Uxbridge Hospital
Oak Valley Health

Urban Design Brief

4 Campbell Drive Uxbridge, Ontario

diamond schmitt

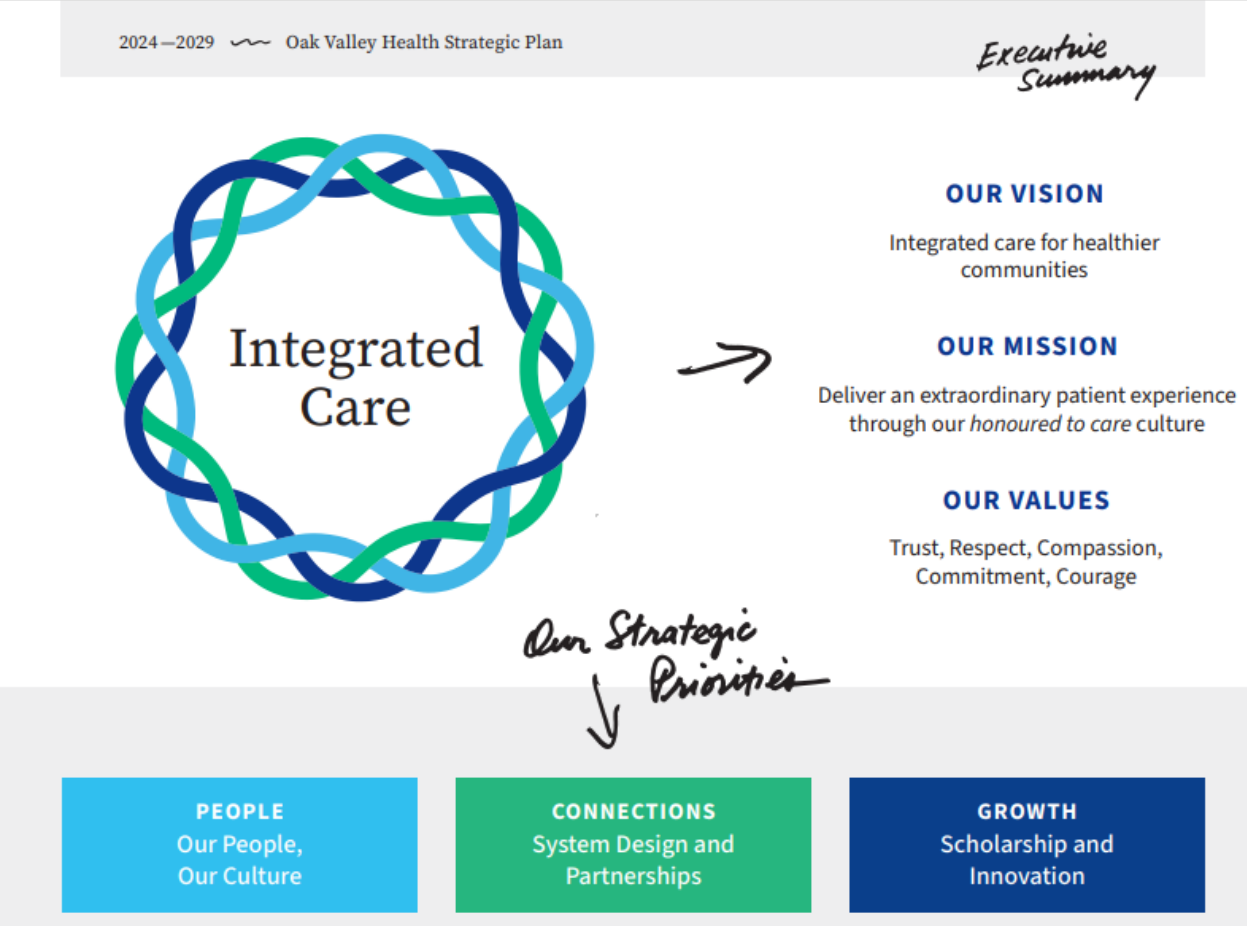
Oak Valley Health serves residents of south-east York and west Durham regions with hospital based services provided by the Uxbridge and Markham Stouffville Hospitals.

Like many rural communities in Ontario, Uxbridge is experiencing demographic challenges arising from a growing and aging population which are resulting in increased demand for health services. To respond to these demands, Oak Valley Health is planning an integrated campus of care with three interconnected facilities, including a redeveloped hospital, a primary care building (hereafter referred to as the UxMed) and a Long-Term-Care home. Together, these facilities will support the delivery of a full continuum of services for the community.

By redeveloping the Uxbridge Hospital, Oak Valley Health will address its most pressing infrastructure challenges and continue to deliver key services in acute care, emergency care, ambulatory care and diagnostic imaging to the community – albeit in modern facilities that meet contemporary care standards and incorporate OASIS principals for healthcare design. By integrating the new hospital with the UxMed, Oak Valley will leverage prior investments in primary care, provide a seamless experience for patients accessing hospital and primary care services, and reduce the capital burden that would otherwise have resulted had these services been constructed in the new hospital. Finally, the addition and connection of the Long-Term Care home and the inclusion of Alternative Level of Care (ALC) beds will provide needed LTC capacity within the community while also addressing pressures on acute-care bed capacity in the hospital.

Oak Valley Health's strategic Plan outlines key priorities and principals that inform the delivery of care:

Fig 1 – Oak Valley Health Strategic Plan 2024 – 2029



The strategic plan is reflected in design objectives that have been translated into the design of the hospital and long-term care facilities. These include:

Excellent Patient Experience:

- Include flexible, standardized and multi-use spaces to support a small-team approach to delivering care
- Provide safe spaces for mental health and patients with dementia (exit seekers), infectious patients and pediatric patients

- Include more space for family in patient and waiting spaces
- The hospital should present best-in-class design, fully connected to the broader health system, integrating the latest technology

Embracing Our Community:

- Include the community in the development of the design to provide ownership and capture local spirit. "Co-design" has been identified as a principle to ensure that the Hospital meets community needs
- Create a design that represents the caring values of the hospital, while projecting confidence in the OVH system capability
- Maintain the comfort that the community feels with the hospital (simplicity of wayfinding, small-scale feel) while meeting current standards. "Sophisticated but grounded in a local context".
- Integrate community art in the interior design

Empowering Our People

- Maintain the "family" culture that the hospital staff has developed while addressing the deficiencies of the current hospital building by meeting or exceeding modern facility standards.
- Consider staff volumes and nighttime scenarios. Develop a compact/collapsible design that supports team cohesion and staff safety that is also flexible to address patient volumes
- Include teaching and collaboration spaces that support learning, both face to face and virtual
- Maximize staff wellness by providing areas of respite, a wellness centre, and staff amenity areas.

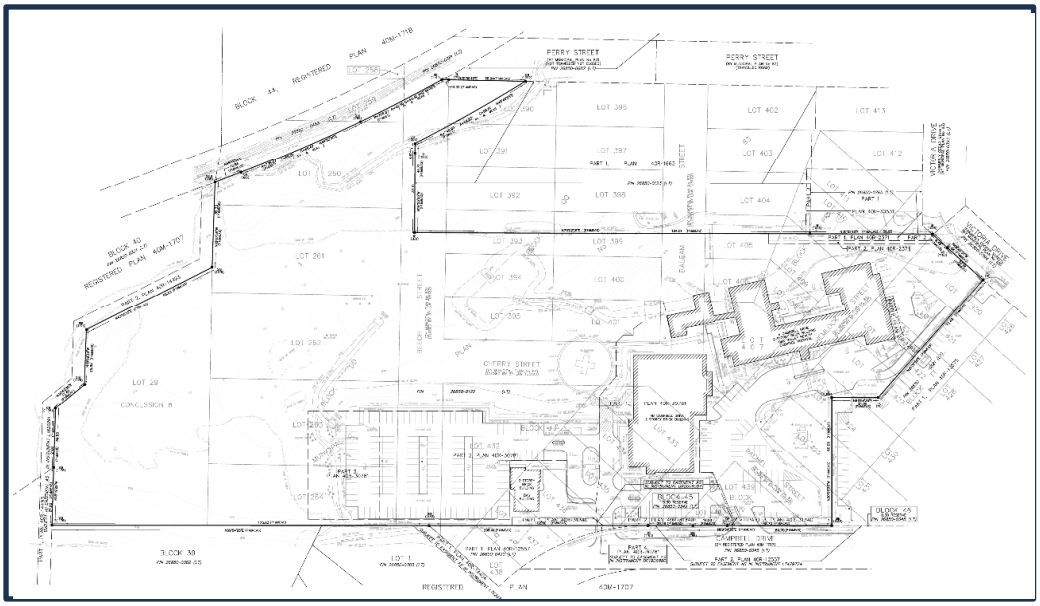
Context

The Uxbridge Hospital site is bounded by Victoria Drive to the east and Campbell Drive to the south. To the west, the hospital property abuts an existing heritage rail line and creek and to the north the property faces a 2-stroey municipally owned apartment complex. A large portion of the west property is undeveloped and partially falls within the LSRCA regulation limit. Both Campbell Drive and Victoria Drive are predominantly residential in nature and populated with single-family homes. Directly east of the hospital site is a 3-storey masonry medical office building.

The hospital site is served by three entrance driveways – one located off of Victoria Drive, which is predominantly used for service deliveries, and two from Campbell Drive which provide public and staff access to both the hospital and the Uxmed building. Parking areas are generally distributed around the site, with a small short-term parking area located south of the existing hospital and larger, gated parking area located to the west of the UxMed building.

The hospital site is presently organized around three existing structures. The existing hospital is a 2-storey wood-frame building which will be demolished to make way for a new facility. A one-storey ambulance garage will also be demolished to expand parking capacity. Finally, the UxMed building is a 2-storey medical office building which will remain. The new hospital will connect to this building to form a single facility.

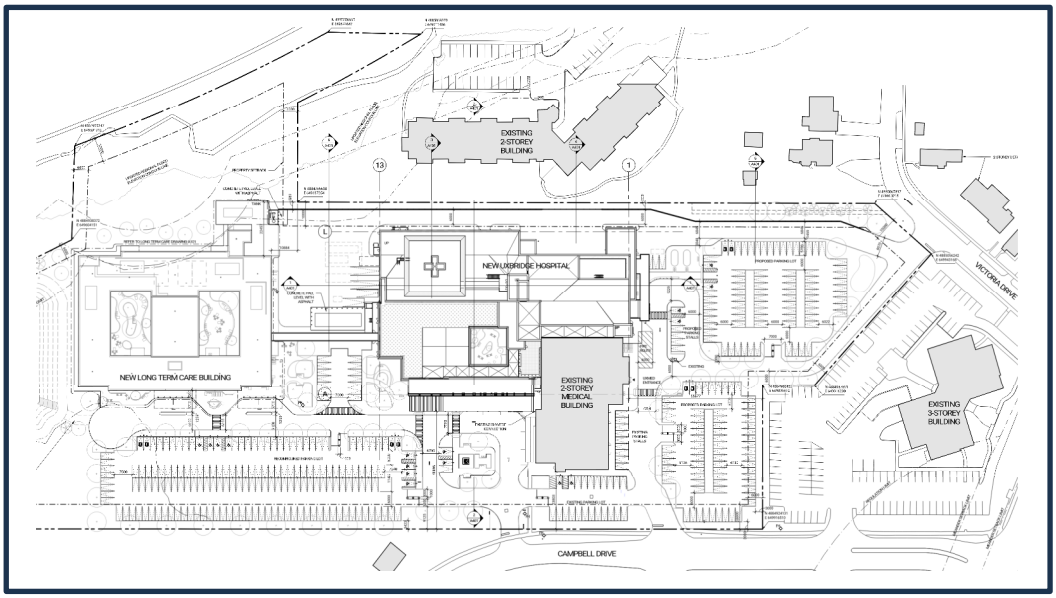
Fig 2 – Existing Site Survey



In redeveloping the site, the following principles were deemed to be critical to future hospital operations:

- Simplify access for patients and visitors by ensuring that public access routes are adequately separated from service routes
- Provide highly visible public entrances
- Size vehicular drop-off areas appropriately. Ensure that adequate short-term parking is available near entry points
- Design loading and service routes to accommodate over-sized vehicles to fully support hospital operations
- Design ambulance access routes to support one-directional traffic; minimize conflicts with public and service routes to the extent possible
- Maximize available surface parking
- Incorporate soft landscaping elements and bioswales to assist with stormwater management.
- Realize the shortest possible construction schedule by simplifying project phasing so that the new hospital is operational as soon as possible.

Fig 3 – Proposed site Plan



The resulting site plan is illustrated in Fig 3. The new hospital is positioned to the north and west of the UxMed, fully connected on two levels at the north building face. The hospital's main entry is located to the south, where it shares a redeveloped entry drive with the UxMed main entrance. Emergency department access is provided to the east, while access to loading facilities is provided at the west, via a service road constructed to the north of the new hospital. The three municipal street entrances remain intact, with the two entry points from Campbell Drive providing public access to the main entrance and UxMed building (west) and emergency department drop-off (east). The entry from Victoria Drive provides access to the new service road, which accommodates service deliveries as well as ambulance traffic for emergency and patient transfers.

The UxMed vehicular drop off will be expanded to serve the new main hospital entrance, incorporating additional covered lay-by spaces and short-term, metered parking.

The emergency department drop-off similarly incorporates covered lay-by and short-term parking and separates public vehicles from ambulance traffic, which will enter the site via the north service road and be accommodated in a dedicated

ambulance garage. Parking spaces for police vehicles is accommodated in close proximity.

Fire-fighting accommodations have been included in the site planning. Access is provided to all building faces; the main response point is near to the Emergency Department walk-in entrance, which is overseen by security personnel. The main entrance will include a fire alarm annunciator panel.

Loading facilities separate clean and soiled docks and provide space for waste handling including a combined compactor, open bin and recycling bins. Turning facilities within the loading area accommodate articulated trucks to support linen services as well as the maneuvers of the trucks servicing the LTC.

Surface parking will be developed across the site to maximize the number of spaces. Internal access roads are organized to allow for controlled access to parking lots to maximize revenue potential, while permitting public to reach drop-off points and short-term parking without needing to access pay-lots. With the exception of a small number of short-term, metered spaces, all site parking will be controlled, whether it is utilized by the Hospital, UxMed or the LTC. Where appropriate, landscape areas and bioswales have been incorporated into the parking areas to visually break-up the paved areas. These interventions have been balanced against the heavy parking demands of the facility.

Landscape Design

The site design supports the hospital and future LTC initiatives towards healthcare and well-being, including accessibility and ease of wayfinding, pedagogy, and sustainability. The site programming and landscape spaces provide for an attractive and engaging landscape with focus on the incorporation of native species, pollinator supporting species, and indigenous plant species in support of the overall healthcare objectives of the project and surrounding environment. The landscape materials, both at-grade and applicable rooftop areas, will encourage naturalization and low-maintenance practices to help to reduce the long-term operational footprint for the project as well as providing the opportunity for facility users to enjoy a microcosm of the surrounding natural environment.

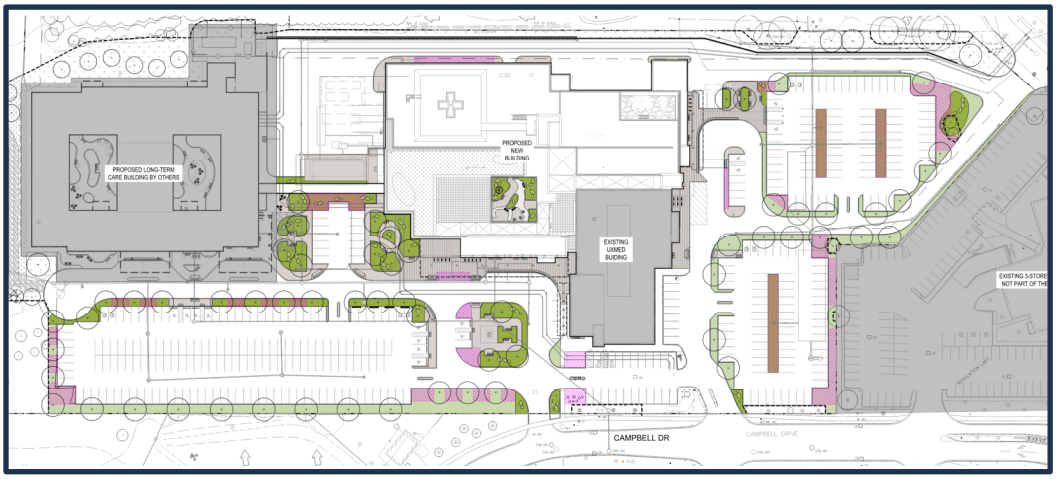
All site enhancements incorporate landscape design best practices for CPTED and comply with current municipal and AODA guidelines to create safe and barrier-

free outdoor spaces for this facility. The site design prioritizes minimum pedestrian clearways of 1.5m while aiming to maximize clearways for comfortable navigation at 2.0m where possible. Planting beds that abut paved paths of travel have curb edges to ensure wheeled devices stay on path.

Seating areas include designated spaces for users with mobility devices and select bench locations will offer opportunity to transfer from device to bench by excluding the arm rest. Benches and tables will be selected for ease of navigation. Shade for rest areas will be provided for hot weather while also providing some areas in sun for cold weather when the heat of the sun is welcomed.

Accessible parking spaces have been provided as appropriate throughout the various parking areas and entrances. Accessible paths of travel will include tactile indicators at depressed and flush curbs with consideration for tactile directional indication through the detailed design process. Rest areas will be provided every 30.0m from accessible parking spaces to the closest facility entrance.

Fig 4 – Planting Plan



Exterior Design – New Hospital

The Hospital building design combines the OVH vision to create a hospital that is reflective of the scale and character of the community with the imperatives of building durability and energy performance.

Elaborating on the work of the visioning sessions, the hospital and design team have identified four design objectives for the building expression:

- **Recreate the Site:** Much of the hospital site will be developed as part of the hospital replacement, threatening its innate rural character and connection to the greater context and ecology. In response, the building should look for opportunities to naturalize building elements to reinstate the lost landscape.
- **Respond to the Microclimate:** The new hospital will enjoy a broad southern exposure and will also be exposed to prevailing winds from the west. The building design should leverage the benefits of these elements while limiting their negative impacts, such as excessive heat gain from sun effects.
- **Appropriate Scale and Character:** The community's attachment to the hospital is connected to its small scale and sense of local context. As directed in the visioning sessions, "maintain the comfort that the community feels with the hospital (simplicity of wayfinding, small-scale feel) while meeting current standards. Sophisticated but grounded in a local context".
- **Materiality = Expression:** Expanding on the point above, the building design should incorporate materials that are familiar and speak to the local context.
- **Enhance Visibility and Connections:** The hospital should appear open and welcoming. Glazed areas should be used judiciously to reveal the inner workings of the hospital and to support wayfinding by creating visual connections between major access points. Exterior views should be available from all regularly occupied spaces and should be maximized for patient spaces to realize the benefits of biophilic design.

The redeveloped hospital will be a two-story plus penthouse facility, which will be connected to the UxMed on levels 1 and 2. The ground floor will accommodate programs that require vehicular access such as emergency, morgue and loading/logistics, as well as departments that experience heavy public access such as Diagnostic Imaging, Ambulatory Clinics, Registration and the public lobby. The second floor is occupied by acute care and pharmacy. Unoccupied areas in the UxMed building will be renovated on each level, with the ground floor housing

laboratories and certain administrative components and the second floor, housing hospital administration.

Fig 4 – Exterior View of Hospital from Campbell Drive

The ground floor departments are organized around a central exterior courtyard which provides amenity space for patients and staff, simplifies patient and visitor wayfinding and offers access to natural light and view to departments that otherwise would be buried within the large building footprint.

Fig 5 – Exterior Courtyard View

The main lobby is a two-storey volume that provides a welcoming environment for patients and visitors and an appropriately scaled entry pavilion for the new hospital. The lobby volume is integrated with a broad canopy and colonnade that provides a human-scale shelter to the drop-off.

The configuration of the second floor maximizes the building perimeter to provide exterior views to all patient rooms and regularly occupied spaces. Outdoor terraces and green roofs, where the second floor sets back from the ground floor, have been intentionally concentrated at the south side of the building to benefit from solar exposure. Terraces are sheltered from wind effects by the building mass to the north and east and by the public lobby to the south. Clerestory glazing along the north side of the lobby creates a visual link between the terrace, courtyard and public entry below.

Fig 6 – View of Roof Terrace

The size of the mechanical and electrical penthouse of the building is significant given the demands for air handling and electrical equipment. This volume covers the entire footprint of the second floor, save for the northeast corner where a sunken area is provided for placement of the building cooling towers to assist with limiting their visual impact. An acoustic and visual screen wraps around this area to further mitigate impact to adjacent properties.

To visually break down the size of this volume, the cladding includes sections of brick masonry, patterned metal siding and storm louvers.

An aluminium framed heliport will be provided above the main roof, accessible by patient transfer elevators and two separated exit stairs. Links between the heliport landing surface and elevators will be by exterior ramp c/w safety netting. The elevator vestibule has been expanded to accommodate storage and staging requirements of relevant standards and access stairs have been reconfigured to provide direct exiting from this area without needing to go outside.

The building materials have been selected and deployed in accordance with the design objectives and the visioning priorities. These materials will include brick masonry for exterior walls; pre-formed metal cladding for mechanical penthouses; heavy timber elements at the main lobby; standing seam metal roofing and cladding at the public lobby entry pavilion; and, high-performance aluminum and

timber curtainwall systems. Roofs will be a mixture of inverted and green roof systems at terraces and conventional systems on non-occupied roof areas.

The material palette of the hospital is intended to reflect the regional historic building fabric – particularly the prevalence of buff-coloured brick in significant buildings such as the library and public school – and of a modern-rural aesthetic. The use of heavy timber construction in the double-heigh lobby area is intended to both reflect the Township's rural context and impart a sense of warmth to the lobby space.

Fig 7 – Existing Uxbridge Masonry Fabric

The facades of the hospital are carefully modulated to address the scale of the new facility by including pedestrian-scale elements at entry points and vehicular drop-offs. These include canopy elements, decorative paving and bollards, fully accessible roll-curbs and feature lighting.

Fig 8 – View of New Hospital Entrance

All building assemblies have been selected to meet enhanced sustainability requirements. Window to wall ratio will not exceed 40%. Wall systems will be highly insulated and will target R15 effective, incorporating thermal breaks and thermally isolated sub-framing systems. Roofs will meet R40 effective. Window systems will include high-performance curtainwall and punch windows, with double or triple-glazed insulated glazing units with low E coating and high effective U-Values. Foundation walls will be fully insulated, as will the underside of the ground floor slab on grade.

Glazing has been deployed where it will provide the greatest benefit to patients, staff and visitors. Large areas of curtainwall are provided along the southern edge of the public lobby and around the exterior courtyard to provide a bright, welcoming environment and drive natural light more deeply into the plan. The emergency department entrance and waiting areas similarly include larger glazed areas to signify the importance of this entry to the public. Both the main entrance and Emergency Department entrances are signified with generous canopies which provide weather protection for vehicular drop off and pick-up. Windows in patient rooms have been optimized for view by patients and families and fitted with sunshades on the south exposure to limit unpleasant heating effects.

Exterior doors will be aluminium-framed and glazed – either automatic sliding or swing doors will be selected depending on the application. In all cases, exterior doors will be protected with vestibules that are a minimum of 3m deep to meet ASHRAE and LEED requirements.

Exterior Design – Long Term Care

The Long-Term Care facility has been designed as a five-storey institutional building that thoughtfully integrates into the surrounding context while providing high-quality care accommodations and therapeutic outdoor environments.

The building is massed to optimize natural light and views for residents, with two landscaped interior courtyards functioning as secure, restorative outdoor spaces. The primary entrance along Campbell Drive is defined by a generous pedestrian forecourt, decorative concrete paving, and a canopy element, creating a welcoming and clearly identifiable point of arrival. The urban interface has been softened through strategic landscape buffers, accessible rest areas, and thoughtfully programmed amenity zones. Materials such as EIFS in warm tones, composite metal panels, smooth beige masonry, and wood-patterned accents establish a residential character while maintaining institutional durability and clarity in the architectural expression.

The building is strategically oriented with an articulated façade that responds to the site's geometry and municipal setbacks. Surface parking and service zones are discreetly located to the rear and sides of the building, minimizing visual and noise impacts. A snow melt system is proposed at the main entrance to ensure safe, year-round accessibility. Bicycle racks and pedestrian connections reinforce sustainable mobility options for staff and visitors.

The landscape design plays a central role in shaping the facility’s identity. The planting strategy incorporates native and adaptive species to foster biodiversity and seasonal interest, while accessible walking loops, seating, and raised planter beds support active aging and resident engagement. The two courtyards — east and west — are distinct yet complementary, incorporating layered vegetation, shade trees, and movable furnishings to accommodate both quiet reflection and social interaction.

Zoning Bylaw Considerations

The proposed hospital and Long-Term Care facility require relief from the following zoning bylaw requirements:

Building Height:

Maximum allowed as per item 4.13.3:	12m
Height of proposed hospital:	25.3m
Height of proposed Long-Term Care:	24.04m

The proposed building heights are inclusive of mechanical and electrical penthouses, elevator overruns, parapets and the proposed heliport. If these elements are eliminated and only the primary building volumes are considered, the building heights are as follows:

Height of proposed hospital:	18m
Height of proposed Long-Term Care:	18m

The rationale for these increased building heights is somewhat different for each of the buildings.

In the case of the Hospital, the requirement for increased height is driven by the ventilation requirements of the new hospital and the inclusion of the heliport. The CSA guidelines that govern the design of hospitals require both high air change rates and equipment redundancy to address the risks associated with infectious outbreaks. These requirements drive both the footprint and height of rooftop enclosures and disproportionately impact a smaller hospital, which would otherwise be only two storeys.

The heliport will provide critical service to the local and regional community. In addition to the heliport platform itself, supporting infrastructure includes redundant elevators and a staging vestibule for EMS and clinical personnel to support patient transfers.

As noted above, the hospital's building mass has been designed to address the increased building height through material selection and articulation. The building plan steps to provide additional clearance between the hospital and the

properties to the north to reduce shadow impacts (refer also to the shadow studies that have been submitted under separate cover). The large mechanical penthouse form is clad in a variety of materials with articulation introduced by way of deep shadow joints and horizontal banding. Finally, the projecting elements, such as the heliport and the elevator overruns have been set back from the building perimeter to reduce their visual impact.

The height of the Long-Term Care is driven by the number of resident and patient rooms and the imperative to design the building in a compact form that supports a community-based approach to delivering care while leaving a significant portion of the site as landscape open space.

The LTC includes 192 residents' rooms and 50 beds that will be operated by the hospital to provide low -acuity care to patients who are transitioning to home or placement in an allied facility. The resident rooms are organized as neighbourhoods of 32 with shared amenity and support areas. These neighbourhoods are organized around landscaped courtyards to reduce staff travel distances and encourage a sense of community and engagement.

Due to its location on the west side of the site, the impact of the LTC on neighbouring properties is somewhat reduced, however the design incorporates similar strategies to the hospital to reduce the visual impact of the building mass. The building facades are articulated with large window openings and clad with materials sympathetic to the hospital and the local context. Mechanical rooftop elements have been set back from the building perimeter and clad with similar materials to main building form.

Parking Requirements

Due to limited site area, the planned parking capacity of the redeveloped site will not meet the zoning bylaw requirements noted below:

Existing parking on site (Medical Building and existing hospital):	228 spaces
Zoning by-law requirements:	
Medical Building (existing):	132 spaces
Hospital (based on new gross floor area)	218 spaces
Long-Term Care (incl residents and patient rooms)	136 spaces

Total required:	486 spaces
Total provided:	375 spaces

A detailed rationale for the reduced parking capacity and allocations during the phases of the project delivery is included under separate cover.