourhoods’ are planned for “ongoing, gradual, integrated, sustainable and context sensitive development”. In areas subject to an ‘Evolving Overlay’, the gradual, well-planned transformation of these areas is supported and Section 5.6.1.1(1b) allows for “new building forms and typologies, such as missing middle housing”, which may differ from the existing building stock of the immediate context. In accordance with the Official Plan, Section 6.3.1(3), areas designated as ‘Neighbourhood’ will generally remain low-rise, and the OP expects a full range of low-rise housing options sufficient to meet the intensification goals outlined in Table 2 and Table 3b of the OP.

The design of low-rise residential infill will be important as Ottawa’s neighbourhoods evolve to meet contemporary planning challenges and the strategic directions outlined in the Official Plan.

Design and Sustainability

The Official Plan, Section 4.6.4(1), indicates that “innovative, sustainable and resilient design practices and technologies in site planning and building design” will be supported by the High-performance Development Standard, which applies to low-rise development subject to Site Plan Control. The metric requirements for Site Plan applications can be found in the Site Plan Control By-law.

In the Urban Design section of the Official Plan, Section 4.6.6(6) directs that low-rise buildings “shall be designed to respond to context, and transect area policies, and shall include areas for soft landscaping, main entrances at-grade, front porches or balconies, where appropriate. Buildings shall integrate architecturally to complement the surrounding context”.

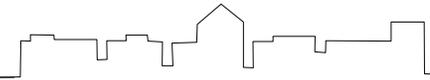
Infill and Intensification

Infill is development that occurs on a single lot, or a consolidated number of small lots, on sites that are vacant, undeveloped or where demolition occurs. Infill may also refer to the creation of the lot or lots.

Infill development at higher densities, in relation to existing neighbourhoods, requires good design to mitigate the potential impact of intensified building forms.

Residential intensification means intensification of a property, building or area that results in a net increase in residential units or accommodation and includes:

- Redevelopment (the creation of new units, uses or lots)



on previously developed land in existing communities), including the redevelopment of Brownfield sites;

- The development of vacant or underutilised lots within previously developed areas;
- Infill development;
- The conversion or expansion of existing industrial, commercial, and institutional buildings for residential use; and
- The conversion or expansion of existing residential buildings to create new residential units or accommodation, including secondary dwelling units and rooming houses.

The benefits of intensification (from CMHC'S 'Healthy Housing 2005') are:

- More efficient use of existing infrastructure and community facilities;
- Reduced expense on entirely new infrastructure and transit systems;
- Lower energy requirements for transportation due to reduced automobile travel and more opportunities for public transport, walking and cycling;
- Reduced commuting time and stress on the environment;
- More compact development patterns that protect greenspaces;
- Reduced rate of encroachment on undeveloped areas;

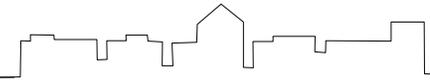
- Reduced water collection costs in clustered- and more dense development;
- Lower water treatment costs, with larger treatment plants serving more homes; and
- Mixed dwelling types that encourage people to stay in the same community as their housing needs change.

When Are Design Guidelines Applied?

Design guidelines are a tool to help achieve the Official Plan's goals in the areas of design and intensification and they help implement Official Plan policies with respect to the review of development applications for infill development.

This design guideline document will be applied to all infill development in the Downtown Core-, Inner Urban-, Outer Urban- and Suburban Transects, as identified on Schedule B of the Official Plan, and also applies to infill development within services areas of villages in the Rural Transect. This infill may include the following residential types: single detached, semi-detached, duplex, triplex, townhouses, stacked townhouses, low-rise apartments (four units and more) and other forms of ground-oriented housing typologies that may emerge.

The design guidelines that follow illustrate some of the important principles for design of the site, the building and in the public realm.

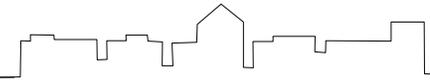


The photographs and sketches below are intended to illustrate only a few of the multitude of solutions for successful infill development. Note that not all components of every photograph illustrate successful solutions. As new projects are constructed, some photographs may be replaced from time to time with photographs that better illustrate the guidelines in this document.

The City's Completed Design Guidelines are available at:
<https://ottawa.ca/en/planning-development-and-construction/community-design/design-and-planning-guidelines/completed-guidelines>

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1.0 Streetscapes

The public realm is made up of the public streets, sidewalks, boulevards, back lanes, street furniture, public utilities, parks and open spaces. Civic life takes place in these outdoor spaces that make up the public realm. In addition, private front yards form the edge of the public realm. Both landowner and pedestrian benefit when the front yards of buildings serve as landscaped edges to the public sidewalk.

New development should contribute to the character and legibility of public spaces and new streets should form natural, logical extensions of the existing city street network. Cities are for people, and when the environment is designed with a respect for pedestrians and cyclists, the quality of the public realm improves.

To create healthy cities, development must make public streetscapes attractive to pedestrians, with trees and planting a priority. Sustainable cities have beautiful large-canopied trees lining their sidewalks, providing natural cooling and shade in the summer.

Where neighbourhoods have diverse building forms and a less-than-successful urban environment, infill buildings can fulfill the role of creating newer and more desirable standards which can enhance the streetscape.

Design Guidelines

1.1 Contribute to an inviting, safe, and accessible streetscape by emphasizing the ground floor and street façade of infill buildings. Locate principal entries, windows, porches and key internal uses at street level.



Figure 1: Buildings, with active facades close to the sidewalk, frame the street to establish a human scale and connection to the public realm.

- 1.2 Reflect the desirable aspects of the established streetscape character. If the streetscape character and pattern is less desirable, with asphalt parking lots and few trees lining the street, build infill which contributes to a more desirable pedestrian character and landscape pattern. When new built form typologies are introduced to the streetscape, a sensitive design approach that is informed by the existing streetscape character allows for good integration.
- 1.3 Expand the network of public sidewalks, pathways and crosswalks to enhance pedestrian safety.



- 1.4 Provide pedestrian-scale lighting that points downward in order to minimize light pollution and prevent spillage onto neighbouring properties. (Refer to the City's Standard Site Plan Agreement specifications for exterior lighting).
- 1.5 Preserve and enhance any existing decorative paving on streets and sidewalks.
- 1.6 Design accessible walkways from private entrances to public sidewalks.
- 1.7 Ensure that new streets, if private, look, feel, function and provide similar amenities as do public streets, including sidewalks and street trees.



Figure 2: The infill building on the left reflects the style, mass and character of the existing building on the right. A soft landscape edge has been retained and new trees, which will contribute to the streetscape, have been planted.



Figure 3: A sidewalk lined with trees creates a pleasant pedestrian environment.



Figure 4: A row of street trees creates an attractive street edge.



2.0 Landscape

Design Guidelines

- 2.1 Landscape the front yard and right-of-way to emphasize aggregated soft landscaping as much as possible and provide adequate soil volume for the planting of large sized trees.



Figure 5: The newly planted front yard of this infill home reflects the green front yards of the surrounding homes.

- 2.2 Where the soft surface boulevard in the right-of-way is limited, identify alternative areas for soft landscaping that can accommodate tree-planting.



Figures 6 and 7: These images show how trees can be retained when driveways and building footprints are sited carefully.

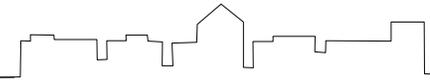


Figure 8: Planted edges, on public or private land, enhance the public sidewalk and streetscape.

- 2.3 Design buildings and parking solutions to retain established trees located in the right-of-way, on adjacent properties and on the infill site. To ensure their survival, trenching for services and foundations must take into account the extent of the tree's critical root zone. Replace trees with new ones if removal is justifiable.
- 2.4 Provide street trees in continuous planting pits or in aggregated soft landscaped areas with shared soil volumes to support healthy growth. Where the space available to accommodate adequate soil volume is

limited, use materials and planting techniques (e.g., permeable paving, Silva Cells or similar planting systems) that improve tree growth conditions and limit the impacts of soil compaction and road salt.

- 2.5 Plant trees, shrubs, and ground cover adjacent to the public street and sidewalk for an attractive sidewalk edge. Select hardy, salt-tolerant native plant material that can thrive in challenging urban conditions.
- 2.6 For sustainability and energy conservation, refer to the High Performance Development Standard, and include elements such as planting deciduous trees to shade south and south-west windows from the summer sun, and functional landscaped green roofs.
- 2.7 In order to enhance a sense of separation when infill is close to the street, use planting and/or low fencing, where feasible to define the boundary between the public space of the street and the semi-public space of the front yard.



3.0 Building Design (Built Form)

Infill development, by its nature, is contemporary construction within an historic context – a stylistic blending of new and existing. The existing context, character and pattern of an established neighbourhood can be recognized, while at the same time allow for the evolution of architectural style and innovation in built form. Infill development should be a desirable addition to an existing neighbourhood. This does not mean imitating historical styles and fashions of another era, or conversely creating a total contrast in fabric or materials, but rather recognizing the established scale and pattern of the context and the grain of the neighbourhood, including where introducing new built form typologies to established neighbourhoods that help achieve the Official Plan’s growth management objectives. The goal of good infill development can be met within any architectural style.

Residential infill should meet current building requirements and incorporate new technologies. Various architectural styles can be very compatible with existing structures and spaces. Through the use of quality materials and innovative design, contemporary architectural styles can revitalize a street. Built form that is rich in detail enhances public streets and spaces.

Design Guidelines

3.1 Siting

- 3.1.1 Ensure that new infill faces and animates the public streets. Ground floors with principal entries, windows, porches and key internal uses at street level and facing onto the street contribute to the animation, safety and

security of the street.



Figure 9: This urban infill matches the setbacks of surrounding homes and preserves an established tree. The front door faces the street, the ground floor elevation matches that of the neighbours and the large first floor window contributes to an animated and safe street.

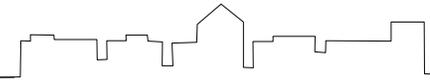


Figure 10: This suburban infill respects the scale, setback and materials of surrounding homes. The home takes advantage of a corner lot by locating the garage and driveway on the side façade.

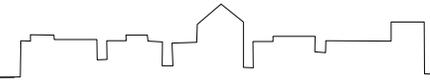
- 3.1.2 Locate and build infill in a manner that reflects the desirable planned neighbourhood pattern of development in terms of building height, elevation and the location of primary entrances, the elevation of the first floor, yard encroachments such as porches and stair projections, as well as front, rear, and side yard setbacks.
- 3.1.3 In determining infill lot sizes, recognize the provisions of the Zoning By-law, the Official Plan's Transect-, Overlay-, and Neighbourhood policies, and local lot sizes, including lot width, the existing relationship between lot size, yard setbacks and the scale of homes.
- 3.1.4 Orient buildings so that their amenity spaces do not

require sound attenuation walls and that noise impacts are minimized. Design amenity areas such as second floor balconies and rooftop decks to respect the privacy of the surrounding homes.

- 3.1.5 In cases where there is a uniform setback along a street, match this setback in order to fit into the neighbourhood pattern and create a continuous, legible edge to the public street. In cases where there is no uniform setback, locate the infill building at roughly the same distance from the property line as the buildings along the abutting lots.
- 3.1.6 Contribute to the amenity, safety and enjoyment of open spaces by offering living spaces that face them.



Figure 11: Living spaces facing onto public pathways support the quality of an open space.



Figures 12 and 13: These two rows of infill townhomes, built around an internal parking court, use extensive landscaping to enhance the development. Generous balconies predominate over recessed garages.



Figure 14: The back row units, in the same development shown in Figures 13 and 14, offer attractive landscaping, enhanced front entrances, large balconies and recessed garages.

- 3.1.7 Avoid the arrangement of units where the front of one dwelling faces the back of another, unless the units in the back row have façades rich in detail, extensive landscaping, and recessed garages if applicable.
- 3.1.8 Determine appropriate side and rear separation distances between existing homes and new infill homes/housing blocks to ensure appropriate space for landscaped area and privacy. Consider how building height, site orientation and the location of windows affect views, sunlight and privacy.



- 3.1.9 Maintain rear yard amenity space that is generally consistent with the pattern of the neighbouring homes. Limit disruption to an existing neighbourhood pattern of green rear yards caused by reducing required rear yard setbacks.
- 3.1.10 Permit varied front yard setbacks if this preserves and integrates existing natural features, such as mature trees or rock outcroppings. Note that some neighbourhoods enjoy consistent setbacks and others are characterized by irregular setbacks.



Figure 15: An adequate separation distance between infill blocks, on this rear private lane, ensures sufficient light, view and privacy for residents. Richly detailed rear balconies and arbours define outdoor amenity areas, while complementary screening and planting increase privacy.

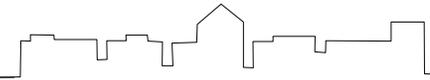
- 3.1.11 Respect the grades and characteristic first-floor heights of the neighbourhood by not artificially raising or lowering grades.
- 3.1.12 Position infill to take advantage of solar heat and reflected light. Create a layout where internal and external spaces benefit from solar orientation.

3.2 Mass/Height

- 3.2.1 Design infill in a manner that contributes to the quality of the streetscape considers the impacts of scale and mass on the adjacent surrounding homes.



Figure 16: The height, width, materials and landscape treatment of this infill echo the existing units on either side.



- 3.2.2 In cases where larger infill development backs on to lower-scale residential properties or public open space, provide a suitable buffer zone in order to address bulk, massing, and privacy concerns.
- 3.2.3 Where the new development is higher than the existing buildings, create a transition in building heights through the harmonization and manipulation of mass. Add architectural features such as porches and bays, and use materials, colours and textures to visually reduce the height and mass of the new building.
- 3.2.4 Locate roof projections, which provide access to decks and patios, so that height impacts are reduced.
- 3.2.5 To reduce the perceived height of the building, as contributed to by the parapet around a rooftop use, consider materials, such as frosted plexiglass, which reduce height impacts and at the same time maintain a level of privacy.
- 3.2.6 If the new development is significantly larger than the existing adjacent buildings, create a transition in building widths by visually dividing the building into smaller sections that approximate the width of the neighbours and scaling down the height as it approaches the neighbours.

3.3 Architectural Style and Facades

- 3.3.1 Design all sides of a building that face public streets and open spaces to a similar level of quality and detail. Avoid large blank walls that are visible from the street, other public spaces, or adjacent properties.



Figure 17: The curved façade, echoed by the curved arbour, creates a unique corner treatment that adds interest to the public realm. The significant glazing contributes to community surveillance.

- 3.3.2 Design infill to be rich in detail and to enhance public streets and spaces, while also responding to the established patterns of the street and neighbourhood. To appropriately transition into an established neighbourhood, consider elements from the neighbourhood such as:
 - Materials, patterns and colours used in wall treatments;
 - Cornice lines, form of the roofline and chimney details;
 - Size, shape, placement and number of doors and windows; and



- The pattern and location of projections, recesses, front porches, stoops, and balconies.



Figure 18: These townhouses pick up on the materials and colours of the existing residences while at the same time incorporate more modern design elements.

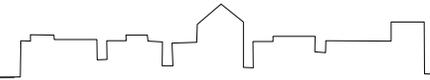
- 3.3.3 Provide primary building entrances that are inviting and visible from the street by:
- Using quality and eye-catching materials and features at the entry;
 - Adding architectural elements such as porches which promote street-oriented interaction;
 - Keeping front doors prominent and close to the ground to match the pattern of the doors on the street and to

minimize exterior stairs for accessibility, as well as to ease year-round maintenance; and

- Where the front door does not face the street, use architectural detailing, lighting and landscape design to clearly indicate the location and route to the front door.
- 3.3.4 Ensure that when one or more units are constructed on adjacent properties, they relate to each other and the existing fabric on street. At the same time, design the infill units with distinguishing characteristics (e.g., different materials, colours, rooflines, windows and door treatments) so that they have distinct identities.



Figure 19: A covered porch articulates the front façade and highlights the entrance to this home.



- 3.3.5 Locate front doors at an elevation that reflects the dominant and desirable pattern of door heights in the neighbourhood. A first-floor elevation that is the average of that of the surrounding homes allows for better integration with the neighbourhood pattern of doors, entries, porches and landscape.
- 3.3.6 Where they are in keeping with the character of the neighbourhood, add front yard projections, such as porches, bay windows and balconies, to enhance the façade of the infill and contribute to the sociability of the street.

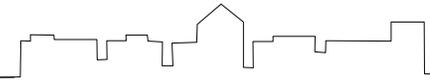


Figures 20: This semi-detached home is designed so that the two units are compatible but not identical to each other.

- 3.3.7 Use the past to inform approaches to design; reinterpret local vernacular in a contemporary way.
- 3.3.8 Harmonize with the traditional materials of the neighbourhood when in the context of a heritage streetscape.



Figure 21: This semi-detached infill unites two different architectural styles. The renovated unit on the left is attached to the contemporary middle unit but reflects the form and character of the existing single-detached red brick home. The contemporary unit adopts the colours of the renovated unit to blend into the streetscape.



Figures 22 and 23: Front doors and windows close to grade offer an attractive edge to the public sidewalk. Lowering the elevation of the first floor reduces the need for stair projections, thereby allowing for maximum soft surface front yard area.

4.0 Parking and Garages

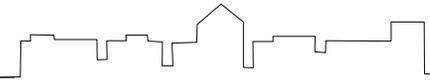
Create infill that supports the quality of the public streetscape and enriches the pedestrian experience. To preserve liveable city streets, a high-quality built environment is as important a consideration as the need for parking and servicing. Buildings define the edges and richness of a public space.

If a house presents only a garage door as its primary face on the public street, the result is a loss of a quality environment for the neighbourhood. A pedestrian's enjoyment of these city spaces diminishes if the pattern of blank garage faces repeats itself down the length of a city street.

A garage must not dominate any façade facing a street, public space or other residential dwelling. Soft landscaping should prevail for its aesthetic and environmental value. The goal is to design safe and environmentally friendly communities with an appropriate interface between pedestrians, cyclists and vehicles.

Design Guidelines

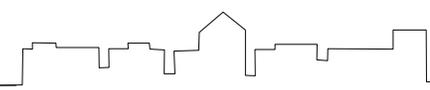
- 4.1 Where such features are permitted by the Zoning By-law, limit the area occupied by driveways and parking spaces to allow for greater amounts of aggregated soft landscaping in the front and rear yards. Reduce the width and length of driveways and parking spots and use permeable pavers to minimize the visual and environmental impacts of hard surface areas.
- 4.2 Where driveways and walkways are in close proximity to each other, use contrasting materials or landscaping to distinguish and highlight the walkway to front door.



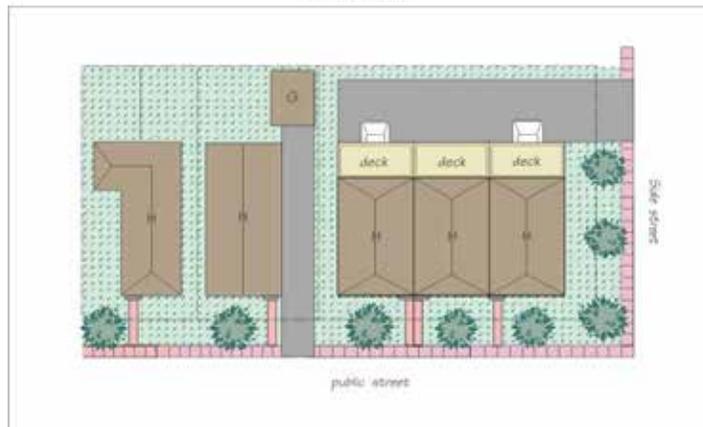
- 4.3 In order to minimize paved surface area and pedestrian/vehicular conflicts at the sidewalk, and to maximize room for soft landscaping and on-street parking, build shared underground parking that is contained within the site when multiple units are proposed, if parking is required.
- 4.4 In order to maximize the area of green front yard and to emphasize the dwelling façade, provide driveways to detached rear garages or parking areas (where parking is required), if the provision of driveways is in keeping with the neighbourhood character.
- 4.5 In neighbourhoods with open rear public lanes and on corner lots, provide parking in the rear with access from the lane or flanking street.
- 4.6 Where access to a garage is at the front, design infill so that the proportional relationship between the width of the garage and the width of the lot is similar to the pattern of the neighbourhood. For example, if front garages occupy 25% of the lot frontage of existing homes, reflect this characteristic in the proposed infill home.



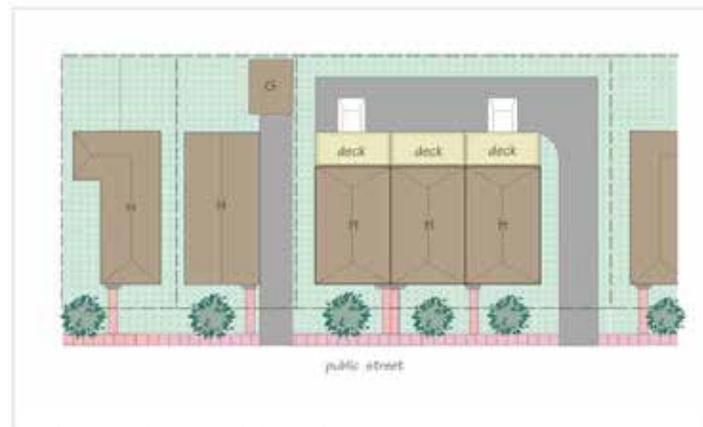
Figure 24: This detached rear garage fits with the neighbourhood parking pattern and permits more front yard landscaping.



3 townhouse infill with parking at the back on corner lot



3 townhouse infill with parking at the back in existing neighbourhood



Figures 25 and 26: A single shared access driveway for multiple units matches the neighbourhood pattern of parking at the back. A single vehicular access reduces vehicle/pedestrian conflict, allows for more soft landscaping in the front yard, and permits more on-street parking.



Figure 27: The design of this infill minimizes the impact of car storage by locating shared parking behind the development, internal to the site and accessed through a low entryway.

- 4.7 Limit the number and width of access depressions (curb cuts) and share driveways in order to maintain as much on-street parking as possible.
- 4.8 Avoid sloped driveways to the basement garages of detached and semi-detached houses, to avoid creating a pit in the front yard and/or at the street edge.
- 4.9 Where front garages are permitted, recess garages behind the front façade and make windows, projecting balconies, living space and landscaping the dominant elements facing the public streetscape.

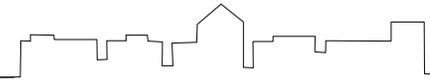


Figure 28: The architectural detailing on this semi-detached residence highlights the structure and not the garage and covered parking spot. Each half is also architecturally distinctly different from the other.



Figure 29: Turf block provides a stable base for parking while increasing on-site infiltration of surfacewater.

- 4.10 In order to increase the amount of surface water infiltration, in particular on narrow lots where paved areas occupy a large percentage of the yard, use permeable paving for hard surface areas (e.g., parking spots, walkways and driveways). Turfblock, cobblestone, honeycomb block, and wheel strips, that are hard, stable and dust resistant, can all be used as alternatives to conventional paving and asphalt.



5.0 Heritage Building Alterations/Additions

Revitalizing and adding on to existing buildings is a fundamental principle of city building. Older structures, with updated interiors, rejuvenated exteriors, new uses and added facilities, are good neighbours. As familiar landmarks in the community, they represent prudent development and conserve the environment through reduced landfill. Heritage buildings require special attention and are covered under their own legislation under the *Ontario Heritage Act*.

Design Guidelines:

- 5.1 Respect the municipal and provincial policies specifically related to additions and infill associated with heritage properties and districts – in particular, OP Section 4.5.2 and the Provincial Policy Statement (2020), Section 2.6, Cultural Heritage and Archaeology. Since many older residential parts of Ottawa are within designated Heritage Conservation Districts, the relevant district studies, guidelines and plans apply.
- 5.2 Complement the character and style of the existing building as well as the attributes of the surrounding area.
- 5.3 Respect and conserve the heritage value when introducing a new addition to an historic building and/or place.
- 5.4 Use materials and finishes that are predominant in a neighbourhood with heritage character. Traditional materials and finishes, rather than simply the

traditional building form, can be used as an effective mechanism to balance new with old. Select colours and materials that enhance, or harmonize with, the existing character of development in the area.

- 5.5 Make new development physically and visually compatible with and distinguishable from the historic place. Look for opportunities to be innovative and creative when blending new development with the existing context.
- 5.6 Enhance and maintain the amenity and continuity of a heritage streetscape.
- 5.7 Recognize the surrounding older architectural vocabulary and reference this in the scale, proportion and materials of the new infill.
- 5.8 Safeguard and protect views to adjacent or nearby valued older and/or landmark buildings and structures.
- 5.9 Protect and incorporate existing site features such as large trees, fencing, stone walls, stonepaving, etc.
- 5.10 Design additions either secondary to and framing the heritage showpiece, or design additions as visually separate and distinct from the heritage structure.

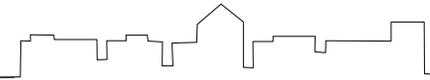


Figure 30: The red brick infill addition, which is set back and to the right of this neighbourhood building, blends into the existing context through its compatible composition, materials and colours. Its placement on the site showcases the heritage building.

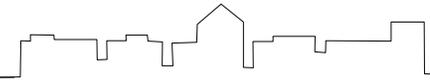
6.0 Service Elements

Reduce the negative aesthetic impact on streets and open spaces of service elements such as utility boxes, garbage storage, loading docks, vehicle access and egress (such as ramps to parking), air conditioner compressors, utility meters and transformers.

Services can be incorporated into the design of new development and screened from view so that they do not diminish the quality or safety of the public streetscape.

Design Guidelines:

- 6.1 Integrate and screen service elements (such as loading areas, garbage and recycling storage, utility meters, transformers, heating, ventilation and air conditioning equipment) into the design of the building so that they are not visible from the street and/or adjacent public spaces. Conceal these elements using a variety of methods such as containment, hard and soft landscaping, and decorative screening, without unduly limiting access, safe operations and maintenance.
- 6.2 Where there is no garage, store garbage, green bins and recycling bins in a rear shed or, if functional space allows, in a small storage space that is within the building but with outdoor access at the side or rear, or outdoors at the side of the building. Do not replace the storage function of a garage with a storage unit that is visible on the front façade of the home.
- 6.3 Ensure screening does not interfere with the safe movement of pedestrians and vehicles.



- 6.4 Locate ventilation out-takes so odours do not spill into public areas or private residential spaces.
- 6.5 Respect safety clearances and setbacks from overhead and underground services and utilities.
- 6.6 Group utility boxes to minimize their visual impact. Consider innovative methods of containing utility services on or within streetscape features such as gateways, lamp posts, transit shelters, etc., when determining appropriate locations for large utility equipment and utility cluster sites.



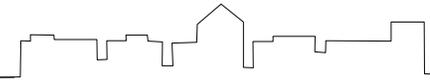
Figure 31: Service elements are integrated into the design of this home by making them visually less prominent.

7.0 Infill on Narrow Lots

In some neighbourhoods, the lot widths permitted by the Zoning By-law are much narrower than existing lots and, as a result, it can be more difficult to achieve a complementary fit. This is particularly true for development on the narrowest lots (less than 6m in width), where many functions must be squeezed into a narrow area. Particular attention to design and context is required to ensure a desirable fit for infill on narrow lots.

All the previous sections of this document apply to small lots; guidelines are given in this section to place particular emphasis on the issues surrounding narrow lots and to re-emphasize certain guidelines.

- 7.1 Design buildings where the principal living space is at grade and where ground floor doors and windows face the street and create possibilities for interaction with the neighbourhood.
- 7.2 Do not create a dwelling on stilts as a means to provide parking under the dwelling or access to rear parking.
- 7.3 Limit the width of driveways, parking spaces and walkways in the front yard in order to maximize the amount of soft surface area remaining in the front yard. On lots of 6m or less in width, provide one driveway access to shared parking for multiple lots, instead of separate accesses to individual garages or parking spaces.
- 7.4 Locate hard surface areas so that the largest area of contiguous greenspace can be maintained.



- 7.5 Ensure that there is sufficient space to park a single vehicle without overhanging the sidewalk or curb.
- 7.6 Construct hard surface areas out of porous materials to increase on site surface water infiltration.
- 7.7 Where there are healthy existing trees, site driveways and parking spaces on the property in such a way that the trees can be retained. Retention of healthy mature trees should take precedence over the provision of parking.
- 7.8 When planting new trees in an area with limited soil volume and planting area (less than 9m² per tree), use materials and planting techniques (e.g., Silva Cells or similar planting systems) that improve tree growth conditions and limit the impacts of soil compaction and road salt.
- 7.9 Incorporate architectural features, such as porches, that reflect neighbourhood character.
- 7.10 Store garbage, recycling and green bins in a rear shed, or in a small storage space that is within the building, but with outdoor access at the side or rear, or outdoors at the side of the building. Do not create a storage unit that occupies the front façade of the home.

Glossary

Accessibility: The ease with which a building or place can be reached.

Amenity: Elements that contribute to an area's needs, whether social, environmental or cultural and promotes the comfortable use of the space.

Architectural elements: Prominent or significant parts of the physical building or structure that contribute to the overall design.

Articulation: Architectural detail that gives a building interest and added richness.

Buffer zone: an area to be used for planting/screening to mitigate the impact of an adjacent use.

Building mass: The combined effect of the shape and bulk of a building or group of buildings, including height, width and depth.

Built form: Buildings and structures, their density, scale (height and massing) and appearance.

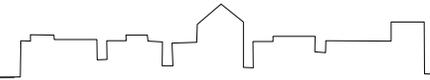
Block: An area surrounded by a set of streets.

Character: A place with its own identity.

CHMC: Canada Mortgage and Housing Corporation.

Context: The setting of a site and its adjacent uses; it can include the houses on a street, the trees, the neighbourhood and the pedestrian environment.

Driveway: A private way used for vehicular access from a parking space to a public street.



Fabric: The pattern of the arrangement of street blocks, lots and buildings.

Façade: The principal face of a building (also referred to as the front wall).

Front wall: The main exterior wall of a residential building located closest to the front lot line.

Front yard: The space between the property line and the structure facing the public street.

Glazing: A transparent part of a wall, usually made of glass or plastic.

Grade: Ground level.

Grain: see *Fabric*.

Green roof: Provides recreational amenity, reduces storm water run-off, helps insulate buildings, reduces heat infiltration, filters rainwater and requires less energy to cool.

Infrastructure: Physical structures that form the foundation for development. Infrastructure includes wastewater and water works, electric power, communications, transit and transportation facilities, and oil and gas pipelines and associated facilities.

Landscaped buffer: A landscaped area along the perimeter of a lot that screens certain uses from one another or from the public street.

Legibility: The ease by which an area can be understood and navigated by both its residents and the world at large.

Light pollution: Light created from excessive illumination, by unshielded or misaligned light fixtures, and by inefficient lamp

sources, with health implications to humans and wildlife.

Lot width: The horizontal distances between the side lot lines.

Official Plan: the Official Plan of the City of Ottawa (2021) as amended from time to time.

Pedestrian scale: A size (of building, space) that a pedestrian perceives as not dominating or overpowering.

Permeability: The variety of routes and views through something that feels pleasant and safe.

Private way: Private driveways within a Planned Unit Development (PUD) that leads to a public street.

Property line: The legal boundary of a property.

Public Lane: A narrow street at the back of buildings, generally used for service and parking.

Public realm: The streets, lanes, parks and open spaces (whether publicly or privately owned) that are free and available to anyone to use.

Public Streetscape: The overall character and appearance of a street formed by buildings and landscape features that frame the public street. Includes plants, lighting, street furniture, paving, public utilities, etc.

Planned Unit Development: Two or more residential use buildings on the same lot.

Scale: The size of a building in relation to its surroundings and to the size of a person (see *Pedestrian Scale*).

Setback: The required distance from a road, property line or another structure, within which no building can be located.



Soft landscape: The area used for planting.

Soft landscaping: Includes trees, shrubs, hedges, ornamental plantings, grass and ground cover.

Street: A public street.

Streetscape character: A streetscape with characteristics based on street age, building siting, landscape patterns and natural features.

Streetwall: A line of buildings that frames the street.

Style: Architectural vocabulary and appearance; can reflect historic or modern.

Urban Design: The art of making places; includes buildings, groups of buildings and the spaces between them.

Walkway: A walking area that connects the street or public sidewalk to the front door of a residence.