



Community and Sustainable Design Report

County of Simcoe Social and Community Services and Housing Development
20 Rose Street, City of Barrie



Prepared for: The Simcoe County Housing Corporation

Prepared by: Rachelle Hamelin RPP, MCIP, County of Simcoe

Reviewed by: Michael McKnight B.Arch. OAA, McKnight Charron Limited

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1.0 Purpose

The Community and Sustainability Design Report has been prepared in support of the Simcoe County Housing Corporation's Site Plan Approval (SPA) application for 20 Rose Street in the City of Barrie to permit the development of a rental affordable housing and community and social services hub.

This Community and Sustainability Design Report is intended to supplement the 'Urban Design Report', dated May 1, 2024, and to provide additional description of the proposed development's design objectives, features, and matters relating to public access, accessibility, health, safety, and sustainable design elements.

As part of the Community and Sustainable Design Report, several drawings, analysis diagrams, and illustrations have been included, and listed in the Table of Figures, to support the proposed development.

2.0 Site Context

The Site, 20 Rose Street, is located in the built-up area within the City of Barrie (Figure 1). The Site is approximately 1.9 hectares (4.7 acres) in size and is situated in the northeastern quadrant of the city. It is the former site of the Ontario Provincial Police (OPP) detachment. The demolition of the structures on the property was completed in 2021. A modular building is currently on the site however, it will be relocated to an alternate location prior to site alteration so that the proposed mixed-use affordable housing development can be initiated.

The surrounding neighborhood is generally a residential area with a mix of low-density residential housing and is in proximity to the commercial area along Bayfield Street and employment lands south of Highway 400. In addition, the Site is within walking distance to amenities such as schools, parks, shopping centres, and restaurants.

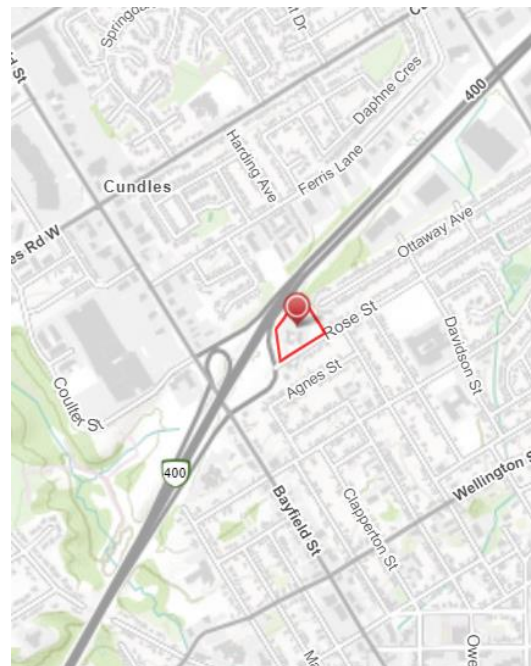


Figure 1: Site Location

Public transportation is available in the neighbourhood however, transit access closer to the Site would be ideal. The Site has easy access to major roads, including Bayfield Street and Highway 400. The proposed development will consist of a mixed-use residential apartment building of a nine (9) storey and an eleven (11) storey tower with a total of approximately 215 residential units and agency space for social and community services, and program rooms located at street level, as well as County services on the top levels of the proposed parking structure.

3.0 Design Vision, Guiding Principles, and Objectives

3.1 Vision Statement

To enhance the Simcoe County Housing Corporation housing portfolio and augment its sustainability to meet the increasing needs of current and future tenants, with a focus on strategic community partnerships and streamlined implementation.

The vision for the Site encompasses the community hub and affordable housing policies of the City of Barrie Official Plan including:

- Providing an appropriate range of housing types, unit sizes, affordability, and rental tenure arrangements at various densities and scales that meet the needs and income levels of current and future residents, in a sustainable manner.
- Creating complete residential development by forming a conjunction with the community and social service agency spaces in both the residential building and top levels of the parking structure.
- Enhancing Rose Street with attractive places along the corridor livable, connected, residential neighborhoods integrated with the transportation infrastructure.

The design vision is intended to implement environmental and operational sustainable rental development projects that are designed and built to exceed the Ontario Building Code energy efficiency requirements, including high-quality residential materials, and to complement the general neighbourhood character. The benefits of high-performing affordable housing, as proposed at 20 Rose Street, include increasing economic sustainability by lowering operation, replacement, maintenance, and repair costs and reducing greenhouse gas emissions. Additionally, for residents, it will result in lowered utility bills.

3.2 Design Principles

The fundamental principles of the development's proposed design include consideration of the proportion and scale, pattern and contrast, balance, access, and sustainability.

The proposed design considers the residential building's proportion and scale by including a bottom, middle, and top proportions. The bottom portion of the building is anchored in a heavier stone base while the middle and top have precast cornices and coloured panels, brick masonry, residential window patterns, and a conservative colour scheme appropriate for a residential appearance and façade that is compatible with the character of the surrounding community.

The physical scale of the buildings has been considered by the application through the use of setbacks and stepped landscaped features. The proposed residential building consists of two residential towers to assist with the visual impacts of the taller built form and reduce effects from massing on adjacent uses. The proposed mixed-use residential building towers are staggered two storeys to create visual interest in the skyline, minimize shadowing, and improve sunlight and sky views. In addition, the proposed tower design reduces the visual and physical impact of tall buildings (as opposed to a slab-style building design, to accommodate the same number of residential units).

The proposed design of the buildings include a contemporary pattern and mix of contrasting colours and materials. The proposed colour scheme (primarily red brick and gray stone) will fit in well with the surrounding properties – most of which are all masonry. The rendering (Figure 2) below identifies the proposed exterior material selection:

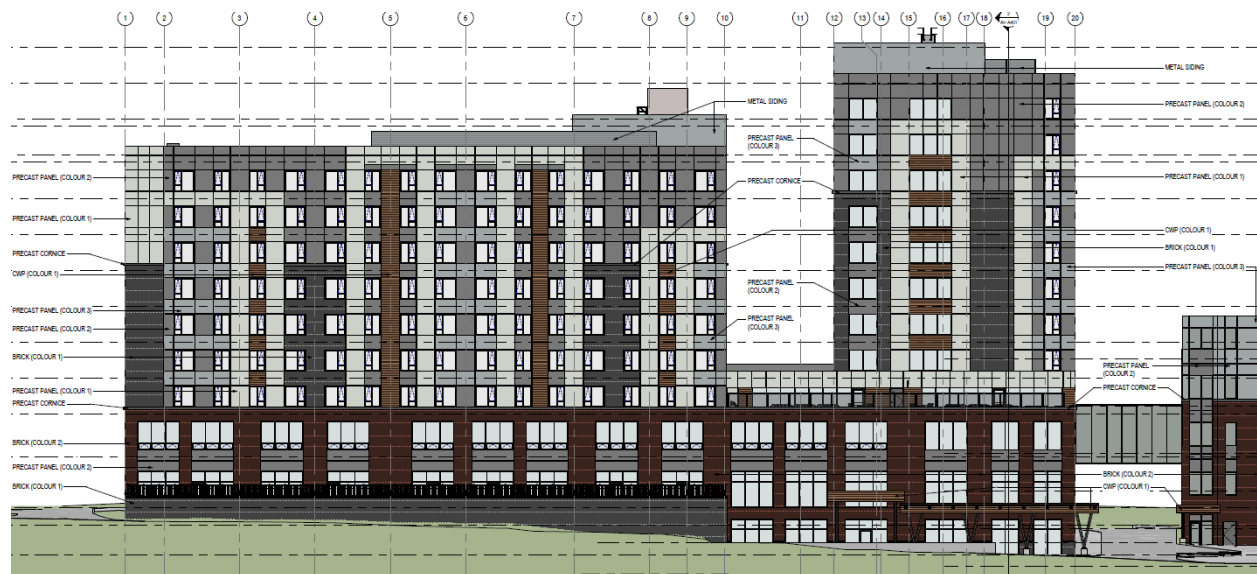


Figure 2: Buildings' design and materials

Exterior high-quality materials include solid stone block and brick finishes and durable paneling such as the woodgrain composite metal panels and siding shown in the photos (Figures 3 & 4) below of the recently constructed Simcoe County Housing Corporation affordable housing and social and community services hub built in the City of Orillia:



Figure 3: Primary Entrance, SCHC - Orillia



Figure 4: Material selection, SCHC - Orillia

Building material selection is included in the Simcoe County Housing Corporation projects proformas to quantify the life cycle costing of building material selections. Life cycle costing (LCC) is a technique to establish the total cost of ownership. It addresses all the elements of the cost of a product or service and produces a spend profile over its anticipated lifespan. The results of the LCC analysis for 20 Rose Street development contribute to a more sustainable building and focus on quality materials with projected high-performance standards, long life cycles, and high efficiencies; and where possible, recycle and/or salvage construction, demolition, and land clearing waste.

Additionally, sustainability principles are also integrated into the energy efficiency design of the proposed building design and construction and low impact development stormwater management site design.

3.3 *Design Objectives*

Design objectives for Simcoe County Housing Corporation rental projects are to design affordable housing that is compatible and beneficial by incorporating the following features:

- Provide comfort and security;
- Incorporate quality building materials in character with the surrounding neighbourhood;
- Integrate street design and/or redesign into a development and natural environment;
- Offer neighbourhood inclusion through public walkways, bike paths and inviting entrances, landscaping;
- Address sustainable development in the building and site such as low-impact stormwater design; and
- Incorporate universal design principles and accessibility features.

3.4 *Design Directions and Considerations*

The architectural massing and façade design offers a classic contemporary look and character of the residential building and the parking structure with high-quality external materials while providing a transition between the controlled access Highway 400 and the existing residential neighbourhood. Site and architectural design include significant energy efficiency design considerations and features.

All the apartment units utilize universal design practices and can accommodate aging-in-place and persons with disabilities. The residential tenants will have access to a shared laundry facility, two tenant common rooms that can be used for programs, and an outdoor patio amenity area. A minimum of 15 percent of the residential suites distributed throughout the building will be designed with additional accessibility features such as barrier-free paths of travel and use including in the kitchen and bathrooms. In addition, the tenant common rooms, laundry facility, public washrooms and seating areas, and community rooms will be barrier-free.

The development will include non-residential community hub uses on the ground and lower street-levels of the residential building and on the top levels of the parking structure. The residential building is proposed to include a licensed childcare centre, partner agency space potentially for early learning and/or health services, as well as partner agency space potentially for education and/or health services. Co-location partnership commitments remain tentative until such time a building permit is issued and tenancy timing can be confirmed.

A community program room and community kitchen are located adjacent to the residential building's primary entrance in the proposed design. The on-site services and community rooms

present partnership opportunities with community agencies to work directly with building residents, as well as community residents. Resources and supports through County of Simcoe services include Ontario Works, Children and Community Services, and Social Housing services.

Due to property constraints, a parking structure is required to accommodate parking standards. The proposed parking structure is designed to accommodate three levels of parking, plus two levels for the County of Simcoe Social and Community Services, more specifically the Ontario Works, Children's Services, and Social Housing office space. One and a half (1½) parking levels are designed to be below grade, one parking level at grade, and one and a half (1½) parking levels above grade. The parking structure is located on the eastern portion of the Site and is fully enclosed on the east and south sides to minimize any adverse impacts on neighbouring residential properties.

A street-level community-facing outdoor amenity area is proposed on the site plan. Preliminary amenity space design and additional detail are included in the Master Landscaping Plan (MP excerpt) (Figure 5).

In addition, high-quality landscaping and planting, including tree planting for the neighbouring public realm, side yards, and accessible raised planters are incorporated throughout the site to foster a residential look into the urban-style streetscape and provide safe outdoor amenities to the residents.



Figure 5: Proposed street-level public-facing amenity area (MP excerpt)



Figure 6: Penthouse and rooftop mechanical screening, SCHC - Orillia

Utilities will be grouped where possible to minimize visual impact and promote an attractive streetscape and public realm. Utilities for the proposed development will be internal and/or enclosed on the rooftop. Rooftop mechanical systems will be screened with complementary building materials similar to the design implemented in the photo (Figure 6) to the right of the recently constructed Simcoe County Housing Corporation affordable housing and social and community services hub built in the City of Orillia.

The mechanical penthouses are proposed to be located on the east-sides of both towers of the residential building and the roof level of the parking structure. Diesel generators for emergency backup power are proposed to be positioned behind the parking structure to reduce visibility and noise transmission. The backup generators will be enclosed with safety and noise reduction fencing.



Figure 7: Proposed street-level public-facing amenity area (rendering)

To maintain an attractive streetscape, rooftop mechanical equipment will be screened from public view. The tower top, being the thoughtful architectural design of the rooftop, will provide an appropriate expression to the top of the building, and will be designed to be of architectural interest and contribute to an articulated skyline and cityscape, amenity space, and environmental sustainability features, screen building mechanical or telecommunications equipment from view.

In addition, as illustrated in the rendering (Figure 7) above, the upper tier of the residential building is designed to include an outdoor patio area for residential tenants. This large patio area will include outdoor amenities such as seating and raised planter garden boxes and is sheltered from the wind with 6' tinted glass panels for privacy and bird collision reduction.

The parking structure is designed to provide a mix of materials and blend with the proposed residential building. While the parking structure is primarily for parking, the upper levels include office space for the County of Simcoe's Social and Community Services divisions including Ontario Works, Children's Services, and Social Housing. The building materials are similar to those proposed for the residential building including screening of the parking levels and matching windows on the office levels.

3.5 Glazing treatment

Glazing treatment is an integral component of architectural design, serving multiple purposes such as aesthetics, functionality, energy efficiency, noise reduction, and light transmission. In addition, the Ontario Building Code (OBC), specifies regulations regarding window design and installation, ensuring safety, accessibility, and environmental performance. Balancing these requirements ensures that windows fulfill their intended purposes effectively and enhance the overall livability of the space and building character.

A well-proportioned window design complements both the residential building and parking structure's scale and overall composition, creating a sense of balance and compatibility with the neighbourhood.

The upper levels of the residential building are designed to incorporate awning windows: hinged on top and open with a levered mechanism for accessibility and air-tightness/energy-efficiency.

The commercial windows for the lower-level agency spaces in the residential building are designed to balance functional requirements with aesthetic considerations to create inviting, efficient spaces. Factors such as daylighting, visibility, branding, and energy efficiency influenced the design decisions and the larger window selection at the street level.

4.0 Site Access

Site access is from Rose Street. Pedestrian access is focused toward the eastern portion of the Site to make it easy to enter the buildings and to move about the Site safely. The primary building entrance (Figure 8) is at street level and enters into the residential building's lower level adjacent to gathering areas such as the Community Program Room and Community Kitchen area. The covered primary entrance is positioned to optimize building access from Rose Street. The overhang provides pedestrian cover from the elements while transitioning between indoor/outdoor environments. The adjacent exterior window canopy reduces solar gain during the summer months and the varying canopy heights contribute qualities of depth and shade that create one of the characteristic patterns in the building's overall design.



The residential building's main entrance at the street level will provide immediate access to the proposed secured social and community agency space on the ground level as well as the Community Program Room and Community Kitchen (Figure 9).

Figure 8: Primary Entrance – 20 Rose Street (rendering)

building, connecting the weather-protected main pedestrian entrance to the building and the rear parking area as well as the crosswalk to the parking structure. The street face of the proposed parking structure is designed to harmonize with the podium level of the residential building and to conceal the parking levels.

Walking and alternate forms of transportation such as mobility aids are promoted through the use of path networks. Site circulation includes paved and heated walkways for winter maintenance and pedestrian safety. Walking paths in the outdoor amenity area are designed to be fully accessible such as the walkway, as shown in the photos (Figure 10) below of the recently constructed Simcoe County Housing Corporation affordable housing building in the City of Orillia:



In addition, the following features have been included in the site design:

- Good signage (with contrasting colours) and lighting;
- Provision of a layby to accommodate access to public transit, when available; and
- Walkability to neighbourhood commercial and recreational spaces.

The surface parking area is located behind the residential building to not dominate the streetscape of the development, provides logical traffic circulation patterns and is designed to provide efficient and safe emergency access.

All outdoor lighting on the Site, including lighting for the parking areas, will meet photometric requirements to ensure safety and zero “spill-over”. Pedestrian movement will be well signed and marked in accordance with the Pavement Marking and Signage Plan.

Figure 10: Pedestrian walkway, SCHC - Orillia

Due to Site topography and the existing grading along this section of Rose Street, extending the sidewalk, along the entire frontage of the Site, west from Peel Street is not included in the proposed site plan. Supplemental pedestrian crossings have been included at Rose Street and Peel Street and from the eastern portion of the Site across Rose Street for safe pedestrian access (please refer to the Traffic Impact Statement Addendum, dated April 29, 2024, for more information).

Two vehicle access points are provided to ensure safe Site egress and ingress onto and off Rose Street. The east access point, as identified on the preliminary site plan, provides access to the parking structure and visitor parking for the County’s community and social services uses proposed to occupy the upper levels, as well as the loading area at the north end of the ‘east’ tower.

The second access point, located at the west end of the Site, provides access to the loading area at the west end of the 'west' tower, the surface parking area behind the building, and safely distanced from the childcare centre drop-off area. All emergency vehicle turning radius can be accommodated on the Site. Appropriate signage to these entrances will be detailed through Site Plan Control.

Site circulation routes for service vehicles are designed to direct movements in a logical and orderly fashion. On-site circulation has been designed to limit the possibility of cars reversing or maneuvering on/off public streets. Through design considerations, site design has ensured that there is adequate access for the related waste collections service vehicle and the loading space is located adjacent to the recycling and garbage handling area.

5.0 Public Realm

The public realm is generally defined as the places and spaces publicly owned and used by the public and can include municipal streets, sidewalks and civic buildings. The proposed mixed-use development will include private space for residents and social and community services space available for community agencies and organization administration and programming use. The entire mixed-use development is designed to enhance the accessibility and social inclusion. In addition, the proposed development considers the development's surroundings in the design to create a sense of place that increases physical and social safety and well-being.

The residential building interface is set back approximately 14 meters from Rose Street curb, however due to natural grading on the site, the proposed retaining wall is approximately 5 meters from the curb. The retaining wall also serves to provide pedestrian comfort from northwest winds at the primary entrance at street level. Many design details are considered on the façade of the podium to break down the scale of the building and fit the scale of the pedestrian. The proposed design includes low podiums and massing steps which will act as horizontal breaks for downwashing wind flows, and the L-shaped form will create several vertical breaks for wind flowing through the site.

The Site has been designed to push the built form towards the street side, to create a stronger street presence, increase the public realm, and frame the site. The proposed massing provides a transition of density to adjacent land uses, recognizing that the subject lands are located in close proximity to the City's Strategic Growth Area (SGA) along the Bayfield corridor, where high-density residential development is permitted and anticipated.

The proposed massing is setback from adjacent low-density uses to allow for appropriate transition and spacious separation while recognizing the high-density land uses nearby. Collectively, this will blend the proposed built form into the diverse landscape of the area. It is the intent of the proposed design to contribute to the City of Barrie's architectural style. The use of landscaping elements will further be utilized to soften the built form and enhance building design. Building entrances are well-defined and accessible to pedestrians and are designed in compliance with the Accessibility for Ontarians with Disabilities Act (AODA).



Figure 11: Proposed streetscape/Building face cross-section

The proposal includes a step-back after the 3rd storey for a clear relationship between the scale of buildings on both sides of Rose Street - and a more harmonious streetscape/cross-section (Figure 11). Taller elements in the massing are located towards the north-west side of the Site to maintain a consistent scale of the streetscape on Rose Street, minimize impacts of height on the surrounding context, and optimize opportunities for good transition and oriented to avoid creating overlook conditions on surrounding/adjacent residential, wherever possible.

In addition, the proposed buildings are designed to provide sufficient privacy, natural light penetration into the building, and adequate views by minimizing the setback along Rose Street and the location of the parking structure between neighbouring properties and the apartment building, allowing the property to have a good opportunity for intensification and integration.

Potential wind impacts at the grade level would be limited due to the low podium and re-entrant corners of the building, as well as the moderate wind speed characteristics of the area. The wind study concluded that wind conditions on and around the existing site are suitable for pedestrian use throughout the year. The pedestrian wind safety criterion is met in all areas assessed.

The streetscape will include abundant tree and shrub plantings to soften the stone finish of the retaining wall, similar to the streetscape completed in the photo (Figure 12) below at the recently constructed Simcoe County Housing Corporation affordable housing building in the City of Orillia:



Figure 12: Retaining wall and ornamental fencing, SCHC - Orillia

Street greening enhances the aesthetic appeal of the streetscape, improves environmental quality, softens hardscaping features, and adds to a sense of neighbourhood community.

Fencing proposed for the Licenced Childcare playground areas will be ornamental design made of quality materials and designed in accordance with the *Child Care and Early Years Act, 2014, S.O. 2014* Ontario Regulations

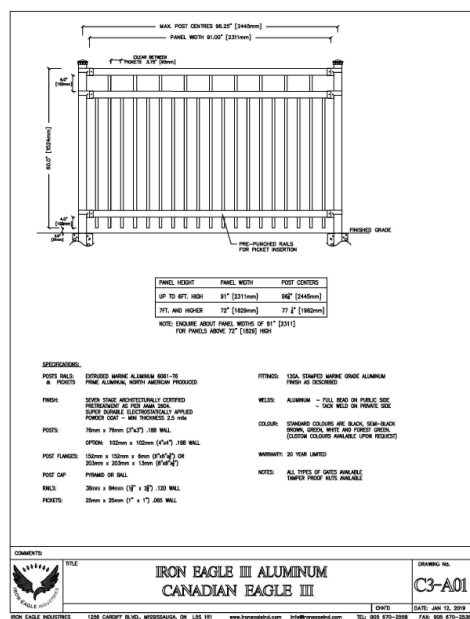


Figure 13: Proposed ornamental fencing detail (MP excerpt)

In addition to tree plantings, the streetscape is also proposed to be enhanced with a park-like setting including play equipment, walking paths, a gazebo, and seating areas as illustrated in the rendering (Figure 14) below. The proposed location of the outdoor amenity area also creates natural surveillance by having units overlook public outdoor amenity spaces.



Figure 14: Conceptual street-level public-facing amenity area

The outdoor amenity area will include accessible playground equipment for residents of all age groups and abilities, such as the play equipment including the recently constructed Simcoe County Housing Corporation affordable housing building in the City of Orillia in the photo (Figure 15) below:



Figure 15: Ground level public-facing amenity area, SCHC - Orillia

The location of the built form will contribute to an animated streetscape and improved public realm while providing a focal point at the adjoining intersection.

6.0 Energy Conservation and Sustainability Standards

Energy conservation is demonstrated in the County's experience exceeding energy efficiency standards. The proposed building will be designed to incorporate a Passive House (PH) design, including energy-efficient mechanical and electrical design, to achieve optimum building performance. PH design further improves energy efficiency by minimizing air leakage, increasing indoor air quality, providing protection from noise pollution, and reducing operation and utility costs. Consideration of PH design as an intentional part of the project would have the additional benefit of increasing economic sustainability by lowering greenhouse gas emissions and additionally, for residents, it will result in lowered utility bills with more money available for families' necessities.

A green roof will be installed on top of the tiered building stepbacks. Green roofs provide energy efficiency as well as reduction of water runoff. In addition to maximizing energy efficiency, efforts to reduce carbon footprint and greenhouse gas emissions will also be made.

The Energy Modelling Report – completed for the residential building demonstrates the proposed building design will achieve a 43.2% energy reduction over the Ontario Building Code and a 59.3% CO₂ emissions reduction.

An secure indoor bike storage room and separate indoor e-bike and mobility scooter storage room are included on the street level floorplan. In addition, the Site will be designed for electric vehicle (EV) charging stations. It is anticipated future demand will require adaptation for EVs. Therefore, the site design will have future capacity and electrical panel space to accommodate several future EV charging stations.

7.0 Views

The proposed site and building designs create high-quality living and working environments that mitigate the impacts of the highway, consider access to daylight, sky view, views, air quality & circulation, and services, and amenities.

The Southeastern View (Figure 16) from the Site will include a treed residential urban area, and the upper levels will have views of the Downtown area including midrise buildings and Kempenfelt Bay.



Figure 16: View looking Southeast (rendering)

The Eastern view from the Site will include a treed residential urban area, and the upper levels will have views of the adjacent manufacturing area and in the distance likely be able to see Georgian College and the Royal Victoria Hospital.

The Northwestern View (Figure 17) from the Site will include Highway 400, the commercial area along Bayfield Street, and the mix of residential and commercial areas north of Highway 400.



Figure 17: View looking Northwest (rendering)

8.0 Summary and Conclusion

The proposed development design is guided and informed by good community design principles and objectives.

The fundamental principles of the development's proposed design include consideration of the proportion and scale, pattern and contrast, balance, access, and sustainability. The proposed design complements both the residential building and parking structure's scale and overall composition, creating a sense of balance and compatibility with the neighbourhood. In addition, the proposed development incorporates design best practices such as Passive House design, universal design, crime prevention design, and AODA standards and requirements guide the proposed design directions.

The design objectives for Simcoe County Housing Corporation rental affordable housing and social and community services hub is to design a mixed-use development that is compatible and beneficial by incorporating comfort and security, quality building materials, sense of place and integrated public realm, sustainable design features and energy efficiency, and accessibility and inclusion.

The buildings have been designed and setback at a pedestrian scale, to contribute to a community-facing amenity area, desirable streetscape, and public realm along Rose Street. Appropriate colour scheme and quality materials have been selected for both durability and compatibility with the neighbourhood. The proposed development and site plan include safety and crime prevention principles by integrating adequate indoor and outdoor lighting for public and private spaces, creating natural surveillance by having units overlook public outdoor amenity spaces and eliminating unnecessary barriers to increase unobstructed sightlines. Furthermore, setbacks have been implemented to provide buffering and separation to adjacent uses.

The primary entrances to both the residential building and the parking structure are designed to act as prominent features, providing direct pedestrian access, which are clearly identifiable from the street.

The proposal provides for a transition of density, recognizing that the subject lands are located in close proximity to the City's Strategic Growth Area (SGA) along the Bayfield corridor, where higher-density development is planned and directed. The architectural massing and façade design offers a classic contemporary look and character of the residential building and the parking structure with high-quality external materials while providing a transition between the controlled access Highway 400 and the existing residential neighbourhood. Please also refer to Section 4.0 of the 'Urban Design Report', dated May 1, 2024 and the Planning Justification Report for details on how the proposed development addresses the applicable City of Barrie Urban Design Guidelines and Official Plan design and sustainable community policies.

In conclusion, the proposed development design is appropriate to the surrounding physical site context and community, is in keeping with the City of Barrie's Urban Design Manual and conforms to Provincial and local policy context.

Respectfully submitted by,



Rachelle Hamelin RPP, MCIP



Respectfully reviewed by,



Michael McKnight, B.Arch. OAA