

Urban Design Manual

00.1.0 INTRODUCTION

00.1.1 KITCHENER BY DESIGN

City Building

A great city is more than just the sum of its buildings, streets, and open spaces. A city is both its visible and invisible elements; its tangible and intangible experiences, and the relationships between objects and spaces. City Building is a kinetic, living process; cities breathe and grow and mature. They can be swept up with excitement. They can provide comfort and solace. They can persuade and charm. A great city rewards curiosity and tells a plurality of stories through its people, the rhythms of its spaces, and the memories of its past.

Successful cities are designed with a shared vision and purpose. They evolve and anticipate change, while remaining nimble and responsive. They proactively seek to meet the needs of all residents and visitors, adapting to new people, cultures, and identities.

Economic Development

Design is critical for Economic Development. Good design adds value to development and improves quality of life. It leverages existing and planned assets, networks and infrastructure for greater efficiencies and helps create a recognizable urban identity. Design is contagious; good design can catalyze better design, better design can catalyze great design, and great design attracts investment and builds confidence. The best design creates a city-specific vibe-- a sense of excitement and a shared civic pride.

Kitchener has many unique assets and opportunities relative to other mid-sized cities. It has an incredible amount of promise-- promise that can be fulfilled through a commitment to design excellence, a collaborative spirit, and leadership in design.

Sustainability

Good design is sustainable design. This includes, first and foremost, environmental sustainability; new and efficient technologies, building systems and amenities that can help reduce our carbon footprint and respond to climate change. It also means designing for social and economic sustainability by providing a range of housing and workplace options that are affordable and inclusive. Civic and cultural sustainability are also important, which includes preserving and creating new public institutions and open spaces that meet evolving needs and expectations as well as protecting, enhancing and complementing our natural and built heritage.

A sustainable city is one which actively and comprehensively pursues sustainable practices in all avenues of city building.

The Cover Art

As part of our commitment to great design and public art, staff commissioned local artist Nicole Beno to create cover art for the manual. An artist's statement and progress images can be found below;

“The City of Kitchener Urban Design Manual visualizes the city as a living, breathing entity that is connected together through lines and paths, highways and streets. The artwork is brought together through the use of collage and assembling textures, elements and pieces found in the built environment.

Research was gathered by consciously slowing down and observing often overlooked details, and paying close attention to the sensory experience of navigating Kitchener’s streets, and their potential to affect our well-being and sense of place through urban design.” - Nicole Beno

00.1.2 KITCHENER’S URBAN DESIGN MANUAL

What is an Urban Design Manual?

Kitchener’s **Urban Design Manual** is a set of expectations, a guiding document and a vision for design. We are committed to taking a leadership role for design in mid-sized Canadian cities through responsible, sustainable city building practices which celebrate diversity, creativity, and design excellence.

Great urban design adds tremendous value to private development, public works, streets, parks and neighbourhoods. It contributes significantly toward the quality of your home, your yard, and your local street. It makes the places you work, play and shop safer, easier to use, healthier and more engaging. Visibly and invisibly, urban design drives the way you experience the city, it informs the choices you make and directly influences your quality of life.

How Does the Manual Work?

The **Urban Design Manual** consists of three parts. **Part A** contains guidelines for various land uses and built forms. These are the objectives which set the direction for urban design in Kitchener. Applicable guidelines from **Part A** will be referenced in an **Urban Design Report** accompanying a **Development Application**, where required.

Part B contains supplementary guidelines completed through other studies such as streetscape master plans. Where appropriate through future updates, guidelines contained in **Part B** will be consolidated into **Part A**.

Part C contains design standards. These provide detailed guidance for elements such as parking, landscaping, lighting, accessibility and more. **Part C** standards assist and provide certainty to developers preparing applications and while working through detailed site design.

How is the Manual Used?

Part A of the **Urban Design Manual** is primarily a tool used to guide private site development, but it has been designed to serve many users. It is to be used by the development industry and city staff when preparing or reviewing a development application, forming the basis of urban design reports and giving direction to many different planning-related processes.

The manual also serves the public and our political leaders. It is a document that has been purposely designed with the public-as-user in mind, giving the people of Kitchener a resource to understand and hold-to-account the way that change is happening in their community. The manual contains additional information and vibrant visuals so that it functions as more than a technical manual for the industry and becomes a guiding document that all stakeholders can use.

Part A of the **Urban Design Manual** is divided into 13 sections, each covering a land use or built form typology. Section 01, **City-Wide**, sets design expectations for all of Kitchener. Developers, consultants and staff should familiarize themselves with this section, as it applies to all development and public works in the City. From there, it is likely that any individual project will need to reference two additional sections of the manual. For example, a **Mid-Rise** building in a **Major Transit Station Area** will need to address those two sections in its **Urban Design Report**, while also ensuring consistency with the **City-Wide** guidelines.

Did You Know? Some may find that the language used throughout the manual is more directive than that found in manuals from other cities. Words like “Provide” and “Avoid” are used in place of words like “Consider” and “Encourage”. This was done to reflect that these guidelines are expectations, but we also understand that not every guideline can or should be achieved exactly as written in all scenarios. This is why, generally, something is a guideline rather than a part of the Zoning By-Law. However, we expect that where something cannot be achieved as written, that it will be appropriately justified, and that an approach for achieving the objective through other means will be proposed.

Did You Know? The manual is organized in this way to limit repetition as much as possible and to streamline the process by not requiring users to work through the entire manual for each project. It also makes it easier for the public, staff, council and others to quickly find what they’re looking for and for non-local developers and consultants to access and utilize the manual, saving time and minimizing confusion.

Vision

To deploy a spirit of collaboration and creativity through thoughtful and innovative design that makes Kitchener the best designed mid-sized city in Canada.

00.2.0 COMPOSITION

00.2.1 KITCHENER’S URBAN FABRIC

Streets & Parcels

Kitchener’s street network offers tremendous variety, spanning multiple historical eras, adapting to various natural boundaries and contextual peculiarities. Some streets are generally aligned in a NW/SE and NE/SW direction, but many others are oriented in all possible directions.

This street network creates an equally varied parcel fabric. Sites are oriented and shaped in an number of ways. Shadow and wind impacts from developments must be very carefully considered, as so many sites are unique. Proposals must design not only toward high general standards for architecture and urban design, they must also be carefully designed to mitigate site-specific impacts and take advantage of site-specific opportunities.

Kitchener’s varied urban fabric also means that relative to more grid-like cities, there are many more situations in which a development will appear as a visual terminus or have other visual impacts from unexpected perspectives. Therefore, proposals need to thoroughly consider their viewshed (where the building is visible from the public realm, see image below) to understand these unique relationships. This is especially true of large developments and tall buildings.

00.2.2 KITCHENER'S ECLECTIC FORMS

Built Forms & Open Spaces

Particularly within its Downtown, Central Neighbourhoods and Major Transit Station Areas, Kitchener is an eclectic mix of styles, eras, typologies and forms. At larger scales, there is no single defining or prevailing 'Kitchener Style'. Far from being a disadvantage, this diversity is a strength and many are drawn in by the offbeat spirit of the resulting mosaic.

With development accelerating, it is critical that we recognize and continue to conserve Kitchener's identity by encouraging creative and responsive forms and styles. The Urban Design Manual is intended to facilitate compatible, complementary development but that does not mean the replication of existing or historical architectural styles or designing uncritically to the prevailing development trends at any given time.

New development should be contemporary in nature, while embracing the many design options and forms of expression for which the contemporary design environment allows. Existing buildings should be conserved where it is practical to do so, to maintain the eclectic mix that defines Kitchener, even when a certain style or era of building has fallen out of favour, as such changes in taste can be temporary.

Did You Know? Throughout this manual a preference for 'contemporary' design is often stated. This is intended to mean that regardless of style, buildings and sites are to be de-signed and constructed authentically to the methods, materials and techniques available when they are built.

00.2.3 KITCHENER'S LIVING HISTORY

Land Acknowledgment

To be added to the final manual pending direction from Council.

Berlin

Kitchener is one of few cities to have changed its name in modern times-- from Berlin to Kitchener in 1916. Known at the time as the German Capital of Canada, the outbreak of World War I led to a May 1916 referendum to re-name the city after British Secretary of War Lord Kitchener.

The name change is just one example of Kitchener's unique history. Designing in Kitchener means having respect and empathy for this history, whether it involves a direct intervention on a cultural heritage asset or simply understanding how a new development contributes to the ongoing evolution of the city; even when that contribution may be a departure from tradition.

00.2.4 KITCHENER IS A CITY FOR EVERYONE

Inclusivity

Kitchener is, and will be designed consciously as, a place for all who wish to live, work, play, shop and visit here. This includes persons of all ages, from newborns to young children, teenagers to young adults, older adults and seniors.

It means designing spaces throughout the city for single people, couples, small families, large families, 'empty-nesters' and multi-generational homes. This includes accommodating larger families within multi-residential buildings, conserving the greatest possible mix of unit types, and providing a full range of price points for both rental and ownership by pursuing affordable housing options.

It means accommodating, celebrating and acknowledging the cultural and ethnic traditions of all who spend time here, from festivals that have existed for decades to events focusing on newly arrived Canadians from all over the world.

It means creating safe, welcoming and purposely designed spaces for persons of all identities, including such things as washroom facilities that are safe and accessible for non-binary persons.

It means designing our city for the needs of persons of all abilities and disabilities, including accessible and visitable spaces as well as street and open space design that guarantees mobility, equity and autonomy for all.

It means designing our city to serve those in need by providing safe and convenient access to social services and building creative, sensitive and progressive spaces that respond to the needs of persons struggling with addiction, homelessness and mental illness.

Additional Information: Staff have worked carefully with stakeholder groups to use language that is respectful and representative. However, we acknowledge and appreciate that many individuals and groups may not identify themselves in the same way. Our intention is to continue to learn, grow, and be responsive to change throughout the lifespan of the manual.

00.3.0 ENGAGEMENT

00.3.1 URBAN DESIGN FOR EVERYONE

A Shared Vision

Throughout this process, it has been our intention to create an Urban Design Manual that works for everyone. It is an industry resource that provides expectations, clarity and flexibility to our builders and consultants. It is an implementation tool for staff to ensure we are actively pursuing our shared goals and objectives. And it is a resource for the public to better understand the principles of good design and to better participate in discussions on new development, intensification, infill and the public realm.

The Grand Total

To ensure that we were creating a document that met the full spectrum of needs for such a diverse set of users, staff embarked on a comprehensive engagement program. We met early and often with staff, the public, and industry, releasing multiple in-progress drafts to create a process that was as open, collaborative, and transparent as possible.

We approached each engagement opportunity differently to respond to the various needs of our stakeholders, from in person one-on-one meetings, to site walks, to coffee shop discussions to design charrettes and more; customized for each user group and tailored to help us receive targeted, direct and informative feedback. In total, we conducted **57 unique engagements** and provided **over 80 hours of consultation**.

00.3.2 PUBLIC ENGAGEMENT

Coffee Shops

We began the public engagement process by holding a series of six coffee shop chats in April of 2018. We held informal discussions about urban design concepts, emerging issues and heard the concerns and interests of a broad set of community members.

The six events were two hours or more apiece, held at different times of the day and evening to accommodate different schedules, and took place at strategic locations to ensure we were visiting with people from all areas of the city.

We welcomed more than 30 participants over 12 hours of discussion.

Doors Open Waterloo Region

Staff held an open house at 44 Gaukel Street as part of Doors Open Waterloo. We were able to leverage an existing and established event to target members of the public with an interest in the urban environment, design and built-form.

Over the course of 7 hours, we met with more than 50 community members.

Neighbourhood Charrettes

In coordination with the secondary planning for Central Neighbourhoods process, we conducted six neighbourhood design charrettes. We met with groups from various central neighbourhoods to create guidelines specific to each area that responded to the concerns and opportunities identified by the people who live there.

Over the course of 12 hours, we worked with more than 75 local residents.

Downtown Design Talk

To help kick-off the formation of the Downtown Neighbourhood Association, staff presented and facilitated a discussion around design in the downtown. With such rapid change occurring in the downtown, it was a great opportunity to speak with downtown residents and get their feedback.

Over the course of 3 hours, we met with 15 downtown community members.

Engage Kitchener

At the beginning of the Urban Design Manual project, staff conducted an Engage Kitchener online survey to gather high level public feedback about the types of spaces people found safe, active and memorable. We received 71 responses and 14 written comments.

00.3.3 INDUSTRY ENGAGEMENT

Industry Stakeholders

We engaged extensively with the development industry, releasing an early draft of the Manual in March 2018. Our intention was to hear from the industry early and often, and to work collaboratively toward a final Urban Design Manual that was practical, flexible, and easy to use while at the same time meeting

the expectations of Kitchener’s citizens, political leaders and staff. We held 26 stakeholder and advisory committee meetings, and received over 300 written comments.

00.3.4 INTERNAL STAFF ENGAGEMENT

Review & Workshops

Staff engaged with a comprehensive set of internal groups to solicit feedback and ensure coordination between projects. Additionally we have also begun implementation workshops with staff. We developed an exercise which teaches the principles of tall building design in a hands-on way. It is our intention to continue these kinds of staff implementation workshops to create consistency in staff review and encourage a higher level understanding of important design principles.

00.4.0 CONTENTS

00.4.1 SYMBOLS & NOTATIONS

Legend

Photo_ This symbol identifies when a photograph has been used to illustrate a guideline or principle.

DYK?_ This is a ‘Did You Know?’ symbol, where additional or supporting information is provided explaining or contextualizing a guideline.

Plus_ This symbol is used to expand upon a guideline by providing more detail for users less familiar with certain concepts.

Map_ This symbol identifies when a map has been used to show a certain geographical area, boundary or land use. All maps are for reference only. For detailed mapping, please refer to the official maps in the source policy documents.

Diagram_ This symbol identifies when a diagram is used to illustrate a guideline or principle. Diagrams are for reference only and do not necessarily represent a fully resolved design.

Render_ This symbol identifies when a conceptual rendering has been used to demonstrate design principles. Conceptual renderings are not intended to represent fully formed design solutions, and do not necessarily conform to all codes, practices, standards and guidelines in place at the City of Kitchener.

Reminder_ This symbol identifies when a user may want to refer to another section of the manual for additional context or information on a given guideline or principle.

City-Wide

01.1.0 INTRODUCTION

01.1.1 CITY-WIDE DESIGN

Inclusivity

Kitchener is to be designed as an inclusive city and to reinforce the idea that it is a welcoming, thoughtful and purposefully created place for people of all cultures and identities. From the city core to new subdivisions, from office and industrial areas to parks and open spaces, Kitchener is to be safe, accessible, comfortable and appealing for all who live, work, play and visit here, including women, the LGBTQIA+ community, Indigenous Persons, new Canadians, children, older adults, and persons of different physical abilities, mental health needs and all socio-economic statuses.

As city builders we have a responsibility to support under-represented groups, to accommodate and celebrate a diverse range of cultural traditions, to welcome all new community members and to positively support social change as we evolve.

Working With the Guidelines

The purpose of the **City-Wide Design** section of the **Urban Design Manual** is to set forth the universal design expectations which apply to all of Kitchener. These are urban design objectives that are relevant to all geographies and building typologies. This section of the manual has been created to limit the duplication of guidelines, to streamline the manual's length and avoid potential conflicts. Where conflicts do occur, prioritize first the standards in **Part C** of this manual, followed by the relevant **Built-Form** section, followed by the related **Urban Structure** section, and then lastly, the **City-Wide Design** guidelines.

Format

Kitchener's **City-Wide Design** guidelines are divided into two sections; **Community Design** and **Site Design**. **Community Design** involves the broader principles of urban design that create our streets, built-form and parks and open spaces. **Site Design** provides more specific direction for on-site access, circulation, public art and landscaping, among other objectives.

01.2.0 COMMUNITY DESIGN

01.2.1 INCLUSIVE DESIGN

Safety

Creating an inclusive city is not possible without first creating a safe city. City builders have a responsibility to maximize the real and perceived safety of all who live, work, and play in Kitchener. Safety is a critical, city-wide design parameter for all buildings, streets and shared spaces.

Prioritize safety for pedestrians, cyclists, public transit users and motorists *in that order*. Prioritize passive, integrated design techniques (site lighting, landscaping, built-form, parking and access) over physical barriers and security technologies wherever possible.

Use Crime Prevention Through Environmental Design (CPTED) principles to design all spaces, including transit stops, to a high standard for safety. A CPTED Report may be required for any development, to be approved by City staff.

No building, street or shared space is to be designed in isolation from its surroundings. Design for the specific contextual constraints and opportunities of a site and consider both current and planned future conditions for the area when designing for safety.

Design sites to provide clear, continuous and highly visible pedestrian pathways that connect the public realm with building entrances, are barrier-free, and minimize conflict with vehicles.

Design all public spaces to increase the presence of people, and design all sites and buildings to maximize the ability of occupants to provide natural surveillance onto the public realm.

When designing the built form and site function elements on a project, do not create any potential entrapment areas, dead-ends, or hidden/obscured spaces. Building users and/or the public should always have multiple means of egress should a potentially unsafe situation arise.

Design all elements of a site to be identifiable and clearly delineated. This should be performed through passive design elements but may also include appropriate signage.

Building entrances and exterior shared spaces should be clearly defined and visible from the public realm, evenly lit, human scaled and under natural surveillance from building occupants.

Universal Design

An inclusive city is one in which all spaces are designed to be equitable and flexible for all users.

Wherever possible, design spaces such that all users are able to encounter, navigate and experience the space without restriction. Where this is not possible, all users should have equivalent means to use these spaces, and no one should be singled out or excluded.

Design all spaces to serve the full range of users' physical, mental and sensory abilities, including such things as; anticipating differences in pace of movement and types of mobility; minimizing the physical effort required to use the space; being sensitive to varying reactions to visual and auditory stimuli and; providing texture and tactility for the sensory impaired.

Design spaces with a margin for error by minimizing potential hazards, providing redundancies and making it easy to correct or overcome any accidental or unintentional actions.

Design spaces such that they are intuitive, welcoming and safe to use for persons of all abilities, backgrounds, cultures, languages and identities. This means designing for visual clarity for people unfamiliar with Kitchener, including visitors and newly arriving Canadians. It includes intuitive wayfinding that doesn't rely on complex written direction and provides clear visual delineation between different types of spaces (public, private, front-of-house, back-of-house).

Integrate Universal Design measures into the architectural expression of the building and the urban design of the site, including all ramps, handrails and other barrier free measures. No one should be made to feel that their needs are an afterthought or a burden on the design process.

Ensure that the site user experience is created for the enjoyment of all, including consideration of sight lines for children and users of wheelchairs and other mobility aides.

Emphasize life safety, mobility independence, and quality of life measures for those who are most vulnerable to potential hazards.

Affordability

Pursue all opportunities to incorporate affordable housing into residential and mixed-use projects.

Avoid “Poor doors”, or separate entrances/lobbies for affordable units (where a mix of affordable and market units exist within a multi-residential or mixed-use building).

Likewise, access to shared spaces and other common amenities is to be provided equally to all residents regardless of status.

Affordable housing should be provided in a full range of unit sizes, types and tenures.

Age & Family Friendly Design

Age and family friendly design practices are those which enhance the mobility, independence and quality of life for older people and families at the **Neighbourhood, Building and Unit** scales. They promote active lifestyles, encourage social interaction and instill a sense of community pride. Age and family friendly design prioritizes the ability for older adults to age-in-place, and for families to grow-in-place.

All development in Kitchener should be designed as age and family friendly. Where seniors and/or children are not intended users or the target demographic, their needs must still be addressed, to ensure equitable and flexible use of the urban environment for all.

The Neighbourhood Scale

Design for the mobility independence of children and older adults.

Provide a mix of housing types, sizes and tenures in each neighbourhood, including seniors housing options for both independent and assisted living to create options for aging-in-place.

Locate retirement, long term care homes and institutional uses in the neighbourhood centre and in close proximity to community services, personal services and commercial uses.

Provide small but frequent community spaces to promote and advertise volunteer opportunities and community events.

Locate child care facilities and schools near pedestrian, cycling and transit routes to maximize mobility autonomy. Consider adjacency to parks, community centres and recreation facilities.

Design comfortable streets that encourage older adults and families to linger and socialize.

Provide a range of public art as well as park, open space and shared space elements that are flexible, educational, interactive and inclusive to allow for a range of activities including; resting, walking,

socializing, physical activity and access to nature. Accommodate imaginative play, encourage a sense of adventure and reward curiosity in people of all ages and abilities.

Design the public realm with frequent rest areas, including barrier-free seating, weather protection and shade trees. Ensure comfortable wind conditions for users.

Maintain the public realm with adequate lighting and curbs that are suitable for barrier-free travel, including tactile surfaces for the visually impaired. Ensure that site works involving utilities in the public right-of-way do not encumber users' ability to navigate their urban environment.

Provide frequent crosswalks that are intuitively designed for pedestrians and obvious to drivers.

Prioritize winter maintenance for those most impacted by adverse conditions, including persons with mobility aides and families with strollers.

Create opportunities for cycling to be the preferred choice for trips that are less than 5 km. Support an all ages and abilities cycling network, particularly near schools.

Design for 'last-mile mobility', to ensure that there are no unintentional barriers between transit stops or pedestrian pathways and user destination points that may discourage active transit use among sensitive users.

Where feasible, public washrooms and water fountains should be provided and open year-round. They are to be universally accessible, include family washroom and changing facilities that support safe and equitable access for persons of all identities and abilities.

The Building Scale

Provide a mix of unit types and sizes (studio, one, two and three-bedroom units) to accommodate all types of people and families and to provide up-sizing and downsizing opportunities for those who want to remain in place throughout different stages of life.

Provide indoor and outdoor amenity areas with a variety of activities for all occupants. Consider ways in which amenity spaces can be designed to accommodate the needs of older adults and young people simultaneously, as positive social interaction between generations can have significant mental health benefits for all.

Locate amenity spaces adjacent to circulation spaces and with the greatest degree of permeability possible, prioritizing both real and perceived safety.

When planning a site with multiple buildings, maximize the utility of amenity spaces by sharing facilities among all users, where possible.

Building lobbies and other interstitial spaces should be large and flexible enough to accommodate social encounters and to avoid frustrating the movement of those with mobility aides, families with child equipment or individuals carrying groceries.

Where feasible, provide additional communal or individual storage, prioritizing floors with larger units. Explore opportunities for stroller or mobility device storage in the base of buildings where the floorplate tends to be the largest.

The Unit Scale

Provide generous in-unit storage areas and entryways that can accommodate mobility aides, strollers, circulation for multiple people and other sensitively designed elements.

Provide private outdoor spaces where possible and design them to maximize sunlight, accessibility, safety, flexibility and to minimize uncomfortable wind conditions.

Consider the provision of oversized balconies, patios and terraces with screening that extends living space to the outdoors.

Design for future adaptability to changing demographics and lifestyles. Consider ways in which units can be specialized for different user needs and adapted for an individual user's preferences.

Did You Know? Needs and demographics change over time, and it's important for buildings to stay responsive to these changes throughout their life-cycle. Designing units for potential future conversion (size, amenity, storage, tenure, etc.) or changes in use (eg. from structured parking to office space) is a more sustainable approach to city building, and new buildings should be expected to endure and remain viable in the long term.

Additional Information: Something as simple as providing space for an entry-way storage bench can assist mobility by giving families and seniors a comfortable and low-effort place to put on their shoes.

Social Infrastructure

Hostile design, or any kind of urban design intended to control, coerce, discourage or prohibit undesired or unintended interactions in public space, is unacceptable in Kitchener. Kitchener is and will continue to be a place where we welcome everyone in our public spaces and protect for the equity and dignity of marginalized groups.

Social infrastructure such as libraries, community centres, healthcare and educational institutions should provide space and programming for people of all ages, abilities, backgrounds and identities.

Community services and facilities should be welcome in all neighbourhoods, particularly those which provide for the more vulnerable members of our community. Social services for those in need should be fully integrated into urban life.

Affordable housing should be integrated within local communities and neighbourhoods to protect against the marginalization and segregation of persons with lower-income.

Why is Avoiding Hostile Design Important?

Hostile design, also known as defensive design, is often associated with anti-homeless measures such as spikes or studs embedded in flat surfaces to prevent lingering or sleeping there. It includes seating

design which is intentionally uncomfortable or inflexible as well as design elements intended to discourage specific user groups such as skateboarders. Such elements intentionally discriminate against particular people and imply that the convenience of some takes precedence over the humanity of others, with already marginalized groups being the most negatively affected.

Additional Information: Avoid hostile design elements of any kind, anywhere within a development including on site shared spaces, amenity areas, landscaped areas and interior elements. Good design can passively encourage positive social behaviours where hostile design can inequitably punish marginalized users and exacerbate existing prejudices and hardships.

Arts & Culture

Public spaces of all types and sizes are to be designed to accommodate events, cultural celebrations, and art installations. Private shared spaces are encouraged to do the same.

Investigate opportunities for the temporary use of vacant commercial space for community gatherings, gallery or event spaces. Consider designing otherwise unusable or remnant building spaces in creative ways which accommodate artistic and cultural installations.

New buildings should consider the provision of gallery, community or event space.

The City, developers and private landowners should partner with local artists when commissioning public art or activating the public realm with art.

Public art installations and community arts and culture spaces are to be accessible and inclusive.

01.2.2 SMART CITY DESIGN

What is a Smart City?

Kitchener/Waterloo is a globally recognized centre for innovation, a leader in high-tech manufacturing, and home to an enviable talent base and leading-edge resources. Positioning Kitchener as a leader in Smart City Design is a natural evolution of our growing identity as an innovation hub, leveraging some of our existing talent and resources to focus on municipal issues.

Smart cities employ data collection and other methods to supply information which is used to enhance services and manage assets and resources more efficiently and effectively. Smart City design is not just about finding technological solutions to problems; it's about providing better, more adaptive service through all available means.

Smart City Design

All projects should contain sufficient, planned space for current and anticipated future needs for technology infrastructure, materials and structures. Spaces for the support of fixed cabling and other infrastructure should be easily accessible in order to facilitate future changes in use.

New buildings, public infrastructure projects and the public realm should be designed to be as functionally flexible as possible, specifically in respect to access, infrastructure and configuration of interior space in order to facilitate future changes in use.

Temporary measures, including changes to the urban environment, should be explored when testing smart technologies. Technology evolves quickly and the city should be open and adaptable to experimenting with new ideas designed to improve the quality of life.

New developments should demonstrate that their design takes account of the latest, best and emerging practices and patterns for smart cities, digital urbanism and placemaking.

Planning and other policies governing the use of urban space and structures should facilitate innovation and changes in use, including temporary changes of use.

Technology changes in mobility, such as e-bikes, e-scooters, on-demand ride hailing, autonomous vehicles, etc. have been changing the way we use urban spaces. Transportation is evolving and needs to be in a position to embrace that change.

Consultation on plans, projects or new developments should explore the capabilities of social media and other relevant engagement technologies to ensure that local communities are given appropriate opportunities to contribute to their design.

Smart city initiatives are far reaching and can vary greatly with respect to cost, ease of implementation, the value and useability of the resulting data, etc. Following are several broad applications for Smart City Initiatives that should be considered where appropriate.

Additional Information: All smart city initiatives are to first respect the safety and privacy of all people.

Smart City Initiatives

Intelligent waste collection that could include dispatch and operation management, system tracking and control and reporting.

Smart systems which make local information more readily available to visitors, newly arriving Canadians and persons with special needs to address language or communication barriers and make it easier to participate in City-led processes, initiatives and events.

Smart visualizations of existing and planned urban conditions and smart mapping initiatives including LIDAR, pictometry, and advanced data sets. This can include viewers, browser portals and other options for data sharing that promote and enhance the City's Open Data initiatives.

Walkability and accessibility data collection and analysis to improve pedestrian connectivity.

Data collection portals for citizens to provide specific, targeted feedback on city services.

Smart city applications which improve existing municipal processes by finding redundancies, efficiencies and unexplored opportunities, as well as smart reporting systems which provide real-time feedback on various municipal issues.

Smart city infrastructure including public wifi, smart information kiosks, and access to and interaction with emerging technologies including smart sensors and Internet of Things products.

Smart sustainability initiatives such as monitoring energy use, planning transitions to renewable energy sources, and other applications which adapt to and mitigate climate change.

Smart Arts and Culture initiatives including virtual library, museum and art gallery resources, augmented reality public art and access to information about arts and culture as well as cultural and natural heritage resources, including a reporting system to provide feedback.

Disaster management and extreme weather event resources, such as smart dispatching and real-time reporting of conditions such as outages, and closures.

Social media monitoring and analytics to evaluate the popularity of topics, identify issues and opportunities and leverage citizen insight into municipal issues.

Smart streetlight management which prioritizes safety, energy efficiency and maintenance.

Smart parking initiatives including vehicle detection to monitor and report on parking patterns and habits, supply, availability, etc.

Crowdsourcing such as collecting information on self-reported road safety issues, to prevent collisions, to identify areas of poor snow removal or landscape maintenance practices, etc.

Smart utility initiatives including monitoring and reporting, capacity analysis, etc.

Additional Information: Smart city initiatives are far reaching and can vary greatly with respect to cost, ease of implementation, the value and useability of the resulting data, etc. On this page are several broad applications for Smart City Initiatives that should be considered where appropriate.

Did You Know? LIDAR uses laser light to measure distances, creating a 3D point-cloud of information that can be used for many applications. Pictometry is an aerial image capture process that obliquely captures building elevations and ground features in 3D.

01.2.3 DESIGN FOR SUSTAINABILITY

Introduction

Sustainable design is an increasingly necessary focus of responsible city-building. We now find ourselves in a critical moment to limit the worst impacts of climate change and to provide the groundwork that will allow future generations to inherit a clean, healthy, thriving Kitchener.

On Monday, June 24th 2019, Kitchener City Council unanimously declared a climate emergency. Adapting to and mitigating against climate change is perhaps the biggest challenges facing municipalities, and we have a responsibility to use the power of design to help create our sustainable future.

Health & Well Being

Design communities to support and encourage walking and cycling. Provide compact block patterns and highly connected street networks. Promote safe, active transportation and public transit use as a priority travel option.

Provide green spaces, gathering places, and recreational facilities and opportunities for persons of all ages, identities, abilities, and cultural traditions. Conserve and enhance existing public spaces.

Provide street trees along all streets with sufficient soil volume to ensure a healthy, mature canopy. Maximize tree planting wherever possible. Ensure natural and built shade features are available at outdoor public spaces.

Ensure safe and convenient access to health care, social services and healthy food options.

Mitigate against noise-related impacts, including noise created by vehicular traffic, building construction, incompatible land uses and site access/servicing areas.

Create complete communities that include mixed densities and affordable housing options for people of all ages and socioeconomic status.

Provide safe, convenient access to social, educational and faith-based community resources.

Provide thoughtful outdoor recreation opportunities for people of all ages including children's playground equipment, sport and fitness equipment, programmed areas such as basketball courts, volleyball pits, skate-parks, skating rinks, climbing walls, and other creative options which encourage participation and provide for easy access, use and participation.

Did You Know? The urban environment affects a person's physical, social and mental well-being in many ways; the quality of air, soil and water, opportunities to exercise, relax and socialize, access to healthy food options and the availability, proximity and nature of jobs, shops, services and public spaces.

Additional Information: An extensive, thriving tree canopy helps to both adapt to and mitigate against climate change. Trees provide shade in extreme heat and limit urban heat island effect. New tree planting is known to be one of the simplest and most cost-effective ways to combat carbon emissions.

Design for Climate Change

There are two types of measures that can be applied to designing for climate change; **Adaptation** and **Mitigation**. **Adaptation** measures are actions that help reduce the urban environment's vulnerability to the impacts of climate change. **Mitigation** measures are actions that can be taken to reduce and limit greenhouse gas (GHG) emissions.

Mitigation includes things like increased energy efficiency, greater use of renewable energy, better public transit and other low-carbon design initiatives such as encouraging adaptive reuse over demolition, deploying recycled and energy efficient materials, and designing compact, walkable communities.

Adaptation includes site design which addresses the security of built form and infrastructure with regard to potential natural disasters, natural and resilient landscaping that can withstand severe climatic conditions, and preventative and precautionary strategies for dealing with flooding and extreme weather events along with climate related migrations.

There are several ways for development to address climate change, including through strategies outlined by the **Canada Green Building Council** in categories such as Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation in Design. Integrate these strategies from the beginning of the design process including neighbourhood design.

Design sites to maximize their relationship to sustainable transportation options, prioritizing pedestrian and cyclists utility and public transit access.

Incorporate renewable energy where feasible, including solar, geothermal, and wind-generation. Preserve for and accommodate new technologies as they are developed.

Pursue district energy opportunities for feasible locations at the multi-site and neighbourhood scales.

Optimize building design for energy performance, particularly through passive daylighting and ventilations techniques which limit the burden on mechanical systems. Buildings should target an energy performance standard 25% above building code requirements and are strongly encouraged to target net zero energy and carbon neutral design standards.

Use renewable, sustainably manufactured and locally sourced materials, wherever possible.

Use reclaimed and recycled materials, particularly those which may be salvaged on-site.

Avoid demolition of buildings which may be adaptively reused and have good design elements, particularly larger buildings for which demolition and removal is expensive and wasteful. Instead, incorporate these buildings into new development through renovation and addition.

Design new buildings to withstand climate change by being resistant to extreme weather conditions, anticipating increased cooling demands through sustainable natural ventilation and efficient mechanical systems, and by being adaptable to changes in the needs of occupants over time as new technologies and lifestyle choices evolve.

Design lighting, landscaping, HVAC and other building systems and material finishes to enhance sustainability by being highly-efficient, low-emitting and adaptable through the smart controllability of systems (lighting, thermal comfort, natural light/shading, ventilation, etc.)

Design for water efficiency including Low Impact Design (LID). Prioritize a reduction in overall water use, innovative stormwater management, and grey water collection and re-use. All new development shall comply with the City of Kitchener's Integrated Stormwater Management Master Plan criteria for stormwater design.

Use green or high-albedo roofs for any large, flat roof surfaces. Green roofs covering at least 25% of the total roof surface are preferred and should be implemented wherever possible. Exterior green walls should also be implemented where opportunities exist to do so.

Design for pedestrian, cyclist and transit user adaptation to climate change through built form and landscaping which provides access to sunlight and shade, respite from heat, and protection from cumulative wind impacts.

Design for climate resiliency, including increasingly frequent and extreme weather events.

Provide LED lighting or newer, even more efficient lighting technologies.

Design for Wildlife

A wide array of birds and wildlife share our urban environment, and their needs should be appropriately considered when designing for Kitchener so that they may continue to thrive.

All site and landscape design should conserve, enhance and promote biodiversity of all forms and at all scales.

All development is to meet a **Dark Sky** compliant standard by using full cut-off fixtures with no uplighting (U0). A **Dark Sky** standard reduces light pollution, improving the well-being, health and safety of both people and wildlife and resulting in less energy usage.

Orient and place fixtures in such a way as to project light only on non-reflective surfaces. This will help reduce light pollution from reflections and glare off of glass.

Migratory birds move through cities at night. In order to preserve dark skies and to lessen migratory bird strikes, consider automated lighting to reduce unnecessary interior light.

Any architectural lighting at the top of buildings is to have an automated timer shut-off.

Design the first 12m of a building to prevent bird strikes by limiting the potential for reflection of trees and sky through material choice and detailing.

Where glazing is prominent on the first 12m of a building, consider the use of treatments which can be applied to the glass surface, creating visual markers for birds.

Use awnings, canopies, recessions, projections and other architectural interventions to disrupt the reflection of trees and sky in ground floor windows.

Ventilation grates on a site also present a deadly hazard for birds. Ventilation grates should have a porosity no larger than 2cm x 2cm or should be covered with netting in order to prevent birds from falling through.

Design sites to accommodate existing migratory paths for local wildlife.

Where possible, schedule tree removals in winter to minimize impacts on seasonal wildlife habitats, including birds, bats, bees and other fauna.

Consider the needs of wildlife, particularly migratory wildlife, when designing green roofs or other sustainable infrastructure. It is often possible to achieve multiple sustainable design objectives through a single intervention when that intervention is considered holistically.

Did You Know? Daytime bird strikes generally occur from ground level to tree top level, while migratory birds are attracted at night to taller structures that are excessively lit.

01.2.4 DESIGN FOR OUTDOOR COMFORT

Microclimates

Did You Know? Microclimates are environmental impacts created by the urban environment. Kitchener features hot, humid summers and cold, dry winters. The city has prevailing westerly winds, and the angle of the sun's path and its intensity varies significantly throughout the year. The Kitchener street network and parcel fabric is an organic grid, creating many different orientations for buildings. It is important to design with these varied conditions in mind and to understand the resulting microclimatic effects. This includes sunlight/shadowing, heat island effect, wind conditions and snow disposition as well as cumulative effects created by multiple adjacent structures.

Mitigate against unwanted microclimatic impacts including wind, snow and shadow. Accommodate walking, cycling and transit use during all anticipated weather conditions and provide shelter and refuge for pedestrians.

Staff may require **Wind** and/or a **Shadow** studies wherever potential impacts may exist. The recommendations from these studies are to be implemented through the site and building design.

Additional Information: Wind studies can generally take three forms. The first is a desktop analysis which can provide basic information on potential impacts and might be appropriate for a project at the earliest schematic stages to help inform building placement, massing, and other design elements. The second is a Computational Fluid Dynamics (CFD) study, which simulates impacts digitally. This type of study may be appropriate for Mid-Rise buildings or other forms where potential wind impacts can be expected to be relatively minor. The third is a Wind Tunnel Study, involving a physical model of the proposal and sensors which provide readings of actual air flow. This type of study should be required of Tall Buildings or other forms where potential wind impacts are significant or difficult to discern.

Additional Information: Design all sites proactively to address microclimatic impacts rather than waiting for staff or environmental consultants to request changes. This can save time and money, and ensure that mitigation measures are a part of the architecture and site design rather than being conspicuously added later on in the design process.

Design buildings to mitigate cumulative wind impacts through base design, setbacks, projections, balcony design, building massing and architectural articulation. Additionally, include site wind mitigation measures such as vegetation and wind screening features.

Provide for pedestrian and public refuge through canopies, colonnades and sheltered areas to offer protection from rain, wind, snow, and to provide shade.

Create compact, sensitively designed built forms which limit shadowing on the public realm and adjacent properties.

Design to limit the need for 'extra' mitigation measures such as screens and trellises which may not suit the project's architectural vision.

Four Season & Winter City Design

Design all buildings, streets and open spaces with regard for Kitchener's year-round weather conditions including local prevailing winds, wind speeds, precipitation trends including both rain and snow, and average access to sunlight.

Locate major glazing areas and transitional indoor and outdoor spaces-- including patios and porches-- to maximize passive solar gain and access to sunlight. Add sun shades to receive the best combination of winter warming, summer shading and daylighting potential.

Employ colourful, warm (3000k max), human-scaled site lighting and architectural accent lighting to enhance safety at night and provide a more pleasant pedestrian experience.

Bold, colourful materials and accents can also be employed to help brighten the urban environment during grey, dim winter conditions.

Give preference to deciduous trees to the south and southwest of buildings or shared space where shade is desired. Deciduous trees will provide shade in the summer while allowing sunlight to filter through in the winter.

Give preference to coniferous vegetation on the north and west sides of open outdoor spaces to protect areas from prevailing winter winds.

Strategically deploy masonry, concrete and other heat absorbing materials to act as either interior or exterior heat-mass walls, absorbing heat during the day and radiating it back out at night.

01.2.5 STREET DESIGN

Complete Streets

Complete Streets enable safe, attractive and comfortable access and travel for all users-- including pedestrians, cyclists, transit riders and motorists, Complete Street design is a balanced approach, serving an array of mobility, social, recreational and ecological needs.

Each street is unique and reflects the required roadway function, the era of completion, spatial constraints, and the character of its buildings and open spaces. Complete Street design is not a 'one-size-fits-all' approach; the desired form and feel of a street will ultimately influence its design.

Design new-- and enhance existing-- streets to include the following attributes, where appropriate:

Safety. Support safety and security with predictable, unobstructed routes that are connected by readily apparent and convenient crossings. Design streetscapes to promote a perceived and actual safe experience through at-grade active uses, lighting, slow vehicular movement speeds and other CPTED (Crime Prevention Through Environmental Design) measures.

Multi-Modal Access. Provide safe access and offer convenient travel choices for users of all modes of transportation within the right-of-way.

Pedestrian & Cyclist Use & Comfort. Prioritize these users with comfortable spaces and appropriate access to transit, while creating conditions that promote convenience and walkability.

Spaces For Public Life. Create visually interesting and flexible public spaces for social, commercial and recreational activities that encourage people to spend time in the public realm. Provide for creatively designed, well integrated, easily accessible public bicycle parking and/or bike sharing stations.

Memorable Experiences. Create a distinctive, recognizable identity that provides meaning, assists wayfinding, reflects local history and supports a broad range of cultural traditions and identities.

Ecological Sustainability. Extend the urban forest to enhance the community's long-term ecological function and assist in increasing tree canopy coverage. Minimize environmental impacts created through the design, construction and maintenance of streets.

Convenient Connections. Facilitate efficient, convenient connections among all travel modes to all destinations. Provide for safe and convenient temporary conditions during periods of construction.

Barrier-Free Access. Facilitate ease of use and access for all users by incorporating universal design principles and meeting or exceeding Kitchener's standards for accessibility.

A Sense of Enclosure. Establish appropriate proportions of street width to abutting building facade height to create a sense of enclosure and comfort for pedestrians.

Maintainable. Plan and design for the ongoing maintenance of streetscapes, including trees/landscaping, sidewalks and bike lanes within the public realm.

Improve Public Health. Design streets in ways that incorporate physical activity and health-conscious living into people's everyday routines, by considering the movement needs and desired amenities for active users.

Coordinated. Design streets to accommodate the full range of utilities in a coordinated, comprehensive manner to ensure an attractive, uncluttered streetscape that is designed for people. This includes trees, stormwater management, natural gas, hydro, telecoms, and any other utilities.

Street Design

Create and conserve a modified grid street pattern based on a hierarchy of streets that ensures connectivity and provides opportunity for efficient transit routes.

Create and conserve walkable block lengths that provide the greatest possible connectivity for pedestrians between potential destinations and transit stops.

Create and conserve a minimum grid of protected cycling infrastructure.

Minimize points of conflict between pedestrians, cyclists and vehicles, always prioritizing pedestrians and cyclists (in that order).

Locate transit stops at gateways, planned commercial and employment areas, higher density housing blocks, live-work areas and parks. Seamlessly integrate stops into the site design.

Use creative street alignments to reinforce focal points and priority streets, to sensitively address cultural and natural heritage assets, and to create interesting public realm opportunities.

Provide street trees with the goal of creating a continuous mature tree canopy wherever possible.

Provide additional trees, planters and other soft landscaping elements, featuring a sensitive, diverse and attractive mix of plant species that are durable, easy to maintain and designed to meet the needs of all users (including wildlife) throughout all four seasons.

Provide surface treatments with a coordinated mix of colours, textures, and materials.

Provide frequent seating areas, public washrooms and fountains with appropriate weather protection and a variety of seating options for persons of all needs and abilities.

Provide creatively designed, well integrated, easily accessible public bicycle parking.

Provide public art, wayfinding and educational elements to create streetscapes with a greater and more varied sense of civic utility and public interest.

Place seating, building entrances, retail and other areas of activity facing the street, concentrated at major transit stops and integrated into the design of the public realm.

Use buildings, landscaping and other design elements to create continuous, vibrant and creative streetscapes that encourage exploration, interaction and reflection. Ensure that natural surveillance is always provided into the public streetscape.

Design the public realm to be human-scaled, varied, visually appealing and landscaped.

Protect existing natural features and provide sufficient soil depth, volume and growing medium for new trees.

Provide unobstructed, accessible and high quality pedestrian pathways and seating areas.

Provide energy efficient, pedestrian-scaled lighting along primary pedestrian routes.

Provide pedestrian-oriented street furnishings, public art, and interactive features.

Design streetscapes to satisfy the needs of a diverse range of users by providing access, safety, comfort, mobility, and leisure for people of all ages and abilities.

Design streetscapes to optimize the pedestrian experience for any time of day or night, extreme weather conditions, nearby activities and events, and other contextual considerations.

Ensure weather protection elements, such as overhangs and canopies, are well-integrated into the building design, detailed and scaled to support the streetscape, and positioned to maximize function and pedestrian comfort.

On large sites, enhance existing or create new publicly accessible mid-block pedestrian connections that are direct, logical and continuous.

Design mid-block connections with high-quality, universally accessible and sustainable surface materials, furnishings, landscaping and pedestrian -scale lighting.

Focal Points & Gateways

Focal Points are built or natural features that draw attention and help define a city's character.

Gateways are built or natural features that act as an identifiable threshold between different parts of the city.

Use massing and architectural expression to create landmark structures in locations that terminate views or streets. Use **Viewshed Analysis** for prominent developments to empirically determine their visual impact and design with this in mind.

Protect existing views and vistas to and from existing and planned built and natural landmarks.

Create new opportunities for focal points and gateways through the location of streets, intersections, walkways, lookouts, built form and site design.

Frame intersections by locating buildings and concentrating mass close to the street corner.

Provide public art in prominent locations to create recognizable focal points and gateways.

Did You Know? Viewshed analysis can be performed by the City, using LIDAR data.

Wayfinding

Proper wayfinding helps orient and direct all users by providing navigational information throughout the public realm. Wayfinding elements are communication tools to facilitate movement, connectivity, discovery, and to reinforce a sense of place.

Design wayfinding as part of a comprehensive system that is primarily oriented towards pedestrians, cyclists and transit users, to provide navigation in the public realm to key destinations and prominent sites, whether part of the road, trail or park network.

Consider ways to make wayfinding elements accessible to all users, including persons of all abilities, ages and levels of familiarity with Kitchener, including foreign language speakers.

Ensure the physical placement, installation and illumination of signs and other wayfinding elements is suitable for all users.

Effective wayfinding systems may incorporate markers, maps, public art installations, unique surface treatments, street furnishings, landmark buildings, and/or significant natural features.

Design wayfinding systems to be barrier-free, user-friendly, clear, consistent, coordinated, and placed in strategic and predictable locations.

Provide frequent directional cues throughout the wayfinding system, particularly at decision points along journeys in all directions.

01.2.6 PARKS & OPEN SPACES

Typologies

Parks and Open Spaces enhance the built environment, improve the character of neighbourhoods and provide both passive and active recreational opportunities. The following typologies were developed through the City of Kitchener **Parks Strategic Plan: Natural Areas, City Parks, District Parks, Neighbourhood Parks, Urban Greens, Greenways, Trails**

Did You Know? Parks and Open Spaces are planned in consultation with stakeholders and industry partners on a system basis, building upon and supporting networks that exist throughout the city and beyond, including drainage networks, natural area and wildlife corridors, active transportation networks and active facility planning strategies; as well as seeking to generate synergies in combination with other public, institutional and privately owned active and natural spaces.

Did You Know? The City determines park locations and programming based on assessed need and population. Parks are to accommodate an approved municipal recreation program while supporting and enhancing the public realm.

Access/Location

Maximize opportunities for parks and open spaces, leveraging natural and cultural heritage assets, notable topographies and desire lines for pedestrian and cyclist travel patterns.

Provide significant park frontage along streets to improve safety, accessibility, visibility and identity. All parks should have a minimum of two streets frontages and points of access.

Design frontages to maximize pedestrian permeability and safety.

Design parks and open spaces to leverage and enhance cycling infrastructure by locating them within or adjacent to existing and planned cycling and transit networks. Provide seamless connectivity to and through park spaces for cyclists.

Design and place parks and open spaces to be community focal points which support users of all ages, abilities, identities and cultural traditions.

Consider non-traditional opportunities for new park spaces in existing built-up areas and intensification areas to serve greater densities of people with a more diverse range of needs.

Connectivity

Create, conserve and enhance a city-wide, interconnected open space network with a variety of park and open space types and uninterrupted pedestrian and cyclist travel wherever possible, including options for commuting via walking or cycling along trails and through open spaces.

Prioritize pedestrian and cycling access and traversal of the open space network.

Design equitable barrier-free options for accessing and traversing the open space network.

Provide access to the open space network within walking distance (5 minute walk) to most homes, prioritizing higher density areas.

Create and conserve a continuous off-street, open space community trail network with frequent connections to the on-street active transportation network and key transportation nodes. Connect to community facilities and destinations.

Additional Information: Destinations include (shopping and work centres, community facilities, parks and open spaces, hospitals, libraries, schools and community centres.

Park & Open Space Design

Front buildings onto parks and open spaces to frame park and open space boundaries.

Use high quality, durable and easily maintained landscaping and maximize tree planting to ensure parks add significantly to Kitchener's urban tree canopy.

Provide a comfortable environment for users year round. Provide for access to both sunlit and shaded areas and design for four-season wind conditions.

Integrate artistic, interactive and informative design elements into parks, including sculptures, murals, wayfinding, installations, water features and interactive or participatory elements.

Design parks and open spaces to serve community members of all ages, identities, cultural traditions and abilities.

Park design should be generated through a collaborative process, including consultation with City staff stakeholders and with reference to the City's established guidelines and standards.

01.2.7 COMPATIBILITY

Scale & Transition

Did You Know? A compatible city pursues development that exists in harmony with its surroundings. This includes scale, massing, architectural rhythms and compositions, transitions between forms and to lower-scaled established neighbourhoods and the suitability of height, building size, materials, and details within a neighbourhood context.

Compatibility is to be provided while respecting Kitchener's eclectic mix of styles, eras and forms. The pursuit of compatibility should not be interpreted as desiring replication or sameness.

Provide transitions in mass, height and density between areas of different scales and densities in order to mitigate potential impacts and preserve compatibility.

Use periodic breaks in the street line facade, architectural variety in materials, massing and detailing or minor variations in building setback, rhythm and alignment to add interest to the streetscape, and to provide spaces for activities adjacent to the sidewalk.

Provide strongly articulated buildings and respect the rhythm and pattern of the existing and planned context of the area. This can be accomplished through the design of openings, materials, architectural features, details and projections, and balcony/amenity space design.

Stepback the upper floors of taller buildings to create a human-scaled public realm, provide access to sunlight and create adequate separation.

Concentrate height and mass at nodes, street corners, and along corridors and arterial streets.

Use thoughtful and creative landscape design to create compatibility. This includes the size, placement and style of public and private open spaces, using landscaping to provide screening and help established a human-scaled streetscape, and using planting beds, trees, shrubs and other landscaping to enhance setbacks and reinforce boundaries and thresholds.

Additional Information: Refer to the Mid-Rise and Tall Buildings sections of this manual for compatibility guidelines related to buildings of between 4 and 8 storeys, and 9 storeys and above, respectively.

New Development in Existing Neighbourhoods

Design infill buildings at a compatible scale with existing and planned surroundings. New buildings should respect planned and established heights and setbacks in the neighbourhood.

Ensure compatibility by providing appropriate building mass, design features and materials.

Use materials that are compatible with those found in the existing neighbourhood and maintain the rhythm of existing building separations and other spatial relationships.

Complement existing facade openings (size, dimension, orientation, rhythm and articulation), horizontal and vertical massing elements, architectural features, setbacks and materiality.

Use design elements compatible to those within the existing neighbourhood, but do not replicate.

Vehicular parking and circulation is to respect existing and desired neighbourhood conditions.

01.2.8 CULTURAL & NATURAL HERITAGE

Cultural Heritage Resources

Conserve cultural heritage resources including buildings, views and vistas, structures, districts, streetscape and landscapes using the following strategies;

Preservation: protect, maintain and stabilize the heritage value of a cultural heritage resource including its context and setting.

Rehabilitation: repair or replace heritage attributes, construct compatible and reversible additions, integrate the cultural heritage resource or components of the cultural heritage resource into a new development, or adaptively reuse the cultural heritage resource.

Restoration: accurately reveal, recover or represent the state of a historic place or individual component as it appeared at a particular period in history, while protecting its heritage value.

New development on a site with a cultural heritage resource and additions to cultural heritage resources should integrate new, contrasting building materials in ways which respect the integrity of the cultural heritage resource. Conserve heritage value by being physically and visually compatible with, subordinate to, and distinguishable from the cultural heritage resource.

Sensitively rehabilitate cultural heritage resources to ensure equitable and inclusive usability for all while mitigating impacts on heritage attributes.

New development near cultural heritage resources is to be compatible, with a high level of urban design, particularly as it relates to views, streetscape character, and material selection.

Ensure that the design and location of lighting, streets, signage, parking, public works facilities, grading, and other features respects the integrity and character of cultural heritage resources.

Proposals contemplating development on a property containing a cultural heritage resource or adjacent to protected heritage property may be required to provide a Heritage Impact Assessment and/or Conservation Plan as part of the application review process.

Additional Information: A Heritage Impact Assessment evaluates the impacts the development or site alteration will have on cultural heritage resources, and recommends an overall approach to conserve these resources and mitigate negative impacts.

Natural Heritage Resources

Design for the long term conservation of natural heritage resources.

Protect and create views to natural heritage resources.

Locate, connect and integrate parks, open spaces and community facilities with natural heritage resources to provide a range of recreational opportunities. This could include schools, stormwater management ponds, community gardens and trails.

Consider providing public access to and through natural heritage areas, where such connections serve to extend pedestrian networks, and where access and public use of the area can be implemented and managed without impacting the natural heritage resource.

Locate single-loaded local roads along the edge of natural heritage areas. Avoid fragmenting natural heritage areas with road or infrastructure crossings.

Preference should be given to fronting residential units onto natural heritage areas.

Locate public realm infrastructure between development blocks and natural heritage areas.

Locate multi-use trails and pathways outside of buffers and vegetation protection zones.

Locate infrastructure, buildings and impervious surfaces outside of vegetation protection zones.

Avoid locating parking, servicing and loading areas directly adjacent to natural heritage areas.

Utilize green infrastructure and low impact development techniques such as permeable surfaces, green roofs and bioswales for development adjacent to natural heritage areas.

Mitigate negative impacts to adjacent natural heritage features caused by shadow, lighting or wind.

Incorporate stormwater management facilities and LID technology within or adjacent to natural areas as featured design elements. Minimize the use of fencing.

Did You Know? Kitchener's Natural Heritage System is comprised of natural heritage features that maintain local and regional biological, hydrological, ecological and geological diversity and functions, support viable populations of indigenous species, and sustain local ecosystems.

01.3.0 SITE DESIGN

01.3.1 BUILT FORM

Massing

Design massing to conserve and enhance local contextual conditions, including significant buildings, open spaces, civic resources and pedestrian safety and comfort.

Concentrate height and mass where it creates the best public realm opportunities and the fewest unwanted impacts on surroundings.

Use projections, recesses, arcades, awnings, colour, materials and textures to reduce or diversify a building's perceived massing.

Design massing to create visual interest, forge a sense of identity and reinforce a human scale.

Locate primary building entries to be visible and directly accessible from the public street.

Design all elevations to provide transparency, architectural continuity, visual interest and natural surveillance onto surrounding public and shared spaces. Consider the privacy of building occupants and neighbours when designing all elevations. Avoid blank walls or underdeveloped facades, as most buildings have visual impacts in all directions.

Changes in material or colour alone are not enough to provide articulation on a building. Such changes should accompany changes in the building mass, or at a minimum, be separated by significant three-dimensional architectural elements.

Design street facing facades with greater transparency and articulation at a human scale.

Design the built form with regard for adjacent properties to create coherent streetscapes.

Design the scale of buildings to offer a welcoming environment for pedestrians. Large blocks should be broken up with multiple buildings, generally not longer than 70m each.

In most circumstances, buildings should occupy the majority of the lot frontage. Ensure that all accessory building features and components are well integrated into the building design and do not negatively impact the streetscape.

Did You Know? Good built form creates a sense of place and helps establish a neighbourhood identity, while at the same time providing visual interest and variety. It rewards curiosity and exploration by being appealing and interesting from all possible vantage points.

Additional Information: This includes rooftop mechanical equipment, air conditioning equipment/units, utility meters, and balconies.

Materials & Uses

Design buildings that are contemporary and which reflect current cultural standards, technological innovations, sustainability objectives, and local, national and international standards for architecture and urban design.

Vary architectural details, materials, colours and textures to support a human scaled public realm and to distinguish between different building volumes and uses.

Place active uses on the ground floor along street facing elevations. Active uses include retail, personal services, lobby space, shared interior amenity spaces, community spaces, and residential units directly accessible from the street.

Where active uses are not possible, enhance the pedestrian experience through the rhythms, materials, articulation and massing of the built form.

Incorporate a range of building and unit types, uses, and built forms, tenures, and styles.

Highlight prominent built form elements with enhanced architectural treatments for all facades visible from the public realm.

Provide pedestrian weather protection for rain, sun and wind such as colonnades, canopies, awnings and balconies.

All visible elements of a building, including utilities (meters, conduits), HVAC (a/c units, vents) and loading/servicing areas are to be integrated into the design of the building and shown on elevation drawings as part of the building elevation approval process.

Additional Information: Variety in architectural style is encouraged, so long as that variety represents a contextually appropriate response to existing and planned conditions.

01.3.2 SHARED SPACES

Outdoor Amenity

Design amenity spaces with high quality materials and features that are attractive, flexible and adaptable to various programming opportunities and seasonal conditions. Prioritize pedestrian comfort, safety, and barrier-free accessibility.

Amenity areas are to be safe, directly accessible from primary building entrances and physically and visually separated from vehicular traffic. Amenity space users must not have to cross drive aisles or parking areas to access amenity areas. Where such conflict is unavoidable, design priority pedestrian crossings with a high-contrast, alternate material which includes changes in colour, pattern and texture.

Delineate between communal and private areas and provide well-designed thresholds through thoughtful landscaping, low feature walls, changes in paving or ground cover or similar methods.

Outdoor amenity areas are to be carefully designed for wind, sun and weather conditions.

Do not place amenity areas adjacent to vehicular or servicing areas such as loading and parking.

Provide natural surveillance into shared amenity areas.

Orient balconies to maximize access to sunlight and views and to minimize overlook into surrounding private spaces.

Sensitively designed sustainability features may be integrated into amenity space design.

Spaces intended for public use must be designed to be accessible without requiring permission to access. Likewise, public amenity spaces must not be designed to restrict access, discriminate against any user or user-type, or employ hostile design elements.

Do not create small, narrow, unassigned open spaces around and between buildings.

Shared outdoor amenity space is to be provided at-grade wherever possible.

Employ a mix of individual balconies/patios, shared at-grade amenity and shared rooftop amenity spaces to create a variety of recreation options and programming opportunities.

Place and orient outdoor amenity spaces to take advantage of natural lighting and wind conditions. Southern and easterly exposures give access to high-quality morning and mid-day light and can also allow the built-form to provide shelter from prevailing westerly and north-westerly winter winds.

Provide individual dwellings with direct access to their corresponding private open space.

Use landscaping, low walls, or other passive screening techniques to buffer private open spaces from public and private shared spaces. Avoid fencing wherever possible.

Design private open spaces to have direct access to generous and well designed landscaped areas and to mitigate impacts from public realm.

Outdoor amenity areas are to be useable year-round and their quality is not to be impacted by other site functions. Provide physical separation between amenity spaces and snow storage/waste collection/delivery servicing areas.

Design shared spaces to provide multi-use functionality that encourages gathering and play (eg. community gardens, shade structures, barbecues, water features, play areas, seating). Connect shared spaces to existing streets, pedestrian connections, parks and natural areas. Shared spaces should not be surrounded by parking, loading or servicing areas and points of conflict between pedestrians and vehicles should be avoided.

Position windows and other buildings openings onto shared spaces to provide natural surveillance and encourage pedestrian animation.

Did You Know? Public and private amenity spaces are communal, programmed and dedicated areas which provide recreational and social opportunities while adding to the quality and character of the urban environment. They facilitate activity, incorporate green and landscaped areas into urban life and provide valuable spaces for building occupants and the public.

Additional Information: Examples of public and private outdoor amenity spaces include: **Courtyards, Balconies, Privately Owned Public Spaces, Outdoor Seating Areas, Rooftop Amenity Areas, Gardens, Patios & Terraces, Event or Performance Spaces**

Landscaping

Use continuous landscaping to reinforce pedestrian areas within a site.

Select vegetation with regard for their tolerance to urban conditions, such as road salt or heat. Give preference to native species and a mixture of vegetation that provides visual interest and wildlife habitat and aligns with objectives for screening, safety and four season design.

Utilize landscape design to mitigate microclimatic impacts and enhance four-season viability.

Design landscape and hardscape elements to provide colour, having regard for seasonal changes.

Provide a minimum 3.0m wide landscape area, in addition to any walls or fences, at the edges of sites adjacent to residential or institutional properties.

Plant trees, shrubs, and ground cover on any unbuilt portions of the site that are not required for other site functions. This includes any areas reserved for future phases of development.

Use green, low impact development (LID) and stormwater management technologies wherever appropriate.

Protect and feature heritage, specimen and mature trees on site by minimizing grade changes, protecting against construction impacts and preserving permeable surfaces.

Provide landscape areas between the building and the sidewalk with plant beds, planters, trees, street furniture and walkways to the public sidewalk.

Where trees are proposed within landscaped areas, adequate soil volumes are to be planned in order that trees may achieve a mature canopy size.

Coordinate and integrate all landscaping with above and below grade utilities, telecom equipment and transit infrastructure including stops and waiting areas.

Urban Forestry

Provide landscaping that positively contributes to Kitchener's urban forestry objectives.

Provide enhanced boulevard treatment by planting large canopy street trees where adequate soil volumes are available or can be provided, consistent with the City's urban forestry objectives.

Where boulevard locations and lot frontages are restricted, consider a range of alternative suitable locations for public and private trees.

Retain and incorporate existing trees and other natural features into new development planning where possible, using tree protection and conservation techniques to protect the integrity of the root soil zone as well as the existing growing and drainage characteristics of the site.

Signs

Design buildings to accommodate signs that respect building scale, cultural heritage resources, architectural expression and established streetscape design objectives.

Avoid visual clutter, but allow for variety and visual interest including different media, font styles, colours and design inspirations.

Design sign illumination to be task oriented and avoid glare/light spillover onto adjacent areas.

Locate and design ground-mounted and wall-mounted signs to complement the character and scale of the area and promote an active, pedestrian-friendly environment. Integrate all signage into the landscape design an architectural expression of buildings.

Allow for retailer identification where there are multiple buildings and uses on a site but avoid allowing individual corporate image, colour and signs to dominate either the site or public spaces.

All signs must comply with the City of Kitchener Sign By-law and any applicable design report.

Public Art

Public art (size, location, medium) is to be planned in the conceptual stage of the development in order to integrate art works into the building and site design.

While public art may be a stand-alone element, integration as a part of a building design or the public realm is preferred, and can include architectural features and facade treatments, surface materials, street furnishings, lighting, information displays and utility elements. Public art can be multi-functional, providing seating, shade, landscaping and other enhancements.

Where public art is proposed along a wall or building facade, it is to be integrated into the site plan design process and architectural expression of the building, including massing, materials, landscape and lighting design. A mural or other post-construction public art element should not be used to justify the existence of blank walls or otherwise unactivated spaces.

Public art installations may be publicly or privately owned. It is strongly encouraged that private developers incorporate some public art elements within their developments to create a focal point in the development and become a prominent landmark for the community.

Public art should be sited in a manner which does not jeopardize other design objectives such as inclusivity, sustainability, barrier-free access or safety.

Public art is encouraged to be site specific, connecting with the location of the proposed artwork and drawing on natural and living heritage, culture and the local environment.

Public art is encouraged throughout the city, particularly within intensification areas, gateways, parks and open spaces and along multi-modal trails and pathways.

Public art must be installed in a manner that achieves a positive relationship in scale, spacing and materials with adjacent building massing, materials and architectural elements and, where applicable, open spaces and natural features.

Where appropriate, accent lighting is encouraged to highlight a public art installation. Lighting is to be controlled such that it minimizes impacts on dark-sky objectives.

Did You Know? Public Art is accessible from, visible from or located within the public realm and can range in size, form and medium. Good public art makes communities more engaging by creating distinct character and identity within neighbourhoods, providing key interpretations of local history, traditions, social issues and culture, fostering creativity, and instilling a sense of civic pride.

Additional Information: Intensification areas include Major Transit Station Areas, Downtown, and significant Nodes & Corridors.

Lighting

Design site lighting for all building and user needs, including the public realm, pedestrian and amenity areas, transit stops, parking areas, servicing areas and building entry and egress areas.

Supplement site lighting with human-scaled lighting fixtures (either standalone or affixed to buildings) in order to accentuate and animate buildings and shared spaces, provide enhanced safety for pedestrians and increase opportunities for active use programming.

Design lighting to minimize glare and light spilling onto surrounding areas. All site lighting- including porch and other wall mounted lighting-- is to be full cut-off (uplight zero or U0) and dark sky compliant.

Provide lighting that is appropriate to the street character and ground-floor use, with a focus on pedestrian areas.

Use pedestrian scaled lighting to clearly identify pedestrian routes, and illuminate public spaces.

Provide uniform lighting by installing a greater number of fixtures at lower wattages and mounting heights.

Site lighting is to have a correlated colour temperature (CCT) maximum of 3000K, or demonstrated equivalent.

Provide lighting that is consistent and human-scaled. Ensure that site lighting comprehensively addresses safety objectives. Avoid creating glare, 'hot spots' or excessively shadowed areas.

Use energy efficient lamps and avoid over-lighting, while prioritizing safety.

Use bollards, wall-mounted or lower-scale pole fixtures along pedestrian paths to provide human-scaled and ambient lighting.

Additional Information: Lighting should be adaptable to changing seasonal conditions and designed to a winter city standard. This includes enhanced colour and warmth, as high-quality, human scaled winter lighting is known to have positive impacts on mental health and well being.

01.3.3 SITE FUNCTION

Vehicular Access & Parking

Plan parking areas to be flexible and adaptable to future conditions including decreasing dependence on private vehicles, increasing usage of carshare, rideshare, public transit, active transportation, electric and self-driving vehicles, increasing severe weather events brought on by climate change, and the increasing scarcity and value of land.

Avoid placing parking between a building and the street or anywhere within the front yard.

Provide parking at the side and rear of buildings. Clearly define primary vehicle routes on the site through the use of signage, curbing, bollards, and line painting. Separate parking areas from primary vehicle routes and driveway entrances to streets.

Provide conveniently accessible and easily visible locations for bicycle parking.

Locate parking areas for barrier-free parking spaces in close proximity to building entrances.

Parking areas are to accommodate the safe movement of pedestrians both on and off site.

Provide landscaping around the perimeter of parking areas and laneways.

Use landscaping to screen parking areas, to avoid illumination of adjacent properties and the public realm from automobile headlights.

Provide raised traffic islands to break up large parking areas, to a suitable scale and sized to accommodate shrub and tree planting. Select planting material that is easy to maintain, hardy and pollution and drought tolerant.

Ensure parking lot planting does not obstruct views of approaching traffic, pedestrians and cyclists.

Avoid the creation of entrapment areas and dead end parking aisles.

Provide adequate lighting levels and uniform coverage in parking areas, service utility areas, and beneath cantilevered portions of the building.

Link parking areas on abutting commercial properties to provide for movement between lots.

Provide intuitive and comfortable access for park-and-ride or multi-modal transit users, particularly if a transit stop is adjacent to or located on a site.

Above grade structured parking has similar impacts on the urban environment as any other building typology or use and will be held to the same design standards. See the **Design for Structured Parking** section of this manual for more detailed guidelines.

Driveways

Driveway access should be located off of side streets or lanes wherever possible.

Share and consolidate vehicular access to parking areas between adjacent properties in order to reduce the extent of interruption along the sidewalk and the streetscape.

Maximize the distance between site access driveways as well as the distance between site access driveways and street intersections. Locate driveways with regard for the function of the site and the public right-of-way.

Ensure pedestrian and cyclist safety and maximize visibility.

Driveways are not to conflict with transit stop locations.

Provide pedestrian crossings over driveways in a contrasting, alternative material.

Emergency Access

Integrate emergency access requirements into the site and landscape design.

Provide on-site vehicle circulation and parking which does not conflict with the use of emergency access routes.

Provide clear, unimpeded, continuous pedestrian passage to and from the building to enhance emergency access and egress.

Provide all required signage, hydrants, and other emergency access infrastructure such that it is integrated into the site, building and landscape design.

Servicing & Utilities

Maximize efficiencies by sharing or consolidating service and utility areas between different utility providers.

Enclose all service and utility equipment within buildings or screen them from both the street and neighbouring properties. This includes loading bays, utility boxes, garbage and recycling container storage, loading bays, utility metres and ramps and air conditioner compressors.

Eliminate conflict between service/loading areas and vehicle/pedestrian routes, prioritizing pedestrian safety, convenience and mobility.

Design on-site circulation to eliminate reversing or maneuvering on public streets.

Screen industrial/commercial outdoor storage from public streets and adjacent residential uses.

Locate continuous or frequent sources of noise and odour away from sensitive adjacent uses. Use noise attenuation measures where necessary.

Design all access and servicing elements to contribute positively to the architectural expression of the building.

Where feasible, locate utilities underground to improve the appearance of a site, where appropriate and feasible.

Design air intake and exhaust elements into the architecture of the building. Minimize their visibility, especially from the public realm. Show all such elements on the elevation drawings.

Waste & Recycling

Design the site to accommodate waste pickup, deliveries and servicing vehicles with turning radii that allows for complete turning movement/maneuvering on-site with minimal impacts to the public realm, the street, or pedestrian and cycling infrastructure.

Place waste locations, roll out areas and sorting areas so that there is no potential for conflict between users and vehicular traffic.

Provide adequately sized waste and recycling rooms which allow for sorting. Provide for the recycling of organics wherever possible.

Public-use receptacles should be conveniently located for pedestrians and attractively designed.

Snow Storage

Design sites for practical functionality including snow removal and snow storage. Snow storage locations cannot interfere with required amenity spaces, pedestrian pathways or cycling infrastructure.

Place snow storage areas where they are in direct mid-day sunlight throughout the winter and spring months where possible. To encourage melting, snow storage areas should never be located in continuously shaded areas. Similarly, provide smaller, more frequent snow storage areas to increase melting speed, where doing so does not interfere with the quality of the public realm, pedestrian routes, or private outdoor amenity spaces.

Snow storage areas are to be placed such that they will not inhibit pedestrian movement even if they 'overflow' their demarcated area in times of heavy snowfall.

Major Transit Station Areas

02.1.0 INTRODUCTION

02.1.1 KITCHENER'S MAJOR TRANSIT STATION AREAS

The ION

The ION Light Rail Transit system is a transformative piece of urban infrastructure, running from Conestoga Mall in Waterloo to Fairview Park Mall in Kitchener. It has created-- and will continue to create-- extraordinary opportunities for growth, investment, connectivity, mobility and placemaking. Well designed Major Transit Station Areas (MTSAs) will lead to focused city building that provides a critical mass of people, places and events that will make Kitchener a leader in urbanism for mid-sized cities.

What Is A Major Transit Station Area?

Kitchener's Major Transit Station Areas have been identified and developed through the Planning Around Rapid Transit Stations (PARTS) Project. They are Midtown, Central, Rockway, Block Line, Fairway and Sportsworld. These guidelines apply only to intensification lands within these station areas that are not covered by other sections in this manual (such as **Downtown** and **Central Neighbourhoods**). They also do not apply to areas that are intended to be conserved as low-rise stable neighbourhoods (**Residential Infill in Established Neighbourhoods**).

A Vision for Major Transit Station Areas

LRT systems encourage compact, dense, transit-and-people-focused development. Higher densities and enhanced connectivity places a greater number of people in proximity to a greater variety of places, housing options, workplaces, shops, open spaces and events. This makes it possible for buildings, streets and open spaces to be designed using a greater variety of creative forms, styles and programs -- to do things a little differently or try out something new -- knowing that they can attract from a broader user base. Transit supportive densities are mandated by the Province and are needed to support investment and the viability of transit.

02.2.0 COMMUNITY DESIGN

02.2.1 INCLUSIVE DESIGN

Safety

Design for high levels of natural surveillance and optimal pedestrian visibility. Pedestrians should have clear, unobstructed vision along all publicly accessible routes, allowing for advanced detection of potentially unsafe situations.

Design streets, trails, lanes and shared spaces with consistent, pedestrian-level lighting avoiding both 'hot' spots that can cause vision impairment as well as poorly lit or shadowy areas.

Design the pedestrian network with a fine grain and maximize connectivity such that when a potentially unsafe situation presents itself, people have multiple options for alternative routes.

Avoid the creation of dead-ends or entrapment areas. All spaces that can be accessed by pedestrians are to have multiple routes of escape, including areas on private land such as loading/delivery and other service areas.

Implement safety infrastructure such as designated waiting areas for transit users, emergency panic buttons, and other such resources and technologies, where appropriate.

Did You Know? Designing for safety is key in MTSA's, where it is critical to create safe conditions (both real and perceived) for late-night transit users, four season users of public spaces and streetscapes, patrons of station-area active uses, and residents/workers who use these areas in non-peak hours.

Universal Design

MTSA's are to be held to the highest standard for universal design, as users of all ages and abilities are to have equitable access to public transit and public spaces.

MTSA's are to be designed for the convenience and comfort of users with mobility aides including walkers, wheelchairs, scooters and strollers.

Design buildings and open spaces to be intuitive, visitable and enjoyable to users of all abilities, with the intention that the full spectrum of public life be equally available to all.

Age & Family Friendly Design

Families and the elderly are heavy users of public transit and their needs are to be fully accommodated throughout MTSA's.

Residential or mixed-use buildings are to consider unit design and amenity spaces which are appropriate for seniors and families, including storage options, play areas, seating options, etc.

Social Infrastructure

Design residential or mixed-use buildings with consideration for the social needs of families and older adults. For example, there are known positive social and health benefits associated with seniors and children sharing amenity spaces, interacting and looking out for one another.

Locate community, event and social services in close proximity to transit stations.

Arts & Culture

MTSA's are to be designed to accommodate events, celebrations and art installations that are reflective of the full range of Kitchener's cultures, sub-cultures, ethnicities and identities.

Pursue creative opportunities to implement arts and culture initiatives into MTSA's. Along with Downtown, Kitchener's MTSA's should reflect the highest concentration and variety of art pieces, cultural programs and opportunities for interaction, participation and education.

Consider ways to integrate artistic and cultural expressions into the design of all elements within MTSA's including architecture, landscape design, lighting design, streetscape design, wayfinding elements, transit stops, surface treatments and patterns, and site furnishings.

02.2.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Design for high indoor air quality for the comfort and well-being of building occupants.

Provide building occupants with connections to the outdoors by providing daylight into regularly occupied areas of the building, frequent and generous permeability between indoor and outdoor spaces, and direct pedestrian connectivity to trails, parks and open spaces.

Provide operable windows to allow outside air to all occupied spaces in the building to support the comfort and well-being of building occupants and as an energy conservation measure.

Design for Climate Change

New development is to achieve a minimum target for sustainability based on current sustainability measures/policies/programs.

Provide sustainable landscaping within streetscapes, including a range of vegetation focusing on street trees and stormwater retention and infiltration techniques. Use storm water for landscape irrigation where possible.

Introduce green infrastructure along existing and new public open spaces including; bioswales, groundwater infiltration areas and permeable surface treatments; native planting species which enhance urban wildlife habitats; energy efficient, human-scaled and wildlife friendly lighting fixtures and; locally sourced, recycled and reusable materials.

Use these and other design features and technologies to create green connections between new and existing streets, transit stops, parks and natural features to support the natural flow of water, wildlife movement and enhanced connectivity for people. Make these features and technologies visible and interactive where appropriate, to provide educational opportunities and encourage direct and reciprocal relationships between the urban and natural environments.

Where appropriate, integrate sustainable design with streets, transit, parks, public art, and event and recreation spaces to better communicate the importance of nature in the urban environment and harmonize sustainable practices with responsible urban intensification.

Reduce site contributions to urban heat island effect. Maximize landscaping and green infrastructure and provide high albedo (highly reflective of solar radiation) surfaces on other surfaces such as hardscaped areas, parking areas, driveways and building roofs.

Where appropriate, re-use existing site and/or building components to conserve resources. Incorporate previously used building materials and products into new construction.

Reduce construction and demolition waste through reuse and recycling and explore options for renewable energy including district energy systems, geothermal and solar.

02.2.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Transit waiting areas, public and private open spaces, and associated pedestrian routes are to offer a seasonally appropriate mix of direct sunlight and shaded areas, cumulative wind speeds that are appropriate for sitting, standing, and walking, and protection from the elements.

These impacts are to be determined through **Wind** and **Shadow Studies**, with mitigation recommendations from these studies implemented on the relevant plans. These studies are to include surrounding context, and should be completed for all mid and high-rise buildings, multi-building developments, and any other developments where impacts are anticipated.

Design pro-actively for microclimatic impacts through site design and architecture. Consider building placement, orientation, height, base design, stepbacks, projections, materials, landscaping and lighting as opportunities to improve overall microclimatic performance.

Four Season & Winter City Design

Design transit waiting areas and public and private open spaces for winter activity and program them such that they are useable, comfortable, safe and attractive year-round. Include the use of vibrant colours, human-scaled lighting, public art and four-season landscaping.

02.2.4 STREET DESIGN

Streets in MTSA's

Streets are to be designed to the highest standard for **Complete Streets** in Kitchener.

Enhance existing and provide new streets such that they prioritize walkability, cycling and transit, link to the broader sidewalk and trail network, and provide safe and direct access to the LRT station stops, GRT bus stops, and public open spaces.

For large sites or consolidated blocks, provide new public or private streets, lanes, mid-block connections and/or shared streets to break down the scale of the block and improve connectivity. Blocks should not exceed 150m in length, and blocks exceeding that length are to provide enhanced pedestrian amenity, seating areas, and landscaping.

Improve network connectivity to and from ION stops (and other transit options) to reduce travel times and increase walkability between the stop and surrounding neighbourhoods.

Design streets that create a continuous pedestrian experience that is safe, comfortable and attractive, connects directly to public open spaces and building entrances and minimizes points of conflict between pedestrian and vehicular traffic, always prioritizing the pedestrian.

Design streets to cluster pedestrian activity close to station stops.

Create opportunities for seating, weather protection and programmed open space when traveling to and from station stops and waiting for transit.

Provide enhanced cycling infrastructure for new streets and upgraded cycling infrastructure on existing streets. This should include secure bike parking and bikeshare stations and separated, dedicated bike lanes where possible.

Design crosswalks and pedestrian transit access points to be continuous, barrier-free, and sensitive to the mobility needs of children, older adults, and other users with special needs.

Additional Information: Streets in MTSA's will play a significant and increasingly critical role in establishing a minimum grid of cycling infrastructure, encouraging increased use of public transit and other, sustainable modes of travel, and diminishing risks to pedestrian safety.

Focal Points & Gateways

ION station stops and nearby developments are to be designed as focal points, with a sense of identity established through expressive, high quality architecture and landscaping.

Each ION station stop is itself a gateway into one or more of Kitchener's neighbourhoods and development is to create and enhance pedestrian connectivity, reinforce neighbourhood character and help to establish a sense of place and arrival that is suitable to the area's identity

Wayfinding

Wayfinding systems in MTSA's should focus on connecting transit users to destination points, including community spaces, retail areas, civic institutions, health care and social resources.

02.2.5 PARKS & OPEN SPACE

Access & Location

Locate parks and open spaces at, adjacent to, or immediately accessible from transit stops where possible. Otherwise, locate these spaces such that they are the focal points of new development and centres for activity.

Front new parks and open spaces onto public streets, with a minimum of two street frontages.

Prioritize public safety, both real and perceived, in all park and open space design. Enhance, protect and restore existing parks and open spaces.

On large sites or consolidated blocks where multi-phase development occurs, include new public open spaces as part of the first phase of development.

Did You Know? High quality, diverse, and accessible parks and open spaces are critical to the success and sustainability of MTSA's, providing health, recreation and leisure opportunities for all.

Connectivity

Link MTSA's with parks, open spaces and natural areas via trails, complete streets and other pedestrian and cycling connections to create a continuous network of public space.

Comprehensively consider the active transportation network when designing for any single person or user, including the LRT network, local, regional, and commuter rail and bus lines, cycling grids, and all pedestrian connections including sidewalks, trails, and multi-use pathways

Park & Open Space Design

Parks and open spaces in MTSA's should be designed as social spaces which reflect, accommodate and enhance the diverse needs of all people who live, work and visit there.

Design parks and open spaces to serve all users throughout all seasons and times of day. This includes barrier-free use, opportunities for both active and passive recreation, and equitable programming for persons of all abilities, incomes, cultural backgrounds and identities.

Provide high quality public art that acts as a focal point of public space and represents contemporary standards for design.

Fully pursue unique programming and design options which respond directly to site constraints and opportunities.

02.2.6 COMPATIBILITY

Scale & Transition

Conserve established neighbourhoods by focusing development within intensification areas.

Higher density development adjacent to established neighbourhood areas is to provide a suitable transition in scale, massing, building height, building length and intensity through setbacks, stepbacks, landscaping and compatible architectural design/material selection.

Provide a mix of building types and sizes, concentrating height and density closest to LRT stops.

Transition in height, density and mass between the station stop and low-rise established neighbourhoods to preserve compatibility, privacy and access to sunlight.

Locate the greatest quantity and variety of active uses closest to LRT stops, as well as the greatest concentration of public amenity, streetscape features, programmed spaces, event spaces and pedestrian-oriented design features.

For large sites with multiple tall buildings, provide the greatest building height either at the most prominent intersection or internally within a site where it will create the fewest negative impacts (see **Design for Tall Buildings**).

Additional Information: Appropriate tower placement and orientation can make greater overall building heights achievable without creating additional unwanted impacts.

02.2.7 CULTURAL & NATURAL HERITAGE

Heritage Resources

Conserving cultural and natural heritage resources within MTSA's is of critical importance, as doing so promotes diversity, gives variety to the urban fabric, reflects and enhances the cultural history of neighbourhoods and encourages urban exploration, sustainability, and the continuation of Kitchener's living history and natural systems.

02.3.0 SITE DESIGN

02.3.1 BUILT FORM

Massing

High quality architecture and urban design is expected of all development within an MTSA.

Regardless of building height, create, maintain and enhance a human-scaled public realm.

Place buildings close to the public streetscape. Provide active uses along street-facing elevations.

Provide setbacks for upper levels in mid-rise and tall buildings to mitigate impacts and create street-facing shared amenity spaces. Ensure all building forms meet the guidelines in their associated sections of the manual.

For large sites or consolidated blocks, provide a mixture of medium and high density uses in both mid-rise and tall building forms to provide visual variety, human scaled massing, complementary building forms and varied public and private open spaces.

Materials & Articulation

Provide contemporary, high quality materials and details.

Buildings should not be longer than 70m in total length. Buildings greater than 35m in length are to provide additional articulation in building massing, materials, and architecture.

Provide architectural detailing that is thoughtful and visually appealing, which contributes toward the architectural resolution of the project as a whole, and which complements adjacent buildings and enhances the character of the station area.

Primary building entrances and internal building circulation routes are to be organized to maximize pedestrians access, comfort, safety and amenity.

Locate vents and mechanical equipment away from public view. Incorporate visible mechanical elements into the design of the building to minimize their visual impact. All visible elements are to be shown on building elevations as part of the site plan review process.

Concentrate the most prominent architectural expressions toward major street corners and buildings directly adjacent to ION stops.

Avoid blank walls, particularly where visible from the public realm. This extends to loading, service and delivery areas, as well as any exposed structured parking, which is to meet or exceed the guidelines in the **Structured Parking** section of this manual.

02.3.2 SHARED SPACES

Outdoor Amenity

Abundant high quality public and private outdoor amenity spaces should be pursued for all development, particularly through the provision of spaces at grade and spaces which are useable and accessible to the public.

Did You Know? Outdoor amenity spaces in MTSA's perform a critical social, economic and health and well-being function, particularly in areas underserved by existing parks and open spaces.

Landscaping

Ensure effective use of landscape screening along property lines and to provide separation between automotive and pedestrian areas.

Pursue all opportunities to provide tree plantings on-site, particularly large canopy trees that will contribute significantly to Kitchener's urban tree canopy.

Pursue landscaping opportunities that align with sustainability objectives including Low Impact Development (LID) stormwater techniques, using local, hardy and drought-resistant plant species, providing for the needs of bird and wildlife habitats, and integrating into existing natural systems and surrounding contexts to leverage and reinforce sustainable goals.

Did You Know? On compact, urban sites, with many competing elements, good landscape screening can be a critical component that helps conserve and enhance the quality of shared spaces and the public realm while ensuring site functionality.

Public Art

Public art will be associated with public transit and incorporated into MTSA's.

Public art will be inclusive, engaging, interactive and accessible for all.

Avoid blank walls or other undesirable built-form or site design conditions wherever possible, even when the intention is to provide a mural or other public art to compensate. Art should be integrated into the design of a project and used to enhance and add new dimension to already high-quality architecture and site design.

Signs

All signage in MTSA's is to be high-quality, seamlessly integrated into building and site design, and mindful of existing context, neighbourhood character, and cultural heritage assets.

Lighting

Provide consistent, high quality and human-scaled site lighting throughout MTSA's, giving consideration for the existing and planned context for the area to ensure a safe, comfortable and attractive experience for site users, pedestrians and transit users.

02.3.3 SITE FUNCTION

Vehicular Access & Parking

Do not place surface parking, loading or servicing areas between the front of a building and the street. Locate to the rear of buildings and where their function and circulation patterns will cause the least amount of conflict with pedestrian activity.

Above-grade structured parking is to be placed internal to the site and wrapped with active uses along all street frontages and at all levels wherever possible.

Incorporate lay-bys for ridesharing into large scale developments where they do not negatively impact the experience of pedestrians or cyclists.

Integrate structured parking entrances, as well as servicing elements such as garbage and utility areas into the architecture of the building and design to be safe and attractive. This is particularly true of any elements visible from the public realm and/or private shared spaces.

Driveways

Locate driveway access off the lowest order street or lane where it will be least impactful to pedestrians, cyclists and transit users. Where the lower order street is part of a low-rise residential neighbourhood, driveway access should be provided via the higher order street.

Minimize the number of driveway access points and other points of conflict between vehicular traffic and pedestrians. No development within an MTSA should have more than 2 vehicle accesses, with 1 being preferred.

Where parking, loading or servicing is permitted on or adjacent to a public street or lane, locate it where it will create the least interruption to the streetscape and related pedestrian and cyclist activity.

Emergency Access

Accommodate all emergency requirements without limiting or significantly impacting the on and off-site pedestrian and cycling experience, shared outdoor spaces, or access to transit.

Waste & Recycling

Avoid placing waste storage or pick-up areas between the building and the street and comprehensively screen wherever they are visible from the public realm or shared spaces.

Design all waste areas to be safe, convenient, accessible, and useable year-round.

Snow Storage

Design with extra consideration for snow storage in MTSA's, ensuring that their size, placement and location does not frustrate pedestrian activity in any way.

Snow removal at station stops should be prioritized to increase accessibility to transit.

02.4.0 AREA SPECIFIC GUIDELINES

02.4.1 PARTS MIDTOWN

Vision

"The Midtown station area will continue to be a living and working urban neighbourhood focused along a reurbanized King Street corridor. New mixed-use development here will help to deliver a range of housing, services and amenities to support the growing population while integrating with existing stable residential areas on both sides of King Street.

Major employment and institutional uses will positively co-exist within the community and benefit from transit access. New residents will be attracted by the pedestrian and cycling oriented environment, proximity to and complementary relationship with Uptown Waterloo and Downtown Kitchener, distinct retail along King Street and Belmont Avenue, and the range of desirable live-work opportunities." - PARTS Midtown Plan.

Design for Midtown

The Midtown portion of King Street West provides a vital pedestrian and transit connection between Downtown Kitchener and Uptown Waterloo and is to be designed (streetscape, built form, public realm) to the same high standard. Pedestrian movement between Downtown Kitchener and Uptown Waterloo should be seamless, attractive, safe and comfortable.

Setback new development along King St. W to accommodate street trees and a minimum sidewalk width of 2m. Street trees should be consistent in their spacing, stature and soil volumes and be coordinated between sites/properties.

Enhance the public realm along King St. W. with public art, additional landscaping, plaza or patio areas, upgraded surface materials, rest/waiting areas and bicycle parking. Coordinate elements between sites to ensure that a variety of needs are being met, to avoid unwanted repetition and to maintain visual interest and a diverse mixture of activity.

Shared spaces along King St. W are to provide a contemporary feel, high permeability and design elements that are responsive to transit users, hospital users, students, residents and workers. Include a variety of hard and softscape surface treatments, flexible seating options, multi-purpose spaces at multiple scales, and substantial greenery.

Buildings along the north side of King St. W. are to reinforce pedestrian and transit supportive design objectives while providing a compatible transition to established neighbourhoods.

Provide mid-block pedestrian connections where possible, linking King St. W. to surrounding areas and providing greater north/south connectivity through the station area.

No above grade structured parking is to front onto King St. W. Active uses, office space and/or residential units are to wrap any structured parking for the full extent of the garage at all levels.

Create no new vehicular access from King St. W. where any other option exists (other streets, lane access). Existing King St. W. accesses should be closed through redevelopment.

Consolidate vehicular access along Park St. wherever possible to reduce points of conflict between vehicles, pedestrians and cyclists.

Buildings along Park St. and Glasgow St. should have generous setbacks to create more walkable sidewalks and provide ample room for landscaped areas including street trees.

Transition gradually in both height and building length from King St W to surrounding established neighbourhood areas along Braun St., south of Park St., and north of Dodd's lane.

Conserve and celebrate Midtown's cultural heritage assets, including listed and designated properties, and Cultural Heritage Landscapes.

Avoid impacts on the Mount Hope Cemetery while using nearby development to enhance connectivity and visibility to and through the area.

Enhance, complement and retain the cultural heritage value of the Warehouse District Cultural Heritage Landscape as a place of employment, focusing on adaptive reuse of existing buildings and additions/new buildings that are consistent with the character of the district.

Enhance connectivity to the Iron Horse and Spur Line trails, particularly from the Grand River Hospital ION Stop and King Street. Provide open spaces along these connections where possible.

Maximize opportunities for new shared open spaces along the Iron Horse Trail, King St. W, Glasgow St., Strange St., and the rail corridor.

Design Glasgow St., Mt. Hope St., Green St., and Strange St. as complete streets with a focus on cycling infrastructure. This includes coordinating street trees, landscaping, traffic calming, bicycle parking, lighting and seating.

Explore traffic calming measures along streets that abut low-rise established neighbourhoods.

Provide ample short-term and visitor bicycle parking for areas on the Grand River Hospital site, adjacent to the ION Stop, and along high volume commercial streets (King and Glasgow)

Pursue new street and active transportation connections to the northeast of King St. W. Design enhanced crossings for pedestrians and cyclists at the intersections of all of the above streets, including reductions in crossing distances and turning radii, improved sightlines and wayfinding, and new signalized crossings where possible.

Ensure that coordinated streetscape improvements are responsive to and respectful of the established streetscape character and transitions between intensification areas and established neighbourhoods.

Pursue opportunities to enhance, expand and provide frontage for the existing KW Collegiate and Vocational School playing fields, including trail connections to the site.

Consider shared parking solutions and agreements between sites/properties to consolidate parking within shared structures that are located minimize the visibility of parking and the reduce conflicts with pedestrians.

Additional Information: Cultural Heritage Landscapes in Midtown include the Gruhn Neighbourhood, the Gildner Green Neighbourhood and the Mount Hope Cemetery, among others.

02.4.2 PARTS CENTRAL

Vision

PARTS Central will be designed and built to support a well-connected, innovative, vibrant, inviting and inclusive station area in which to live, work, shop, study and play. It includes areas adjacent to Downtown and connecting to Midtown and Rockway. These connections, along the LRT line, form a critical part of Kitchener's urban core.

Development of the PARTS Central area will bring compact, transit supportive densities to underutilized lots, make more efficient use of land, infrastructure and resources and provide a vibrant mix of land uses, building typologies, heights and forms. It will encourage the creation of affordable housing units, support unique commercial and retail uses, and support the area's continuing function as a centre for government, arts, culture, entertainment and recreation.

Design for Central

King Street, Charles Street, and associated developments are to be designed to the highest standard for streetscape, built form, and public realm. Pedestrian movement along both King and Charles Streets should be seamless, attractive, safe and comfortable.

Setback new development along King St., Charles St. and Courtland Ave. to accommodate street trees and a minimum sidewalk width of 2m.

Street trees along King St., Charles St. and Courtland Ave. should be consistent in their spacing, stature, soil volumes and coordinated between developments.

Introduce public realm enhancements for all development along King St. and Charles St., including public art, additional planting/landscaping, plaza or patio areas, seating areas, upgraded surface materials, rest/waiting areas and bicycle parking. These upgrades are to be coordinated between developments to ensure that a variety of needs are being met, to avoid unwanted repetition and to maintain visual interest and a diverse mixture of activity.

New public and private shared spaces along King St. and Charles St. are to respond to the existing and planned context of the street by providing a contemporary feel, high permeability and design elements that are responsive to transit users, residents and workers. This should include a variety of hard and

softscape surface treatments, flexible and varied seating options, multi-purpose spaces at multiple scales, and substantial greenery.

Did You Know? King Street provides a vital pedestrian and transit connection between Downtown Kitchener and the Midtown/Rockway Station Areas. Likewise, Charles Street, which contains the LRT track through PARTS Central, provides a new priority connection between Downtown, Rockway, and the rest of the ION.

Buildings along the north side of King St. and on either side of Courtland Ave. are to reinforce pedestrian and transit supportive design objectives while providing a compatible transition to adjacent established neighbourhoods.

Provide mid-block pedestrian connections where possible, linking King St. and Charles St. to surrounding areas and providing greater north/south connectivity through the station area.

No above grade structured parking is to front onto King St. or Charles St. Active uses, office space and/or residential units are to wrap any structured parking along King or Charles Street, for the full extent of both the length and height of the garage.

No new vehicular access should be provided from King St. where any other option exists (other streets, lane access). Existing King St. accesses should be closed through redevelopment.

Consolidate vehicular access along Courtland Ave. wherever possible to reduce points of conflict between vehicles, pedestrians and cyclists.

Transition gradually in both height and building length from Courtland Ave. to surrounding established neighbourhood areas in the Cedar Hill and Schneider Creek neighbourhoods.

Conserve and celebrate the area's cultural heritage assets, including listed and designated properties, Cultural Heritage Landscapes and transportation corridors such as the Canadian National Railway Line, the Iron Horse Trail and Jubilee Drive, Victoria Park and others.

Enhance, complement and retain the cultural heritage value of the Warehouse District Cultural Heritage Landscape as a place of employment, focusing on adaptive reuse of existing buildings and additions/new buildings that are consistent with the character of the district.

Enhance connectivity to the Iron Horse & Spur Line trails, particularly to and from the future King/Victoria Transit Hub. Provide new public open spaces along these connections.

Maximize opportunities for new public and private open spaces along King St. and Charles St.

Explore opportunities for traffic calming measures along streets that abut low-rise established neighbourhoods, including Courtland Ave.

Improve the cycling network, focusing on Courtland Ave., Joseph St., Charles St., Benton/Frederick Streets, Duke St. and King St. East. Provide enhanced lighting, wayfinding signage, traffic calming and safety features for these streets.

Provide ample short-term and visitor bicycle parking for areas adjacent to the ION Stops, and along high volume commercial streets (King St., Queen St. and Victoria St.)

Design enhanced crossings for pedestrians and cyclists at the intersections of all of the above streets, including reductions in crossing distances and turning radii, improved sightlines and wayfinding, and new signalized crossings where possible.

Ensure that streetscape improvements are responsive to and respectful of the established streetscape character and transitions between intensification areas and established neighbourhoods.

As redevelopment occurs, look for opportunities to enhance, expand and provide frontage for Sandhills Park, Kaufman Park, Mike Wagner Green, Stabler Green, and others. As redevelopment occurs, look for opportunities to create new public open spaces in strategic areas including areas adjacent to the Iron Horse Trail and along Charles Street, Victoria Street, and the rail corridor linking the Iron Horse Trail to the future King/Victoria Transit Hub.

Consider shared parking solutions and agreements between developments to consolidate parking within shared structures that are located minimize the visibility of parking and the reduce conflicts with pedestrians.

Additional Information: Cultural Heritage Landscapes in Central include the Warehouse District, the Catholic Block and the Civic District, among others.

02.4.3 PARTS ROCKWAY

Vision

"The Rockway station area will evolve into a walkable urban village with a strong sense of identity and distinct character tied to the history of industry in the area. Strategies to maintain and attract new employment will be balanced with the redevelopment of former industrial sites and under-utilized lands. Redevelopment will improve connectivity, provide a greater mix of diverse housing choices, and enhance amenities with a range of new uses that meet the day-to-day needs of existing and new residents and workers.

The ecological restoration of the Schneider Creek and Shoemaker Creek corridors will help to establish a signature central open space for the station area, contributing to reducing flood impacts and setting the stage for higher-density development." - PARTS Rockway Plan

Design for Rockway

Locate the highest densities and most active uses adjacent to the Borden LRT Stop.

Provide minimum ground floor heights of 4.5m for buildings along Charles, Borden and Ottawa Streets, to ensure a variety of active uses and to preserve for changing uses over time.

Avoid surface parking wherever possible. Pursue shared parking opportunities and implement transit demand management strategies.

Transform King St. E. into a gateway to the city core with active frontages, a human-scaled public realm, setbacks to accommodate street trees and wide pedestrian pathways.

Introduce public realm enhancements for all development along King St., Charles St., Borden St., Ottawa St., and Kent Ave., including public art, landscaping, plaza or patio areas, seating areas, upgraded surface materials, rest/waiting areas and bicycle parking. These upgrades are to be coordinated between developments to ensure that a variety of needs are being met, to avoid unwanted repetition and to maintain visual interest and a diverse mixture of activity.

Affordable housing units are to be integrated fully into their buildings.

Provide mid-block pedestrian connections where possible, linking transit stops and streets to surrounding areas and providing greater north/south connectivity throughout Rockway.

No above grade structured parking is to front onto King St., Courtland Ave., Charles St., Ottawa St., or Borden St.. Active uses, office space and/or residential units are to wrap any structured parking along King Street, for the full extent of both the length and height of the garage.

The Rockway Station Area should be designed as a dual-corridor; the ION LRT system and the Schneider/Shoemaker Creek system combine to create opportunities not present in any other area of the city.

New development in proximity to the Schneider Creek Floodway is to pursue the PARTS Rockway Plan Candidate Flood Fringe Scenario, pulling new development out of the floodway altogether to unlock higher densities and more sensitive uses outside of the floodway.

Pursue all opportunities to naturalize Schneider Creek and Shoemaker Creek both as environmental infrastructure and public space. Use the requirements of the Candidate Flood Fringe Scenario to maximize public open spaces along the creek.

Daylight the creeks wherever possible and make them as accessible as possible. Avoid fencing off areas of either creek unless absolutely necessary from a safety perspective and introduce new creek-related trails, pathways, and crossings.

Enhance the relationship of existing buildings that remain in the floodway to the creek and related open spaces through select design interventions that improve environmental performance and provide public and private amenity.

Use taller buildings to frame the north side of Schneider Creek, providing views onto enhanced creekside open spaces while avoiding unwanted shadow impacts onto the public realm.

Pursue opportunities for wayfinding, educational experiences, and public art related to the revitalization of Schneider and Shoemaker Creeks.

Improve the cycling network, focusing on Charles St., Kent Ave., Borden Ave. and Mill St. Provide enhanced lighting, wayfinding signage, traffic calming and safety features.

Design enhanced crossings for pedestrians and cyclists at the intersections of all of the above streets, including reductions in crossing distances and turning radii, improved sightlines and wayfinding, and new signalized crossings where possible.

Ensure that streetscape improvements are responsive to and respectful of established streetscape and transitions between intensification areas and established neighbourhoods.

Provide a mixture of low, medium and high rise buildings on large sites and consolidated blocks, strategically placed and designed to maximize the public realm, create a continuous human scale at the street, and create visual variety.

As redevelopment occurs, look for opportunities to create new public open spaces in strategic areas including areas adjacent to the Iron Horse Trail and along Schneider Creek, Shoemaker Creek, and adjacent to both the Mill and Borden LRT Stops.

Consider shared parking solutions and agreements between developments to consolidate parking within shared structures that are located minimize the visibility of parking and the reduce conflicts with pedestrians.

Did You Know? The revitalization and naturalization of Schneider and Shoemaker Creeks presents a unique opportunity within Kitchener; a critical piece of natural heritage and environmental infrastructure within the city's core built-up area. It offers a chance to create high density, transit-oriented development adjacent to an expansive natural area.

02.4.4 PARTS BLOCK LINE, FAIRWAY & SPORTSWORLD

Placeholder

This is a placeholder for PARTS Block Line, Fairway, and Sportsworld, to be updated upon completion of related plans and policies.

Central Neighbourhoods

03.1.0 INTRODUCTION

03.1.1 KITCHENER'S CENTRAL NEIGHBOURHOODS

Vision

Kitchener's Central Neighbourhoods have character, historical significance, and provide balance to the intensifying areas such as Downtown and Major Transit Station Areas (MTSAs). They represent a variety of eras and styles, and if properly planned and conserved, can contribute toward a unique and desirable condition of low-rise, historical residential neighbourhoods within walking distance of the city core and light rail transit.

Additional Information: Applicants with proposals for plans of subdivision should refer to section **04 New Neighbourhoods**.

What Is A Central Neighbourhood?

The City of Kitchener's Central Neighbourhoods are established communities where limited intensification is expected. Due to their central location however, some change is occurring and pressures for additional change will continue. Directing that change in the form of carefully planned infill optimizes the use of existing infrastructure and public transit.

Well-designed residential infill projects integrate harmoniously into their surroundings. Carefully coordinated change can help ensure that the result is compatible development which respects and enhances the character of these neighbourhoods.

This section of the **Urban Design Manual** is designed to help fulfill the intended design strategies for Kitchener as outlined in the **Official Plan** and the **Residential Intensification in Established Neighbourhoods Study** (RIENS).

Working with the Guidelines

These guidelines apply to **Established Low-Rise Residential** and **Low-Rise Residential** land use designations in **MTSAs** and **Community Areas** (see the **Urban Structure** map in the **Official Plan**) within the **Residential Intensification for Established Neighbourhoods** study area, as shown below:

03.2.0 COMMUNITY DESIGN

03.2.1 INCLUSIVE DESIGN

Safety

Provide clear, continuous and highly visible pedestrian circulation that connects building entrances, parking areas, and shared spaces to the sidewalk and street.

Design all shared and public spaces to increase the presence of people, and design all sites and buildings to maximize the ability of occupants to provide natural surveillance into these areas.

Prioritize user and pedestrian safety when designing lighting, landscaping and functional elements such as parking, access and servicing areas.

Avoid site design that creates potential entrapment areas, conflicts between pedestrians and motorists, and where there are hidden areas, narrow or confined spaces, and/or dead-ends.

Additional information: Visibility is to be preserved even for infill projects which extend their built form and/or parking areas deep into the lot, particularly on long, narrow parcels.

Universal Design

Consider ways to provide enhanced visitability for units, to allow for friends and family of all abilities to comfortably visit. This includes limiting and simplifying stairs, minimizing pedestrian travel distances, and creating clear, straightforward pathways to and from units.

Age & Family Friendly Design

Provide the greatest possible mix and variety of unit types and sizes.

Provide amenity spaces which are suitable for families, young children, and the older adults. Design these spaces to be shared amongst different age groups, including making them large and flexible enough to accommodate more than one user type and activity simultaneously.

Consider ways to make personal storage areas, bicycle parking and private amenity areas more convenient and accessible to families and persons using mobility aides.

03.2.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Design residential infill projects to passively provide access to natural light as well as shaded areas and to provide shelter from winds as well as natural air movement through the site.

Provide a mixture of coniferous and deciduous trees. Concentrate deciduous trees to shade south and south-west windows from the summer sun. Concentrate coniferous trees on the north and northwest to screen prevailing winter winds.

Integrate shared space design with landscape design, and consider ways to create, promote and enhance recreation and leisure activities.

Design for Climate Change

When renovating, adding on, or reconstructing a site, incorporate low impact design methods to improve stormwater retention and treatment on-site. This includes enhanced landscaping, employing permeable surfaces, creating bio-retention areas and incorporating opportunities to harvest rainwater from rooftops. Use stormwater for landscape irrigation wherever possible.

Minimize impermeable surfaces and avoid dark surface materials to limit urban heat island effects.

Consider native plant species or rain gardens for boulevards which enhance urban habitats.

Where possible, use renewable energy and energy efficient technologies such as high efficiency appliances, solar panels, natural ventilation and smart controllability of systems.

Maximize natural lighting and passive solar gain in the winter to reduce energy consumption. This includes building placement and orientation, landscape design as well as architectural elements such as the design of openings and vertical and/or horizontal shading devices designed for winter sunlight ingress and shade during summer.

Use renewable, sustainability manufactured and sourced materials, wherever possible.

Use reclaimed and recycled materials, particularly those which may be salvaged on-site.

Design for adaptability to climate change and extreme weather events including high r-value enclosure design, flood mitigation measures where flooding may be a concern, and addressing extreme heat events through both massing and mechanical design elements.

03.2.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Design all sites and buildings to limit microclimatic impacts and provide pedestrian shelter through the placement and orientation of building elements, integrated architectural elements and landscape design.

Avoid long, flat building surfaces which may contribute to accelerated wind speeds through the public realm, shared spaces or private outdoor amenity areas.

Design all buildings to limit shadowing on the public realm and on adjacent properties.

03.2.4 STREET DESIGN

Streets in Central Neighbourhoods

New development should reflect the desirable aspects of the established streetscape character. If the streetscape character is less than desirable, build infill which contributes to an improved pedestrian environment and neighbourhood landscape character.

Emphasize the ground floor and street facade of infill buildings to contribute to an inviting, safe and accessible streetscape. Design at a human scale and design for pedestrian priority.

Provide human-scaled lighting to minimize light pollution and trespass onto neighbouring properties.

Provide public-level amenities along private streets, including sidewalks and street trees.

Provide boulevard landscaping that includes hardy, salt-tolerant plant material that can thrive in challenging urban conditions.

Provide adequate soil volumes for all trees to ensure a healthy mature canopy.

Provide creatively designed, well integrated, easily accessible bicycle parking in public spaces.

Minimize points of conflict between pedestrians, vehicles, and cyclists, always prioritizing pedestrians and cyclists.

03.2.5 PARKS & OPEN SPACE

Access & Location

Pursue opportunities to conserve and enhance existing parks and open spaces. New parks and open spaces should also be planned for these areas to accommodate growing populations.

Explore opportunities to provide increased frontage onto public streets for parks with limited existing access points or street frontage. New parks should have a minimum of two street frontages wherever possible.

Connectivity

Parks and open spaces should be well connected through pathways and sightlines into existing neighbourhoods and transit stops.

Where existing parks have minimal connection points to the greater neighbourhoods, consider the integration of sidewalks, trails, multi-use pathways and enhanced wayfinding.

When designing new parks in existing neighbourhoods, comprehensively consider the active transportation network, including the LRT, local, regional, and commuter rail and bus lines, cycling grids, and all pedestrian connections including sidewalks, trails, and multi-use pathways.

Park & Open Space Design

Parks and open spaces are to be designed to accommodate all users. This includes both active and passive recreation, and equitable programming for all potential users. Existing parks should be periodically re-evaluated over time to respond to changing populations, demographics, densities and lifestyles.

03.2.6 COMPATIBILITY

Scale & Transition

Provide a built-form which respects and complements existing neighbourhood characteristics, including heights, setbacks, orientation, building width and length and architectural rhythms.

Even where new infill is proposed which is larger or taller than its surroundings, provide massing and architectural elements which respect the established neighbourhood identity.

Where porches, detached garages, or other significant features form a predominant part of the neighbourhood character, these same features are to be integrated into new infill development in a respectful, complementary and contemporary way.

Design the ground floor and street facades of infill buildings to conserve and enhance consistently human-scaled and pedestrian oriented streetscapes.

Provide public-level amenities for private streets, including sidewalks, street trees and seating.

Additional Information: Designing private streets to match the design of public streets helps to ensure larger infill projects remain compatible with the surrounding neighbourhood.

02.2.7 CULTURAL & NATURAL HERITAGE

Heritage Resources

Conserve and retain built forms that are representative of the established neighbourhood fabric and/or make positive contributions to the neighbourhood identity.

Alterations and additions to cultural heritage resources are to respect and conserve their heritage value or interest.

Alterations and additions should be distinguishable from but visually and physically compatible with the cultural heritage resource, including massing and materials.

Protect and enhance significant views and vistas, including landmark buildings and structures.

Ensure that new additions are designed to not overwhelm the cultural heritage resource. New additions should be distinct from the heritage resource.

Conserve and enhance the continuity of cultural heritage landscapes.

Protect and incorporate all contributing site features with cultural heritage value.

03.3.0 SITE DESIGN

03.3.1 BUILT FORM

Massing

Respect existing and planned contexts, heights, building lengths and massing.

Ensure new buildings do not appear substantially larger than the existing buildings. If a larger building is proposed, its massing should be subdivided into smaller, compatible pieces.

When proposing greater height than adjacent buildings, provide transition through stepbacks and massing. Transition may also be achieved by increasing separation distances between buildings and/or placing a mid-range built form between the infill development and adjacent buildings.

Add architectural features such as porches, materials, colours and textures to visually reduce the height and mass of the building.

Orient new buildings to face and animate public and private streets and to respect the predominant orientation of the existing neighbourhood context.

Maintain the neighbourhood's prevailing pattern of lot widths, lot depth and lot area.

Maintain the grade and first floor height of adjacent buildings. Avoid unnecessarily raising or lowering of grade, particularly where it may require retaining walls to accommodate.

Orient buildings to avoid the need for noise attenuation walls for amenity spaces. Locate and design amenity areas to respect the privacy of surrounding development.

Complement the existing development pattern of the neighbourhood in terms of building location, building height, landscaping, setbacks, entrances, windows and other architectural elements. The use of repetitive or generic design is discouraged.

Materials & Articulation

New development, when contextually designed, may reflect any architectural style and still be well integrated with the surrounding neighbourhood.

Development on corner lots and at terminating vistas should address all streets with articulated facades and windows that provide views of the street and/or open spaces from living areas. Blank walls visible from the street, parks or other public spaces are not permitted.

Use materials that are complementary to the neighbourhood context. The replication of older building styles using new materials is discouraged. Materials and architectural details are only appropriate for achieving a 'traditional' or historical architectural style if they are demonstrated to be a significant, existing part of the historical neighbourhood character.

Respect the rhythms of design elements from the existing neighbourhood and streetscape. This rhythm can be found through massing, materials, details, and architectural features.

On a street where existing elements (e.g. architectural styles, porches, building placement, On materials etc.) are recurring, new development should reflect some or all of the key elements, sensitively interpreting these elements to reflect contemporary design approaches.

Entrances

Design entrances that are visible and inviting from the street by providing a distinct design and/or use contrasting materials, adding elements such as porches to promote street oriented interaction and minimizing the vertical distance between building entrances and grade.

Design the front entrance to be prominent, well-detailed and located on the front facade.

Yards

Where a consistent front yard setback exists, match this setback. Where front yard setbacks are not uniform, new development should be consistent with the prevailing pattern of the street.

Ensure that side and rear yard setbacks are consistent with prevailing pattern of setbacks in that neighbourhood.

If an infill development projects beyond the rear yard setback of the adjacent building, ensure that it does not cast significant shadows into the rear yards of those adjacent properties and design decks, doors and balconies to not directly overlook adjacent yards.

Townhouses

Orient townhouses to front onto a public street or park in all cases.

Provide landscaping in the front yard at a minimum of 50% of the front yard area.

The end unit in a townhouse block flanking a street is to address the street with a side elevation that includes windows, doors, porches, and details consistent with the front elevation.

The height and massing of townhouse blocks it to be compatible with the neighbourhood.

Common outdoor amenity areas are to be located in a prominent location, visible and easily Common accessed from all units, and with access to sunlight.

Provide parking, servicing and access at the rear of units or where it least impacts pedestrians. Provide landscaped areas with visual screening between units, parking and servicing areas.

The distance between townhouse blocks is to be 3m minimum and landscaped. Where a pedestrian mid-block connection is provided the separation should be at least 6 metres.

Provide a min. 7.5m rear yard for townhouse units to permit landscaping and private amenity.

Provide accessible walkways between parking (including visitor parking) and main entrances.

03.3.2 SHARED SPACES

Outdoor Amenity

Design outdoor amenity spaces for all users. Place amenity spaces in locations with good natural surveillance from units, public spaces and the street. Maintain year-round.

Avoid locating shared outdoor amenity where it is visually isolated or abuts parking areas, drive aisles or servicing and utility areas. Where this cannot be avoided, provide substantial screening in the form of landscaping and architectural elements and upgrades.

Provide outdoor amenity in the form of large, continuous, dedicated spaces. Avoid dividing up at-grade outdoor amenity into too many smaller spaces where possible. Avoid overly linear (long and narrow) spaces in favour of more equally proportioned spaces.

Landscaping

Design infill around existing trees and topography to retain established landscaping patterns and characteristics. Retain and protect existing healthy, mature trees wherever possible.

Use landscaping to provide a buffer between driveways, laneways and parking areas and side and rear property lines.

Limit the widths of driveways and minimize the amount of paved surfaces in the front yard. Use permeable materials to design hard surfaces to manage stormwater runoff where possible.

Use hard and soft landscaping treatment to provide a distinction between public and private amenity areas at the front of a building.

Provide continuous pedestrian walkway access from the public sidewalk to the front entrance of each unit or shared lobby.

The use of retaining walls along street frontages, parks and open spaces should be avoided. Where this is not possible and the grade change is greater than 1m, the wall should be set back from the property lines and terraced to provide an appropriate transition. Through redevelopment, explore regrading options to reduce or eliminate retaining walls.

Additional Information: This guideline may not be applicable in the Cedar Hill neighbourhood under certain conditions, where retaining walls are part of the existing neighbourhood character

Public Art

Citizen-led public art projects should be welcomed and integrated into local neighbourhoods. This public art should reinforce and enhance neighbourhood character and assist in creating memorable experiences, provide wayfinding, and enhance social connections.

Signs

Signage is discouraged in central neighbourhoods except where it serves a community-oriented public service such as a notification board advertising community events.

Lighting

Design site lighting so that it does not impact existing neighbourhood character. This includes any architectural accent lighting as well as lighting in parking areas and shared spaces.

03.3.3 SITE FUNCTION

Vehicular Access & Parking

Minimize the visual presence of parking by placing it to the rear of buildings, screening with landscaping and architectural elements, and providing the greatest possible buffer between it and surrounding property lines.

Provide landscaping, berms and/or low-architectural walls between parking areas and neighbouring properties, with the intent of blocking light trespass from vehicle headlights into adjacent yards or buildings.

Avoid site design that creates potential entrapment areas, conflicts between pedestrians and motorists, and where there are hidden areas, narrow or confined spaces, and/or dead-ends. Where this cannot be achieved, a CPTED report will be required.

Additional Information: Special consideration is to be given to areas where a building ‘cantilevers’ or extends over an outdoor parking area/drive aisle/site function area. CPTED reports should demonstrate how natural surveillance and safe pedestrian movement is provided

Driveways

Minimize the area dedicated to driveways to allow for increased landscaping and amenity space.

Driveways should measure no more than one-third of the total lot width.

Avoid locating driveways in close proximity to property lines where an adjacent property contains a driveway abutting the same property line.

Use contrasting materials for walkways and driveways to provide visual and tactile variety between surfaces and safely delineate pedestrian circulation routes through the site.

On sites with rear lanes and on corner lots, provide parking access from the lane or side street.

Place driveways to the side or rear of buildings, except where they directly align with and are not wider than their related garage.

Limit both the quantity and width of accesses to reduce the amount of paved surface and number of curb cuts. In most cases no more than one driveway will be permitted.

Driveways should not conflict with transit stop locations, where applicable.

Use permeable paving options wherever possible.

Parking Structures

Where the existing streetscape does not contain street facing or attached garages, such garages will not be permitted.

Recess garages behind the front of the building facade and make other architectural features such as balconies, entrances, porches, living areas, shared spaces and landscaping the most visually prominent elements along the streetscape.

Attached garages are to occupy less than half of the building facade width.

Do not locate any portion of the garage below finished grade to avoid sunken driveways.

Provide individual garage doors on houses with double car garages.

Design garages as an integrated part of the overall architectural intent of the building.

Servicing & Utilities

Group or consolidate utility boxes, meters, and ventilation elements to minimize their visual impact while ensuring suitable accessibility for maintenance. Consider innovative ways to integrate services into streetscape features or architectural elements. Meters are not to be located anywhere along a streetline facade.

Waste & Garbage

Waste storage areas are to be fully enclosed and screened from public view, first through the thoughtful design of site and building elements (including placement, orientation and locating the storage area internally to the building), then through landscape screening, and finally, if other options do not exist, through enhanced enclosure design.

Provide safe and convenient recycling options including secure and generous sorting rooms, options for organic materials, and roll-out or outdoor garbage locations that do not negatively impact the streetscape, shared spaces, or building occupants (noise, odour).

03.4.0 AREA SPECIFIC GUIDELINES

03.4.1 INTRODUCTION

Process

Urban design staff have held public design charrettes for six of the Central Neighbourhoods so far; Cedar Hill/Schneider Creek on February 11th, 2019; Victoria Park on February 20th 2019; Civic Centre on

March 6th 2019; Rockway on April 24th 2019, Midtown on May 15th 2019 and; King East on May 16th 2019.

The intent of these charrettes was to speak directly to neighbourhood residents about their concerns and to identify where they saw opportunities for better design in their community. We worked collaboratively to craft guidelines that were area specific and addressed the most important issues of the people living there, so that when change does occur, staff, the development industry and the public have a shared vision for each area.

These guidelines are undergoing further public consultation in the fall of 2019 through the These Neighbourhood Planning Review process and will be brought forward to council for approval as part of the Secondary Plans for each neighbourhood. On approval, the design guidelines for each neighbourhood will appear here, as part of the area specific guidelines for Central Neighbourhoods.

New Neighbourhoods

04.1.0 INTRODUCTION

04.1.1 KITCHENER'S NEW NEIGHBOURHOODS

Complete Communities

The City of Kitchener is committed to ensuring that its residents enjoy a high quality of life through the creation of attractive, walkable, transit supportive neighbourhoods that contribute to complete communities.

Where do the Guidelines Apply?

The City's Design for New Neighbourhoods will apply to undeveloped lands designated as 'Community Areas' in the City's Urban Structure schedule in the 2014 Official Plan. These guidelines are intended to be used in the development of new communities or neighbourhoods mainly through Plan of Subdivision or Condominium.

Working with the Guidelines

This section of the manual includes an additional section, Establishing Neighbourhood Structure, to assist with the master planning of New Neighbourhoods.

The City supports the preparation of a Conceptual Master Plan to illustrate the proposed neighbourhood areas and connections such as the street network, pedestrian linkages, the hierarchy of parks and open spaces, lotting plans and other prominent features.

This *Conceptual Master Plan* should guide the neighbourhood design and be developed with City staff's support at the early stages of planning.

It is expected that the conceptual master plan and the design objectives (outlined below) will form the basis of the Urban Design Report/Brief.

Design Objectives

Combined and interwoven, the following nine objectives can contribute to neighbourhood designs that are focused, appealing, and take full advantage of both existing and new assets and opportunities. The design objectives for new neighbourhoods are identified as:

Walkability: Create walkable neighbourhoods that are well connected and fully accessible to transit, major destinations and surrounding neighbourhoods.

Variety: Build neighbourhoods that provide a range of housing types, parks, neighbourhood focal Build points and accommodate open spaces.

Placemaking: Create quality streetscapes and contribute to neighbourhood character and identity.

Conservation: Conserve, protect and integrate existing natural and cultural heritage resources.

Connectivity: Provide a fully connected and integrated transportation network including streets, pedestrian and cycling connections, transit facilities and trails.

Transit Supportive: Design and build neighbourhoods that support transit.

Safety: Use design practices that create safe neighbourhoods.

Viability: Use design practices that promote economic sustainability.

Liveability: Use design practices that contribute to environmental sustainability, the celebration of arts and culture, and healthy and complete communities.

04.2.0 ESTABLISHING NEIGHBOURHOOD STRUCTURE

04.2.1 EXISTING SITE FEATURES

Existing Site Features

Conserve and integrate natural features such as mature trees, woodlands, valleylands and wetlands (and required buffers) through appropriate supporting environmental studies and land conveyance, creative parks and open space design, street alignments and alternative lotting or floor plan configurations.

Identify existing cultural heritage resources through a Heritage Impact Assessment (HIA) and Identify determine appropriate conservation techniques. Preferably, these resources should be conserved on their original sites. If relocation is identified as a recommended conservation option, the cultural heritage resource should be relocated to a lot within the new neighbourhood to ensure a genuine sense of place is maintained or created.

Establish and preserve views and vistas to prominent on-site and nearby natural features and cultural heritage resources. This could be accomplished through the strategic location of park and open spaces and street design.

Provide buffer areas around existing natural features, such as woodlands and significant wetlands, as appropriate, to help ensure conservation. Buffers should be established through Environmental Impact Assessments and/or Tree Management Policy.

Identify existing and planned transportation routes and railways. Locate land uses in a way that is compatible with noise and vibration from roadways and rail. Use natural berms, plantings and grades to screen roadways and provide sound attenuation when building massing is not a feasible option.

04.2.2 CREATING WALKABLE NEIGHBOURHOODS

Design for Active Transportation

Design sites to have convenient, accessible and direct pedestrian and cycling access to surrounding neighbourhoods, parks, shopping areas, schools, places of employment and worship, transit routes and neighbourhood focal points.

Design neighbourhoods based on a 5-minute walking distance (400 m radius) between major pedestrian destinations such as transit stops, schools, neighbourhood parks and commercial spaces. Longer walking distances may be considered for additional larger scale park spaces and commercial areas.

Provide park spaces at strategic locations that create pedestrian and cycling linkages P between neighbourhoods.

Provide multiple street, pedestrian and cycling linkages to support connections between and to community trails, transit stops, arterial streets, and planned commercial and employment areas.

Provide mid-block pedestrian and cycling connections along long streets (i.e. > 200m) or to P provide access to focal points or trails. Mid-block connections should have a right-of-way of least 9m in width.

Locate institutional and commercial uses close to the street to prioritize pedestrian movement, animate the street and to provide for a positive pedestrian friendly public realm.

Create pedestrian friendly streets through means including attractive building facades, street trees, landscaping and interesting streetscape elements.

04.2.3 STREET TYPOLOGIES

Arterial Streets

Create a local street system that is integrated with the arterial street with multiple points of access ranging in spacing between 200-400m.

Create attractive streetscapes through a variety of design solutions which may include landscaped buffer blocks, landscaped medians, enhanced streetscape elements and 1 front-lotted development.

Collector Streets

Consider a variety of collector street hierarchies to accommodate bicycle lanes, on-street parking, streetscape elements and transit.

Provide a modified grid street system with multiple street connections to arterial streets and abutting neighbourhoods.

Provide dedicated bicycle lanes along collector roads providing access to major trails, employment and to regional bicycle facilities, where appropriate. Consider existing or planned bicycle routes to be extended in future plans.

Local Streets

Block length should not exceed 200-250m in length unless site features or other special circumstances dictate otherwise.

Design streets to create terminating views at public buildings, parks, focal points and vistas.

Design street alignments to emphasize slow/safe vehicular traffic speeds and to respond to existing site features.

Priority Streets

Identify prominent streets as 'priority streets' on the conceptual master plan.

Locate entrance features and enhanced landscape elements on priority streets. Special attention should be placed on street function, lotting patterns and intersection design.

04.2.4 PARKS HIERARCHY

Parks & Open Spaces

Establish an interconnected open space system through an appropriate distribution of park spaces that include: large neighbourhood parks, smaller parkettes, strategically located green connections, plazas and greenways. Integrate these with existing area features and assets.

The following open space typologies should be considered when designing new communities:

Natural Areas: Land that is generally intended to be preserved in its natural state. These range from small local features to regionally significant natural areas, depending on size, location and level of public access.

City-Wide Parks: Parks that provide multi-activity or multi-sport venues and/or serve specialized recreational, P social or economic functions.

District Parks: Community-level parks providing access to scheduled and/or unscheduled outdoor and indoor recreation facilities and amenities serving multiple neighbourhoods.

Neighbourhood Parks: Local parks providing walkable access and passive open space areas, playground facilities and other outdoor recreational and leisure amenities.

Urban Greens: Smaller green spaces designed to provide rest and shade along trails and within the urban Smaller environment, including parkettes, commons and lookouts.

Urban Plazas: Open areas designed for public use, generally defined by surrounding buildings and/or streets.

Greenways: Linear green spaces providing connections among parks, trails and other open space areas and public realm elements within the urban environment.

04.2.5 LOTTING PATTERNS

Lot Design

Establish a mix of frontages along streets to ensure variety and to maximize on-street parking.

Provide a mix of lots for different dwelling types within a neighbourhood and on a block.

Orient and locate higher density blocks in close proximity to transit routes and stops, arterial and collector streets, planned commercial areas or other appropriate locations.

Provide a mix of townhouse block lengths.

Ensure cluster townhouse development includes units which address public streets.

Consider small lot frontages in close proximity to neighbourhood park spaces and within walking distance to planned commercial areas.

Design lotting patterns to conserve and respect existing natural and environmental resources.

On corner lots, building design is to address both street frontages.

Ensure all rear yards have sufficient, liveable and useable space.

Avoid negative impacts such as steep grades or berm encroachments to required rear yards.

Priority Lots

Priority lots are located prominently within a neighbourhood and should be identified according to the following categories:

Gateway Lots: Lots where site, landscape and building design all act to symbolize entrance to (or arrival at) a district or neighbourhood. Design gateway lots as focal points with a prominent architectural presence facing the public realm and directly address all street frontages.

Corner Lots: Lots with multiple street frontages. Consider approaches such as larger single detached lots L (12-16m) with building design addressing both street frontages or smaller lot frontages (<15m) with the front door facing the primary street and the garage facing the minor street. Alternatively, consider asymmetrical semi-detached lots with front doors facing both streets.

Terminating Vista Lots: Lots at the end of streets, intersections or pedestrian connections. Align lots to centre on terminating vistas. Design buildings to address terminus view such as aligning the front door with the terminus view and locating driveways to the outside portion of the terminating lot.

Park Space Lots: Lots which front on or are adjacent to park spaces. Place buildings to directly address and L frame park spaces and provide natural surveillance.

Window Street Lots: Lots which front onto a window street, which are single loaded local streets abutting an arterial road. These are good candidates for row housing or stacked townhouses.

Heritage Area Lots: Lots with or immediately adjacent to a cultural heritage resource. Respect and defer to the context of the area (and the recommendations of Heritage Impact Assessments and Conservation Plans) when creating the lotting pattern and built form for new development.

Conservation Block Lots: Lots within conservation blocks or adjacent to natural heritage features. Design to minimize L impacts on natural areas while providing appropriate built form and access to preserve and enhance existing features.

04.2.6 CONCEPTUAL MASTER PLAN

Components

Below is a sample **Conceptual Master Plan**, with dots for **Existing Site Features**, **Creating Walkable Neighbourhoods**, **Street Typologies**, **Lotting Patterns** and **Parks** corresponding to the notations from previous pages. This is for reference purposes only, as this is a conceptual image meant to demonstrate many elements of New Neighbourhood design simultaneously. It is not expected or necessarily preferred that a real-world proposal resemble the below image literally. Additionally, while each element is noted once on this plan for clarity, in reality there maybe be several instances of a certain feature (eg. gateway lots or local streets.)

04.3.0 COMMUNITY DESIGN

04.3.1 INCLUSIVE DESIGN

Safety

New neighbourhoods are to be designed through a comprehensive master planning exercise that achieves high levels of both real and perceived safety.

Enhance safety at the community design stage by fronting parks, open spaces and amenity areas onto streets, providing natural surveillance on sidewalks, trails, cycling pathways and multi-use pathways, and by fronting housing onto streets and open spaces.

Provide clear, continuous and highly visible pedestrian circulation that connects building entrances, parking areas, and shared spaces to the sidewalk and street.

Design all shared and public spaces to increase the presence of people, and design all sites and buildings to maximize the ability of occupants to provide natural surveillance into these areas.

Prioritize user and pedestrian safety when designing lighting, landscaping and functional elements such as parking, access and servicing areas.

A Crime Prevention Through Environmental Design (CPTED) Report will be required of any proposals where safety concerns are identified.

Universal Design

Consider ways to provide enhanced visitability for units, to allow for friends and family of all abilities to comfortably visit. This includes limiting and simplifying stairs, minimizing pedestrian travel distances, and creating clear, straightforward pathways to and from units.

Age & Family Friendly Design

Provide the greatest possible mix and variety of housing and unit types, sizes and tenures.

Provide amenity spaces which are suitable for families, young children, and older adults. Design these spaces to be shared amongst different age groups, including making them large and flexible enough to accommodate more than one user type and activity simultaneously.

Consider ways to make units, storage, bicycle parking and private amenity areas more convenient and accessible to families and persons using mobility aides.

Social Infrastructure

New neighbourhoods should provide commercial and institutional spaces that can lend themselves well to social services and other social infrastructure. All neighbourhoods should have the potential to accommodate social infrastructure objectives.

Arts & Culture

Arts & Culture is a valuable and often overlooked asset in new neighbourhoods. Identify potential opportunities for public art installations and arts and culture spaces.

04.3.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

It is critical to design new neighbourhoods to encourage active recreation by being transit supportive and walkable, and by providing quality cycling infrastructure and comprehensive connectivity to the parks and open space network.

Integrate shared space design with landscape design, and consider ways to create, promote and enhance recreation and leisure activities.

Design for Climate Change

Maximize opportunities for passive solar gain and natural ventilation.

Design mixed-use and multi-unit residential buildings to be adaptable over time to changing uses.

Consider passive techniques and innovative technological approaches for stormwater management, water use reduction, grey water recycling, and waste water removal.

Prepare a waste reduction plan to minimize construction waste.

Incorporate appropriate sustainable technologies to improve energy efficiency such as on-site power generation, stormwater infiltration, high-efficiency lighting and building insulation.

Explore the use of renewable energy systems and energy efficient technologies such as high efficiency appliances, solar panels, natural ventilation and smart controllability of systems.

Avoid the use of dark surface materials to limit urban heat island effect.

Maximize natural lighting and passive solar gain in the winter to reduce energy consumption. This includes building placement and orientation, landscape design as well as architectural elements such as the location and design of windows and other openings and vertical and/or horizontal shading devices designed for winter sunlight ingress and shade during summer.

Design for adaptability to changing climate conditions and increasing extreme weather events including high r-value enclosure design, flood mitigation measures where flooding may be a concern, and addressing extreme heat events through both massing and mechanical elements.

Did You Know? Low-density, greenfield development can have significant environmental impacts, including reliance on personal vehicles as the primary mode of travel, high energy and water use on a per-person basis, and a reduction in farmland/natural areas. It is important that new neighbourhoods seriously consider their contribution to climate change and make positive strides toward a more sustainable future.

Design for Wildlife

Greenfield development can be particularly impactful on local bird and wildlife habitats. Respond to these impacts in a sensitive and comprehensive manner.

04.3.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Ensure that all new development mitigates microclimatic impacts, particularly along active transportation routes, in parks and public open spaces and at transit waiting areas.

Design new residential projects to passively provide access to natural light as well as shaded areas and to provide shelter from winds as well as natural air movement through the site.

Provide a mixture of coniferous and deciduous trees. Concentrate deciduous trees to shade south and south-west windows from the summer sun. Concentrate coniferous trees on the north and northwest to screen prevailing winter winds.

Transit waiting areas, active transportation routes and parks and public open spaces are to offer a seasonally appropriate mix of direct sunlight and shaded areas, cumulative wind speeds that are appropriate for sitting, standing and walking, and protection from the elements.

Four Season & Winter City Design

Design transit waiting areas, active transportation routes and parks and public open spaces for winter activity and program them such as they are useable, comfortable, safe and attractive year-round.

Use a variety of colours, human-scaled lighting, public art, four-season landscaping and other techniques to bring warmth and visual interest to new neighbourhoods.

04.3.4 STREET DESIGN

Traffic Calming

Provide traffic calming along collector streets and at major pedestrian intersections and crossings such as parks, community trails, planned commercial areas and school sites.

Provide proactive traffic calming measures and design in accordance with the City's Development Manual & Complete Streets Guidelines. This may include textured/coloured pavement, curb extensions, stop-control mechanisms and landscaped medians. Identify proposed traffic calming locations should identified in the urban design report.

Intersection Design

Design intersections to slow traffic. Prioritize safe crossings for cyclists and pedestrians. Use curb extensions to calm traffic and shorten pedestrian crossing distance.

Provide enhanced intersection crossings at destination points, such as transit stops, community, retail and civic spaces, schools, parks, public open spaces and social resources.

Street Trees

Provide a continuous street tree canopy with large, medium and small stature trees distributed appropriately throughout the streetscape. Ensure adequate soil volumes and satisfy the specifications outlines in the City's Development Manual.

Provide diverse tree species. Consider planting themes to establish an hierarchy for intersections, trailheads and gateways.

Provide double-loaded (paired) street trees along park space frontages, open space frontages, non-residential development frontages or reverse lotted frontages.

Provide additional street trees along landscaped medians, trailheads and pedestrian connections.

Did You Know? Diverse tree species add visual interest, minimize the threat of disease and enhance the resilience of the urban forest.

Focal Points & Gateways

Provide gateway features such as wayfinding elements, public art, walls, arches, and water features individually or in combination with one another. Gateways are typically located at significant neighbourhood entry points.

Provide smaller scale, lower maintenance entrance features at secondary gateways, such as natural landscape features featuring native plant species.

Coordinate gateway themes through use of similar landscape materials, public art, signage, lighting and featuring streetscape elements to establish a neighbourhood identity.

Development should face gateway features and provide architecturally enhanced, articulated building elevations that contribute to a sense of place and neighbourhood entrance.

Landscape medians should be designed at neighbourhood entrances as follows:

Preferred Landscaped Median (>2m). Provide large canopy trees with low height plant materials.

Narrow Landscaped Median (1.5-2.0m). Provide low growing non-woody vegetation. Provide structural soils and adequate soil volumes for small trees.

Provide enhanced boulevard treatment by planting large canopy street trees where adequate soil volumes exist, consistent with the City's Urban Forestry objectives.

Wayfinding

Provide high quality wayfinding elements such as neighbourhood specific street signs to contribute to a neighbourhood's unique identity. Wayfinding is to focus on connecting people to destination points, such as transit stops, community, retail and, civic spaces, schools, parks, public open spaces and social resources.

Street Furniture

Provide appropriate street furniture and landscape elements such as benches and garbage receptacles. Provide higher quality street furniture at transit stops, along 'Priority Streets', gateway entrances and planned commercial areas. Provide clear areas for winter maintenance.

Provide high quality street lighting that functions as a unifying streetscape element and contributes to a consistent neighbourhood character.

Integrate postal delivery sites into the streetscape, particularly within active park spaces, along flankage lots and focal points.

04.3.5 PARKS & OPEN SPACE

Access & Location

Locate parks and open spaces as focal points of new development and centres of activity. Parks and open space should be provided within a 5 minute walk of all dwellings.

Prioritize public safety, both real and perceived, in all parks and public space design.

Connectivity

Provide pathways through parks that reflect desire lines, particularly at street intersection locations. Provide enhanced landscaping along pathways.

Park & Open Space Design

Consider a variety of functions, facilities and features in each park space such as playground equipment, seating areas, information kiosks, street trees, plant materials, neighbourhood mailboxes, interpretative signage, landmarks, linkages and passive naturalized areas.

Park spaces should be built during early phases of the development.

Provide enhanced perimeter street tree planting along street frontages. Locate playground structures with clear visibility to public streets. Provide equipment for children of a range of ages and abilities.

Provide a balance of hard and soft landscape materials at street corners. Consider hardscape surfaces to accommodate street furniture such as bike racks, benches, mail boxes and signage.

Incorporate seating areas into play areas with waste and recycling receptacles and trees for shade.

Consider sheltered facilities in programmable park spaces.

Community Trails & Walkways

Visually emphasize connections to the community trail system through increased trail or walkway width (9m right-of-way). Consider special treatments at trailheads such as higher quality landscape features, benches, high quality paving patterns, and wayfinding signage.

Integrate trails with natural and open space features, lighting and wayfinding.

At major trail crossings, design for pedestrian priority through landscaped medians, traffic calming measures, and/or enhanced paving treatments.

Recognize historical settlement patterns/routes through special pedestrian crossings/landscaping.

Design trails so that they are at least 3m from property lines with opportunity for landscaping.

Trails and multi-use pathways are not to be made up of street sidewalk segments.

04.3.6 COMPATIBILITY

Scale & Transition

Respect and complement existing and planned neighbourhood characteristics including heights, setbacks, orientation, building width, length and architectural rhythms.

Where new development is proposed which is larger or taller than its existing and planned context, provide massing, architectural elements and landscaping that respects adjacent sites.

Design the ground floor and street facades of new buildings to conserve and enhance human-scaled streetscapes.

New Development in Existing Neighbourhoods

Introduce or enhance gateway features and tree planting in mature neighbourhoods.

Introduce or enhance pedestrian connections to major destinations such as parks, open spaces and planned commercial areas.

Complement existing park spaces through the introduction of new and expanded parks.

New development should complement the existing neighbourhood character through compatible building design, scale and landscaping.

Integrating Neighbourhood Commercial Centres

Place neighbourhood commercial centres within walking distance of surrounding neighbourhoods and in close proximity to public transit.

Locate building mass close to the street, particularly at street intersections.

Provide on-street parking for street-fronting businesses.

Provide multiple pedestrian connections to commercial development including direct sidewalk connections at intersections and perimeter sidewalk connections.

Design neighbourhood commercial centres to complement the surrounding residential character.

Street-facing building facades should be highly transparent.

Provide compatible building signage that respects the building form and architectural features.

Provide an enhanced landscape buffer between parking areas and residential properties.

Promote higher density housing, such as townhouse units, stacked townhouses or multiple dwellings within or adjacent to neighbourhood commercial centres.

04.3.7 CULTURAL & NATURAL HERITAGE

Heritage Resources

Conserving cultural and natural heritage resources within new neighbourhoods is of critical importance, as doing so promotes diversity, gives variety to the urban fabric, reflects and enhances the cultural history of neighbourhoods and encourages urban exploration, sustainability, and the perpetuation of Kitchener's living history of natural systems.

04.4.0 SITE DESIGN

04.4.1 BUILT FORM

Placement

All buildings are to address the street, particularly at gateway intersections.

Locate taller buildings at gateways and major street intersections.

Provide increased rear yard setbacks for taller buildings abutting lower buildings.

Provide articulated rooflines and transition in massing for townhouse blocks.

Consider increased side and rear yard setbacks with tree planting for apartment blocks adjacent to existing or planned single detached dwellings.

Orient building massing towards intersections and provide quality building designs and architectural details to enhance gateways.

Provide subtle variation in building setbacks along longer street blocks.

Promote natural surveillance by maximizing window openings and orienting more active living spaces toward public streets, park spaces and walkways.

Building Design Details

Provide a variety of architectural styles along each street and avoid repetition of identical materials, features and building massing. Provide variations in roof-lines, window placement, materials, colour, porches and accent features.

Provide enhanced building facades in prominent locations including for all priority lots.

Provide porches of at least 1.5m in depth, particularly on priority lots and along priority streets.

Provide a variety of architectural features and details such as projections, window bays, articulated window detailing, dormers/clerestories and articulated masonry/cladding patterns.

Ensure primary front doors are parallel with the building façade and facing, visible and useable from a public street. Architectural features such as porches or porticos should reinforce the entrance and promote activity.

Balance window openings along side elevations. Consider centrally located bay windows.

Provide individual garage doors on houses with double car garages.

04.4.2 PRIORITY LOTS

Types

Require architecturally enhanced elevations on priority lots, with the following as general guidance.

Gateway Lots: Provide highly articulated building facades with enhanced, unique and recognizable architectural treatments such as brick or stone facades exclusive to this lot type, architecturally prominent massing, recesses, bay windows, porches, glazing and other details. Buildings on gateway lots should signal that a transition is occurring between neighbourhoods or districts and act as landmarks for wayfinding purposes.

Corner Lots: Provide both street facing elevations with a high level of architectural resolution. Emphasize the corner through massing, materials and features such as wrap-around porches. Provide enhanced window treatments such as bay windows along the exterior side elevation and consider the continuation of the same materials and detailing on all visible facades. Consider brick facades and expressive architectural features such as dormers, porches, window projections and articulated roof design. Locate front doors facing primary street frontages and enhance the doorway through architectural enhancements. Provide garages on secondary streets. Locate utility meters in internal side yards away from public view.

Terminating Vista Lots: Locate the building entrance or primary architectural feature at the terminating vista focal point. Consider large front windows, porches, gable elements and strong vertical elements such as dormers and enhanced roof lines to accentuate vista. Garages should be recessed behind the front porch or in-line with the habitable portion of the dwelling.

Park Space Lots: All elevations facing parks or publicly accessible open spaces should have a similar design quality to that of a front/street facing elevation, including high quality materials, door and window treatments such as bays, dormers and projections, and architectural features such as porches and private amenity spaces.

Window Street Lots: Provide a variety of building elevations and roof treatments facing arterial streets with P emphasis on strong vertical and horizontal massing that can be read at a distance. This includes entryways, window treatments, porches and private amenity spaces. Garages should be integrated into the building design and not dominate the streetscape.

Heritage Area Lots: Provide design variety, colour, details and materials to enhance the character of the neighbourhood surrounding the cultural heritage resource. Colours should be selected from an approved heritage palette. Provide complementary, high quality materials and architectural features. Provide compatible rooflines on buildings adjacent to built heritage resources. Further design considerations may be articulated in an Heritage Impact Assessment, Conservation Plan or Design Guidelines prepared in support of the development application.

Conservation Block Lots: Provide built-form, materials, details and building systems which minimize shadow, artificial lighting, wind or stormwater impacts on adjacent or nearby natural heritage features and functions

04.4.3 SHARED SPACES

Outdoor Amenity

Design outdoor amenity spaces for all users. Provide amenity spaces in locations with good natural surveillance from units, public spaces and the street. Maintain amenity spaces year round.

Avoid locating shared outdoor amenity where it is visually isolated or abuts parking areas, drive aisles or servicing and utility areas. Where this cannot be avoided, provide substantial screening in the form of landscaping and architectural elements and upgrades.

Provide outdoor amenity in the form of large, continuous, dedicated spaces. Avoid dividing up at-grade outdoor amenity into too many smaller spaces where possible. Avoid overly linear (long and narrow) spaces in favour of more equally proportioned spaces that can accommodate a greater variety of programs and recreational and leisure opportunities.

Landscaping

Provide landscaping between driveways, laneways, parking areas and side and rear property lines.

Limit the width of driveways to reduce the amount of paved surfaces in the front yard.

Provide front yard walkways with unobstructed access from front doors/lobbies to the sidewalk. Consider paving materials such as impressed coloured concrete and interlocking stone. Minimize the use of impermeable surfaces. Use permeable materials where possible.

Use hard and soft landscaping treatment to provide a distinction between public and private amenity areas at the front of a building.

On corner lots, fencing across the exterior side yard should be placed behind the rear building elevation to avoid blocking the building elevation facing the public street.

Public Art

Developer, City and citizen-led public art projects should be welcomed and integrated into new neighbourhoods. Public art should reinforce and enhance neighbourhood character and assist in creating memorable experiences, wayfinding, and social connections.

04.4.4 SITE FUNCTION

Vehicular Access & Parking

Provide 1 on-street parking space for every 2-single detached dwelling units.

Locate on-street parking spaces at least 9.0 metres from street intersection.

Consider lotting patterns that accommodate on-street parking such as larger single detached lots (≥ 11 metres) and townhouses or apartment blocks with rear laneways accessing garages.

Provide on-street parking along park or open space street frontages.

Provide on-street parking that does not conflict with trail crossings. Do not allow parking to compromise visibility for pedestrians, cyclists and drivers at trail crossings.

Driveways

Minimize areas dedicated to driveways to allow for increased landscaping and amenity space.

Avoid locating driveways in close proximity to property lines where an adjacent property contains a driveway abutting the same property line.

Use contrasting materials for walkways and driveways to provide visual and tactile variety between surfaces and safely delineate pedestrian circulation routes through the site.

On sites with rear lanes and on corner lots, provide parking access from the lane or side street.

Place driveways to the side or rear of buildings, except where they directly align with and are not wider than their related garage.

Limit both the quantity and width of accesses to reduce the amount of paved surface and number of curb cuts. In most cases no more than one driveway will be permitted.

Driveways should not conflict with transit stop locations.

Use permeable paving options wherever possible.

Servicing & Utilities

Integrate and screen service elements (loading areas, utility meters, transformers, HVAC equipment) into the building and site design so that they are not visible from the street and their impacts are minimized.

Consolidate utility boxes, meters, and HVAC to minimize their visual impact while ensuring suitable accessibility for maintenance. Consider innovative ways to integrate services into streetscape features or architectural elements.

Incorporate any required above-grade utility and servicing structures into the residential streetscape through compatible building design, screening elements and landscaping, while ensuring appropriate maintenance access.

Waste & Recycling

Waste storage areas are to be fully enclosed and screened from public view, first through thoughtful design of site and building elements (including placement and orientation), then through landscape screening.

Provide safe and convenient recycling options including secure and generous sorting rooms, options for organic materials, and roll-out or outdoor waste locations that do not negatively impact the streetscape, shared spaces, or building occupants (noise, odour).

Noise Mitigation

Provide front-lotted development or non-residential development adjacent to arterial streets. Avoid rear-lotted development adjacent to street noise sources.

Where noise mitigation cannot be achieved through building placement, implement passive techniques such as changes in elevation, berms, and landscape screening elements.

Where acoustic barriers are required, provide an architecturally appealing barrier with a 3m minimum landscape buffer. Provide low-maintenance landscaping between the barrier and sidewalk. Consider high-quality masonry style acoustic barrier with architectural detailing.

04.4.5 DESIGN REVIEW CHECKLIST

Task, Responsibility

Context

- 01 Establish a Community Vision, City/Applicant
- 02 Prepare an Existing Conditions Plan, Both
- 03 Conduct a Site Walk, Applicant
- 04 Engage in a Design and Visioning Session with Staff, Applicant Initiated

Pre-Submission

- 05 Request a Pre-Submission Meeting, Applicant Initiated
- 06 Identify & Discuss Existing Relevant Studies/Plans for the Area (eg. Subwatershed Study), City
- 07 Identify & Discuss the Design Principles for the Neighbourhood/Development to Achieve the Primary Design Objectives, Both
- 08 Identify & Discuss the Neighbourhood/Development Vision, Both
- 09 Prepare & Discuss a Neighbourhood/Development Conceptual Master Plan, Applicant/Both
- 10 Determine Submission Requirements, City
- 11 Refine Conceptual Master Plan and Prepare Development Plan for Submission, Applicant
- 12 Schedule Additional Follow-Up Meeting, if Desired, to Discuss Refined Plan/Submission, Both

Submission

- 13 Conceptual Master Plan With Supporting Design Principles and Vision in the Application Submission Documentation (Planning Report), Applicant
- 14 Discussion of how the Development Addresses the Design Brief for Suburban Development in the Application Submission Documentation (Planning Report), Applicant
- 15 Urban design policies and practices articulated in this section will inform decision making through the subdivision review process and design requirements many be implemented through conditions of approval of the Draft Approved Plan of Subdivision, City

Circulation

- 16 Planner for the Application File to Include an Identification of Key Urban Design Issues Within Comments to Applicant, City
- 17 Applicant to Respond and Work With City and File Planner to Achieve the Design Guidelines, Both

Approvals

- 18 Has Design for New Neighbourhood Guidelines Been Considered When Preparing Conditions of Approval? City
- 19 Staff Report to Include Discussion of How the Development Addresses the Urban Design Guidelines (Planning Report), City
- 20 Ensure the Design Conditions Are Fully Implemented, Both

Downtown

05.1.0 INTRODUCTION

05.1.1 KITCHENER'S DOWNTOWN

DTK

Downtown Kitchener (DTK) is an historic, cultural and economic centre of Waterloo Region. It is also increasingly home to a diverse array of residents and workers, a destination for an evolving selection of food and drink, and a key base for innovation employment and major office. Additionally, it is the hub for both regional and inter-regional transit, including Grand River Transit bus service, ION Light Rail Transit, GO Train and Bus service and VIA Rail.

Downtown Assets

Downtown Kitchener features many prominent public assets, civic institutions, and landmark buildings. These include;

City Hall + Carl Zehr Square
Kitchener Public Library (Central Branch)
Centre in the Square
Kitchener Market
THEMUSEUM
The UW School of Pharmacy + McMaster School of Medicine
The Tannery
Victoria Park (adjacent to Downtown)
The King/Victoria Transit Hub

Affecting Positive Change

Change is occurring quickly in Downtown Kitchener, from significant new residential, mixed use and office buildings, to the adaptive reuse of heritage buildings, to new restaurants and services popping up in the central core. Its buildings and streets are an eclectic mix of sizes, styles and eras, from 19th century brick and beam factory buildings to modernist office complexes. Heights range from 1 storey to 30 and above. Some buildings occupy entire blocks, others are just a few metres wide.

As of the publication of this Manual, Downtown Kitchener is undergoing change at an As unprecedented rate. We are likely to build as many significant projects in the next 5 years as we did over the previous 50. Within the next two years, the height of DTK's tallest building will more than double, from 19 storeys

to 39. Thousands of new residential units are being created along with space for thousands of new workers.

While this change is exciting, and represents a new era of highly intense, transit supportive development, it is important to preserve the existing mix of lively, heterogeneous streetscapes and built forms. Diversity of people, places and experiences and a commitment to design excellence are key to the ongoing success of Downtown Kitchener.

05.2.0 COMMUNITY DESIGN

05.2.1 INCLUSIVE DESIGN

Safety

New development is to provide comprehensive natural surveillance onto the public realm and avoid creating any potential entrapment areas, dead-ends, or hidden/obscured spaces.

Prioritize people and active transportation users over motorists when designing lighting, landscaping and vehicle access/movement/parking both within sites and in the public realm.

All projects are to enhance the downtown's overall safety and accessibility, through thoughtful design and the implementation of appropriate and comprehensive safety (Crime Prevention for Environmental Design - CPTED) and accessibility design standards.

Hostile or defensive design elements are unacceptable in Downtown Kitchener.

Additional Information: Many of Kitchener's marginalized persons spend significant time downtown, and it is important to consider design responses which protect their safety and preserve their ability to access services and enjoy public spaces.

Diversity

Diversity in all forms is an important part of Downtown Kitchener's identity.

Design in the downtown is to support and amplify ongoing social change toward inclusivity.

Respect, support, enhance and embrace all forms of cultural traditions, from established celebrations to the evolving cultural landscapes of newly arriving Canadians.

Projects are to enhance Downtown's status as a multi-ethnic centre for arts and culture through their architectural expression, public space design, public art and programming.

Create buildings and public spaces that are inclusive and sensitively designed for a range of activities which speak to the needs of people of all abilities, backgrounds and identities.

Embrace the existing character of Downtown Kitchener as a mosaic of forms, styles and eras by creating new development that is unique, contemporary, bold and visionary.

Provide public art that is inclusive and informative. It should promote understanding and respect for the humanity of others, while inviting contemplation and dialogue by being expressive, vibrant and visually and physically accessible.

Additional Information: This includes a commitment to establishing downtown as a regional centre for multiculturalism, as well as a commitment to the safety and comfort of all people, including women, the LGBTQIA+ community, older adults and children, and persons with different physical and mental health needs

Universal Design

Street design and public realm improvements are to place a primary focus on creating inclusive and accessible spaces for all. While public spaces may not be used in the exact same way by everyone, all users are to have equivalent means of accessing and enjoying these spaces.

Kitchener's Downtown consists of heritage buildings and other older buildings which may not be universally accessible. Owners or tenants of these buildings should explore opportunities to integrate universal design measures such as ramps, handrails and other barrier free measures into the architectural expression of the building, providing equitable use to all.

Age & Family Friendly Design

Downtown is to be an equitable place for all people to live, work, play, shop and visit. Cumulatively, DTK is to provide services, amenities, public spaces and buildings at the greatest variety of types and sizes of anywhere in the city. This includes residential units that are attractive to families, workplaces that can accommodate a full spectrum of appropriate employment types, retail that provides for everyone's daily needs and civic spaces suited to all interests.

Older adults are choosing to live Downtown, to be within walking distance of amenities and transit. Likewise, families are increasingly choosing to raise their children Downtown, particularly younger families. Streets and shared spaces are to be designed for the convenience and comfort of users with mobility aides and strollers.

Design buildings and open spaces to be intuitive, visitable and enjoyable to users of all abilities, with the intention that the full spectrum of public life be equally available to all.

Social Infrastructure

DTK will continue to be a place for social services which are available within close proximity to pedestrian routes and public transit. These resources are to be integrated into the urban identity of the Downtown and conveniently accessible to the users who depend on them.

Locate community spaces, event spaces and social services in close proximity to one another, other downtown amenities and to transit stops.

Spaces dedicated to social programs are not to be disguised, hidden or stigmatized in any way.

Arts & Culture

Kitchener's Downtown has a variety of public spaces that accommodate events, festivals, cultural celebrations and art installations year round. Explore opportunities to broaden these arts & culture initiatives in the Downtown, including partnerships with other interest groups, such as developers working on new projects.

Explore ways to integrate artistic and cultural expressions into the design of all elements within the Downtown including building design and architecture, landscape design, lighting design, streetscape design, wayfinding elements, transit stops, surface treatments and patterns, and site furnishings.

05.2.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Projects in the downtown are to demonstrate high standards for sustainable design.

This includes environmental sustainability to mitigate against climate change, ensure pedestrian comfort and adapt to changing energy costs, depleting natural resources and the evolving needs of building occupants into the future.

It includes social/economic sustainability to protect for a range of housing, office and retail options to enhance Downtown as a place for people of all income levels, backgrounds and stages of life.

It includes civic sustainability, to preserve and create additional public institutions and open spaces that service local neighbourhoods, the city and the region.

It includes cultural sustainability, to protect our natural and built heritage resources and to welcome and accommodate both old and new cultural traditions and celebrations.

Sustainability for DTK means creating a design culture that embraces change without erasing the past or harming our future. It means being forward thinking and proactive, anticipating future challenges and opportunities to best position DTK in both the short and long term.

With thoughtful collaboration and a shared commitment to diversity, sustainability and design excellence, DTK can be one of the best places in Canada to live, work, play and visit.

Design for Climate Change

There is sometimes little available space for green infrastructure on downtown sites. Creatively incorporate sustainable techniques everywhere it is possible to do so, including rooftops, interior atrium spaces, streetscapes and landscaped areas.

Pursue all opportunities to increase the urban tree canopy by designing sites to conserve existing trees while providing for new, large canopy tree planting wherever possible.

Integrate sustainable design features and technologies with buildings, streets, transit, parks, public art, and event spaces to demonstrate the importance of nature in the urban environment and to harmonize sustainable design practices with responsible intensification.

Use storm water for landscape irrigation requirements where possible.

Reduce the size and intensity of urban heat islands. Maximize landscaping and green infrastructure and provide high albedo surfaces where appropriate. Prioritize green roofs for large developments.

Where appropriate, re-use existing site and/or building components to conserve resources. Incorporate previously used building materials and products into new construction.

Reduce construction and demolition waste through reuse and recycling of materials, particularly those which can be salvaged on site. Use locally sourced and/or recycled materials for new construction, where possible.

Explore options for renewable energy including district energy systems, geothermal and solar.

Additional Information: Such techniques include; using boulevards as rain gardens; introducing bioswales, groundwater infiltration areas and permeable surface treatments; providing native plant species to enhance urban wildlife habitats and; using energy efficient, human scaled and wildlife-friendly lighting design.

Did You Know? Kitchener is a leader in stormwater management and low impact development, and the downtown should continue to set an example in this field and with respect to sustainability in general.

05.2.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Microclimatic impacts are to be determined through wind and shadow studies, with mitigation recommendations from these studies implemented on relevant plans. Include surrounding existing and planned context. These studies should be completed for all mid-rise and high-rise developments, and any other developments where impacts are anticipated.

Design pro-actively for microclimatic impacts through site design and architecture. Consider building placement, orientation, height, base design, setbacks, projections, materials, landscaping and lighting as opportunities to improve overall microclimatic performance.

Did You Know? The variety of tall and dense forms in the downtown makes accurate, detailed microclimatic studies particularly important when review development applications.

Four Season & Winter City Design

Provide the highest level of winter-city design for projects in the Downtown. Downtown Kitchener is a primary gathering point for people during the winter months, and all of its shared spaces should be designed for winter activities and safe, comfortable year-round use.

Use vibrant colours, human-scaled lighting, public art, four-season landscaping and other techniques to bring warmth and visual interest to the Downtown.

05.2.4 STREET DESIGN

Streets in the Downtown

Design and enhance streetscapes to create the best possible pedestrian experience for all users. This includes public and private streets, lanes and mid-block connections. All streets are to be designed to the highest standard for Complete Streets in Kitchener.

Enhance existing and provide new streets such as they prioritize walkability, cycling and transit, link to the boarder sidewalk and trail network, and provide safe and direct access to LRT station stops, GRT bus stops and public open spaces.

Streetscape design is to form an integral part of all development, seamlessly connecting the public and private rights of way to the building interior(s) in thoughtful, creative, dynamic ways. This includes street trees, landscaped areas, cycling infrastructure, seating areas, pedestrian refuge, walkways, public art and other features.

Design shared spaces and plaza areas to further promote seamless connectivity between a project and its surroundings, maximizing pedestrian comfort, ease of movement and visual appeal.

Streets should be designed to accommodate outdoor patios, festivals and street life as critical elements of the streetscape.

Create mid-block connections as part of development wherever possible, especially where it would extend or connect existing pedestrian routes or improve overall network connectivity.

Vehicular access, servicing and loading is to be accessed from lanes where possible. Where lanes are not available, and mid-block connections cannot be created through the development, locate access off of the lowest-priority pedestrian streets.

Do not allow new vehicular access points along King Street within the downtown. Wherever possible, close existing King Street vehicular access points to create a continuous, uninterrupted pedestrian experience.

Design the public realm to meet or exceed the City's targets for mature tree canopy coverage.

Integrate the public realm with private shared spaces, building entrances and lobbies, and the architectural forms of buildings to create a unique, continuous, engaging urban experience.

Did You Know? Downtown Kitchener streets will play a significant and increasingly critical role in establishing a minimum grid of protected cycling infrastructure, encouraging increased use of public transit and other, sustainable modes of travel, and diminishing risks to pedestrian safety.

Did You Know? King Street, within Downtown Kitchener, is the highest order public street in the City and the primacy of pedestrians, cyclists and transit users is to be respected at all times, even when it may inconvenience motorists.

Focal Points & Gateways

Downtown Kitchener is made up of buildings representing various architectural styles spanning some 150 years. The clock-tower, which is the only surviving piece of Kitchener's old City Hall, is placed in Victoria Park and is a focal point in the downtown and an icon for the city.

Other existing focal points include Kitchener City Hall, which is internationally recognized for its architecture, Victoria Park, Centre in the Square, The Tannery, and many others.

Important gateways into the downtown include the intersection at King and Victoria Streets, and the approach into downtown from King St. E., Charles St., Frederick St., Queen St., Weber St. and Courtland Ave.

New development in the downtown should be sensitive to preserving views and access to important focal points. New developments located at entrances to the downtown should provide a gateway feature (through architecture, built form, art or other) that helps to establish a sense of place and arrival that celebrates the identity of Downtown Kitchener.

Wayfinding

Wayfinding systems in Downtown Kitchener should focus on connecting user to key destination points such as community spaces, public open spaces, transit stops, retail areas, civic institutions, health care and social resources.

05.2.5 PARKS & OPEN SPACE

Access & Location

Provide high quality, diverse, frequent and easily accessible parks and open spaces.

Locate parks and open spaces in areas of the downtown that are deficient in both quality and quantity of park space and close to transit stops, where possible. Otherwise, locate these spaces such that they are the focal points of new development and centres for activity.

Enhance, protect and restore existing parks and open spaces.

On large sites or consolidated blocks where multi-phase development occurs, include new On public open spaces as part of the first phase of development.

Connectivity

Contribute toward the creation of a continuous active transportation network through the design of any single element, including connectivity to the LRT network, local, regional, commuter rail and bus lines, cycling grids, and all pedestrian connections including sidewalks trails and multi-use pathways.

Park & Open Space Design

Parks and open spaces in the downtown should be designed as social collision spaces which reflect, accommodate and enhance the diverse needs of all people who live, work and visit there.

Design parks and open spaces to serve all users. This includes opportunities for both active and passive recreation and equitable programming for persons of all abilities, incomes, cultural backgrounds and identities.

Design parks and open spaces for safe use both day and night, and throughout all seasons.

Provide high quality public art that acts as a focal point of public space and represents P contemporary standards for design.

Fully pursue unique programming and design options which respond directly to site constraints and opportunities.

05.2.6 COMPATIBILITY

Scale & Transition

High density development adjacent to established neighbourhood areas is to provide a suitable transition in scale, massing, building height, building length and intensity.

Preserve for the privacy and access to sunlight of adjacent and surrounding areas.

Provide a mix of building types and sizes. Concentrate height and density closest to LRT stops.

Transition in height, density and mass between station stops and low-rise established neighbourhoods or heritage assets to support compatibility.

Locate the greatest quantity and variety of active uses closest to the LRT stops and along King, Ontario, Charles and Queen Streets.

For large sites or consolidated blocks with multiple tall buildings, provide the greatest building height either at the most prominent intersection or internal to the site where it will create the fewest negative impacts.

Additional Information: Focusing significant intensification in appropriate Downtown locations helps to conserve established, centrally located low-rise neighbourhoods.

05.2.7 CULTURAL & NATURAL HERITAGE

Heritage Resources

Conserving cultural and natural heritage resources within Kitchener's Downtown is of critical importance, as doing so gives variety to the urban fabric, perpetuates the cultural history of DTK and encourages exploration, sustainability, and a sense of living history.

05.3.0 SITE DESIGN

05.3.1 BUILT FORM

Architectural Excellence

Kitchener's downtown presents many contextual factors which require thoughtful design responses. There are therefore many opportunities to create unique experiences and innovative places to live, work, play and visit. All projects in Downtown Kitchener are to aspire towards design and architectural excellence, regardless of size, use, or location.

New development along King Street should fit within the context of the street and provide extensive attention to design detail and articulation, so that new development fits within the existing and historical street fabric. This includes site and building design that is sustainable, expressive, and appealing to pedestrians.

Landmark or marquee buildings, as well as developments on large sites with multiple buildings, are encouraged to pursue architectural design competitions at the local, national or international level.

Massing

Adaptive reuse of-- and additions to-- existing buildings should respect and enhance the established character of the building, its streetscape, and any surrounding open areas. This is the case regardless of a building's cultural heritage status.

Additions to existing buildings must demonstrate a coherent design overall, with thoughtful interplay between old and new that is complementary, visually appealing, and reflective of high contemporary design standards for massing, materials and detailing.

Materials for both building and public realm elements are to be of high quality and carefully detailed to stand up to scrutiny at multiple scales, from the ground level pedestrian experience to a building's impact on the skyline.

Variety in architectural forms is encouraged, so long as that variety represents a contextually appropriate response to existing and planned conditions.

Integrate all elements of a project seamlessly into the overall design (such as signage, vehicle access and servicing, structured parking, mechanical systems, etc.).

Did You Know? Most new projects in the downtown will be either tall or mid-rise buildings, and should meet or exceed the guidelines in the Design for Tall Buildings and Design for Mid-Rise Buildings sections of the Urban Design Manual.

Materials & Articulation

Provide contemporary, high quality architecture and materials. Regardless of style, materials palette or construction methodology all projects in the downtown are to feature exemplary material design and details which are carefully and purposefully crafted.

Podiums for large developments often create large building masses, particularly where featuring above grade structured parking. Where this is the case, design the massing and materials to maintain visual variety and interest throughout the entire length of the building, including creating the perception that one large building mass is made of multiple smaller, connected ones. Where there is potential for a large, sculptural architectural expression, it must be pursued without sacrificing streetscape quality or pedestrian comfort.

Materials and details are to contribute toward the architectural resolution of the project as a whole, complement adjacent buildings and enhance the character of the downtown. Respect and complement historical architectural details but do not replicate them directly.

Primary building entrances and internal building circulation routes are to be organized to maximize pedestrian access, comfort, safety and amenity.

All visible elements are to be shown on the elevations as part of the site plan approval process.

Concentrate the most prominent architectural expressions towards major street corners and buildings directly adjacent to ION stops. Landmark architectural forms should encourage exploration of the downtown and aide pedestrian and transit user wayfinding.

Blank walls are not permitted in the downtown.

Did You Know? A strong architectural design intent and high-quality material detailing can be applied to any project, whether it's a major civic institution, an affordable housing project, a corner store, etc. It is important to use design expertise to maximize the quality of all of Downtown Kitchener's buildings and spaces.

05.3.2 SHARED SPACES

Outdoor Amenity

Abundant high quality public and private outdoor amenity spaces are to be pursued for all development, particularly at grade and within spaces accessible to the public.

Landscaping

Ensure the effective use of landscape screening along property lines and to provide separation between automotive and pedestrian areas.

Pursue all opportunities to provide tree plantings on-site.

Pursue landscaping opportunities that align with sustainability objectives including Low Impact Development (LID) stormwater techniques, using local, hardy and drought-resistant plant species, providing for the needs of bird and wildlife habitats, and integrating into existing natural systems and surrounding contexts to leverage and reinforce sustainability objectives.

Additional Information: On compact, urban sites, with many competing elements, landscape screening is critical to conserve the quality of shared spaces.

Public Art

Public art will be inclusive, engaging, interactive (where appropriate) and accessible for all.

Avoid blank walls or other undesirable site conditions, even when the intention is to provide a mural or other public art to compensate. Art is to be integrated into the design of a project and used to enhance and add new dimension to already high-quality architecture and site design.

Signs

All signage in DTK is to be high-quality, seamlessly integrated into the building and site design, and mindful of existing context, neighbourhood character, and cultural heritage assets.

Lighting

Provide consistent, high quality and human-scaled site lighting throughout the downtown, giving consideration for the existing and planned context for the area to ensure a safe, comfortable and attractive experience for site users, pedestrians and transit users.

05.3.3 SITE FUNCTION

Vehicular Access & Parking

Do not place surface parking between the front of a building and the street.

Above-grade structured parking is to be placed internal to the site and wrapped with active uses along all street frontages at all levels wherever possible.

Incorporate lay-bys into large scale residential, employment and institutional developments.

Parking entrances and servicing elements are to be integrated into the architecture of the building and designed to be safe and attractive.

Driveways

Locate driveways off the lowest order street or lane. Minimize the total number of vehicular access points. 1 is preferred, with a maximum of 2 where required for site function.

Where direct street access to parking, loading or servicing is permitted, place it at the edge of the site to avoid interrupting the streetscape and related pedestrian activity.

Driveways should not conflict with transit stop locations.

Servicing & Utilities

Locate all service and utility areas away from the public realm and shared spaces. Where this is not possible, provide enhanced screening to mitigate impacts.

Design all servicing, loading, utility and delivery areas to maximize safety, avoiding entrapment areas and poorly lit areas. Provide clear delineation between public spaces, private spaces and back of house.

Waste & Recycling

Do not place waste storage or pick-up areas between the building and the street.

Fully screen waste storage or pick-up areas wherever they are visible from the public realm.

Design all waste areas to be convenient, accessible, and usable year-round.

Snow Storage

Design with extra consideration for snow storage in DTK, ensuring that its size, placement and location does not frustrate pedestrian, cyclist or transit user activity in any way.

05.4.0 AREA SPECIFIC GUIDELINES

05.4.1 DESIGN DISTRICTS

Introduction

Downtown Kitchener is composed of four design districts; **City Centre District (UGC1)**, **Civic District (UGC2)**, **Innovation District (UGC3)**, **Market District (UGC4)**.

As established by the first half of this section of the Manual, high standards for design excellence, diversity and sustainability are expected in all four districts. Applicable guidelines from other sections of the manual (City-Wide Design, Design for Tall Buildings, Design for Mid-rise Buildings, for example) apply fully. The following guidelines for each district are supplemental, and speak to maintaining, promoting and enhancing the existing character of these areas.

05.4.2 CITY CENTRE DISTRICT

UGC1

The City Centre District is a compact mix of high-rise residential, office and historical low and mid-rise buildings. It features landmarks like Kitchener City Hall, The Walper Hotel, Arrow Lofts, and the Lyle S. Hallman Faculty of Social Work, among many others.

City Centre contains some of the oldest and newest buildings in Kitchener as well as the greatest mix of eras, uses, heights and architectural styles in the city. Streets, lanes and open spaces feature unique characteristics. Lot sizes and shapes contribute to a heterogeneous urban fabric, as do street orientations and alignments.

The City Centre District is to be a mosaic of these varied elements, reflecting Kitchener's highest standards for design, and responding intelligently to both immediate and broader contextual considerations on a site by site basis. Unique expressions (so long as they remain compatible) are encouraged, particularly those which make the most of their contextual constraints and opportunities while facilitating a dynamic, varied and charismatic public realm.

New development is to contribute positively to the eclectic character of the City Centre New District through visionary design that is contemporary, represents the greatest possible mix of uses, and provides a variety of built forms including heights, massing, formal expressions, materials, and colours.

Large scale developments are to provide variety (through massing, materials and architectural expressions) at scales representative of the established urban fabric.

Preserve and enhance the retail character of King Street, Queen Street and Ontario Street through building massing and streetscape design that protects the existing characteristics and rhythms of these streets. Avoid creating new vehicular access points along King, Queen and Ontario and close existing ones through redevelopment where possible.

No new vehicular accesses should be created along the following streets (within the district): Queen St., Ontario St., Charles St. and Gaukel St. Additionally, when redevelopment occurs, existing accesses should be closed where possible to contribute toward the creation of a continuous, safe, attractive pedestrian network.

Design Gaukel St. as a shared-street or 'woonerf' providing a pedestrian priority connection between City Hall (and Carl Zehr Square) and Victoria Park. New development along Gaukel is to provide a human-scaled public realm and street-facing active uses (including retail at grade as well as balconies or shared private amenity spaces within base storeys). Any above grade structured parking is to be wrapped on all storeys with other uses for the full length of the Gaukel St. facade.

Preserve the established retail fabrics along King St., Ontario St., and Queen St., respectively. King St. should continue to provide continuous ground-floor retail in the form of cafes, restaurants, events spaces, shops (including pop-up markets) and convenience stores. Queen St. is to be positioned as the second highest order retail street in the downtown, with a range of smaller-scale shops, restaurants and service retail options. Ontario St., is to continue developing into an eclectic mix of shops, services, restaurants and event spaces at an especially fine-grain including narrower and visually unique storefronts. These objectives should be met should be met even as large scale redevelopment of sites takes place.

Enhance the character of laneways (Halls Ln., Goudies Ln. and Bell Ln.) as part of the pedestrian network by creating new development which addresses the lane through its built form, provides CPTED measures and natural surveillance, implements public art wherever possible and considers the creative implementation of appropriate lane-facing active uses.

Did You Know? Where a guideline refers to a specific street which extends beyond a district, it is to be understood that the guideline should also generally be applied outside the district as well, to ensure a consistent, high quality streetscape.

Pursue opportunities to enhance the urban tree canopy by maximizing street trees and by pursuing creative options for on-site tree plantings as part of public and private amenity spaces. Where soil volumes or contextual conditions make tree planting impractical, consider well-designed artificial canopy structures to supplement landscape elements.

Likewise, consider creative options to increase and enhance the quality of landscaped areas, including their function as amenity spaces as well as from a natural heritage and stormwater perspective. The City Centre District is one of the least green areas of the city, and all opportunities for improvement should be considered.

Maximize opportunities for public art throughout the district, including a range of media, formats and styles. Consider how to implement artistic or sculptural expressions into the architecture of new buildings, particularly in places where structured parking is exposed or the facade might otherwise be blank. However, it is important to acknowledge that blank walls are to be avoided through the building design, interior layout and massing, wherever possible.

New tall buildings are to make an intentional and positive contribution toward the developing New skyline of downtown Kitchener. The Kitchener skyline should be unique, recognizable and represent a coherent mix of heights, tower lengths and top features. All new tall buildings are to consider their impact on the skyline and be designed accordingly. This will include an understanding of the tower's visual impact in all directions and from all street-level approaches to the downtown, as well as where a new tower will visually block (or be blocked by) an existing tall building (and whether the resulting net visual impact is positive or negative). Towers, and especially tower top elements, will be evaluated with these criteria in mind.

05.4.3 CIVIC DISTRICT

UGC2

The Civic District is a modernist/contemporary urban quadrangle featuring several important civic institutions (including Centre in the Square, the Kitchener/Waterloo Art Gallery, the centre branch of the Kitchener Public Library, Waterloo Regional Police, the former courthouse buildings, and others). Several eras and styles are represented, from early historical buildings to mid-century and late modernism to contemporary (in the case of the library renovation and addition). It is a district that is oriented around important public spaces, including Civic Centre Park, the enhanced streetscape and public amenities along Otto Street, and other open spaces related to many of the institutions listed above.

Prioritize the pedestrian experience along both Queen St. and Otto St. This is to include particular attention to the needs of the children, families, seniors, and other frequent user groups of the public library, creating a safe, vibrant, welcoming and barrier free public realm.

Provide ample, high quality pedestrian crossings along Queen St., Weber St. and Frederick St. and implement enhanced safety and accessibility measures to ensure that the many civic institutions in the Civic District are available to all users.

New development, additions to existing buildings, and the renovation and adaptive reuse of existing spaces-- both public and private-- should strive for a level of design excellence consistent with contemporary standards for major civic institutions such as museums, libraries and performance centres. It should contribute to a 'civic campus' feel, with interconnected public spaces at multiple scales and creative and bold interplay between buildings (through style, massing, materials, articulation).

Provide generous public amenity spaces as part of any development that reinforce and enhance existing public spaces and pedestrian connections. Maximize use of landscaping and tree coverage. Use new built form to frame and provide enclosure for both existing and new public spaces.

As part of new development/renovation/adaptive reuse, concentrate active uses along the north side of Otto St., including restaurants, cafes, gallery spaces and other uses that leverage and enhance the district's character as a hub of arts and culture.

Provide public realm and streetscape improvements on both Queen St. and Otto St., including seating areas, public art, street trees, pedestrian-scaled lighting and human-scaled built form. Where it doesn't already exist, design the south side of Otto St. with the same level of enhancement provided on the north side, including pedestrian-scaled lighting (bollard and lamppost), informal seating, enhanced surface materials and landscape design.

New development should frame and provide streetwall enclosure both for Otto St., and Civic Centre Park. Provide balconies and/or amenity spaces within building stepbacks along both streets to provide natural surveillance and a lively streetscape.

New development should promote pedestrian connectivity between the library, Civic Centre Park and Centre in the Square, embracing opportunities to enhance leisure and recreation in the district.

Place new built form close to Otto St. on both sides, with pockets of outdoor public amenity space that allow for the safe and attractive gathering of Centre in the Square patrons.

No new vehicular accesses should be created on either Queen St. or Otto St. and existing accesses should be closed as part of redevelopment where it is feasible to do so.

Conserve and enhance the mix of architectural eras and styles within the Civic District, including late-modernist, brutalist and post-modernist architectural styles. Additions and renovations are to enhance, complement and preserve the architectural integrity of these buildings rather than hide or cover up their original built form, materials and details.

New development, as well as additions to existing buildings, are to be contemporary in nature and designed to complement but not replicate any of the existing architectural styles represented within the district.

For any new civic project or significant redevelopment to an existing civic asset within the district (including significant additions), consider pursuing a national or international design competition to ensure that any new civic built form is designed to meet or exceed a high contemporary standard for public buildings.

Likewise, consider local, national or international design competitions for new residential, office or mixed use development in the district, in an effort to maintain an equally high standard of design for private development within the district.

All public and private works in the Civic District should make a substantial and meaningful contribution of public art. The district currently features a sculpture garden associated with the K/W Art Gallery at Centre in the Square and a small number of other public art pieces. As a centre for arts and culture, public art should be a vibrant, coordinated and persistent part of the Civic District public realm.

Consider consolidated, shared parking options between various users.

Consider the unique contextual elements adjacent to the district, including the relatively stable neighbourhood opposite Queen St. and Ellen St., and the potential intensification of properties opposite Frederick St.

05.4.4 INNOVATION DISTRICT

UGC3

The Innovation District, formerly the 'Warehouse District', is a dynamic, dense, lively urban area that has evolved out of the creative conversion of historical 'brick and beam' factory buildings (mostly related to the garment industry) into condominiums and office/co-working spaces. It has leveraged these assets with new development including multiple high-rise mixed-use projects and institutions such as the UW School of Pharmacy and McMaster School of Medicine. Following the construction of the planned King/Victoria Transit Hub, the Innovation District will be the regional gateway for GO Transit, Greyhound and the ION.

The continued preservation and adaptive reuse of remaining historical buildings is critical to maintaining the character of the Innovation District, as is streetscape design and pedestrian and mid-block connections that improve the pedestrian network between these assets.

Prioritize the creation of a continuous, uninterrupted and convenient pedestrian and cycling network (enhanced sidewalks and streetscape design, lanes and trail connections) connecting the King/Victoria Transit Hub to all parts of the Innovation District, through to the City Centre District, Midtown Kitchener and the neighbourhoods beyond. This should include direct, protected cycling and pedestrian connectivity to both the Iron Horse and Spur Line trails.

New development should reflect contemporary responses to the 'brick and beam' style that are respectful of existing context and characteristics and create new public open spaces. The bases of tall or mid-rise buildings should pay particular attention to nearby historical buildings to ensure compatibility in height, building length, and architectural rhythms.

Introduce ground-floor retail and other active uses, as well as significant landscaping and pedestrian amenity areas to establish and enhance a pedestrian experience that encourages interaction with and contemplation of the historical character of the district.

Provide public art that suits the district's mix of historical and new built form. Integrate artistic and/or sculptural expressions into the design of building facades and open spaces, particularly where screening above-grade structured parking or creating a focal point for an open space.

Design Charles St. as a complete street, and as the second highest order east/west pedestrian route through the downtown (after King St.). With two ION Stops in the downtown (and another in Rockway), as well as significant new development taking place, Charles St. is positioned for a dramatic increase in activity.

Through redevelopment, provide public realm and streetscape enhancements along both sides of Charles St., including seating areas, public art, street trees, human-scaled built form and pedestrian-scaled lighting. As part of the ongoing development of the lands west of Victoria St., allow for the immediate or future continuation of Charles St. through the block currently bordered by King St., Victoria St., Joseph St. and the rail corridor, in order to provide a finer grain street network. Through redevelopment, create a new internal street running approximately parallel to Victoria St., connecting Park St. to Bramm St., Joseph St. and the extension of Charles St. Design this to be a shared street or 'woonerf', prioritizing pedestrian flow over vehicular movement and allowing for the flexible use of the space to maximize programming opportunities including events.

Create a generous, human-scaled, multi-use connection along the rail corridor linking the Iron Horse Trail to the King/Victoria Transit Hub. Similarly, create a multi-use path along the spur line that arcs through the lands known as the Bramm Yards, connecting the Hub to the south end of Victoria Park and creating another connection to the Iron Horse Trail.

New development along either future trail is to address the trail with active uses, natural surveillance, and a built form that is designed to enhance the pedestrian quality of the trail.

New development within the Bramm Yards area is to be a dynamic mix of uses and building forms, heights, and architectural expressions. Provide a variety of public and private amenity spaces that promote a range of activities and contribute to a diverse, eclectic 'campus' feel.

Through redevelopment, secure substantial new public or privately owned, publicly accessible Th park spaces adjacent to those new trail connections. Prioritize flexibility and adaptability of these spaces to ensure that they can be used comfortably year-round and responsive to cultural, social and demographic changes over time.

Consider consolidated, shared parking for different users in the Bramm Yards area. This may include a connected underground parking structure and/or an above grade parking structure. It may be as part of a shared podium arrangement wrapped in active uses or as a standalone garage, provided it is located and oriented to minimize visual and physical impacts on the public realm and is designed to the highest standards for structured parking, meeting or exceeding the guidelines in the Design for Structured Parking section of this manual.

Complement and enhance the unique character of Victoria St., where historical factory Complement buildings will be interspersed with contemporary new high density infill. While new development carries a zoning by-law setback in addition to potential road widening, many existing cultural heritage properties feature little to no setback. Because these properties are to be conserved, it therefore creates a built form rhythm with pockets of space in front of new development which can be used to enhance the streetscape along Victoria St. This can be through the creation of 'pocket parks' or urban greens, wider boulevards with street trees to separate pedestrian and vehicular traffic, patio spaces associated with restaurants/cafes, areas for pedestrian rest/refuge, public art, and other public amenity

05.4.5 MARKET DISTRICT

UGC3

The Market District is anchored by the Kitchener Market, a mixed-use block that contains both the City's primary market space but also compact, low-rise condominiums and office spaces. The Market District also features a variety of building types, uses, sizes and styles. King Street continues to act as a primary retail and pedestrian/cyclist route.

Market Lane is another important feature of the Market District and should be enhanced, reinforced and extended through future development as a key pedestrian connection. Stylistically, development along the lane should take cues from the Kitchener Market buildings, presenting a contemporary low-rise neighbourhood feel.

New development should prioritize compatibility and integration with surrounding areas. Establishing a mid-rise connective fabric along King Street and Charles Street should be a priority. This will help to transition between scales and consolidate the pedestrian experience.

Additional height may be appropriate where lot depths can preserve a low-to-mid-rise human scaled built form along streetscapes and where off-site compatibility and separation can be achieved, consistent with the Design for Tall Buildings section of this manual.

Streetscapes are to encourage a more leisurely pedestrian and cycling experience through high levels of detail, extensive landscaping, and more intimately scaled public open spaces, seating/refuge areas and retail spaces/active uses.

No new vehicular accesses should be created off of King St. and existing accesses should be closed as part of redevelopment where it is feasible to do so. New vehicular accesses should be avoided on Charles Street where possible to enhance the streetscape and pedestrian and cyclist safety between the Queen Street and Market ION Stops.

Enhance Market Ln. by creating development which addresses the lane through its built form, by providing active uses along the lane and by designing to high safety standards through CPTED measures and providing sufficient natural surveillance. Should the opportunity arise, extend market lane to Frederick St. and connect it with Goudies Ln.

Reinforce Market Lane's identity as a shared street or 'woonerf' through additional enhancements to surface materials, wayfinding and other design measures. Plan for the future temporary and permanent expansion of market-related functions by ensuring space for temporary vendors is provided along the lane. New development should also consider providing permanent retail spaces or other collaborative active uses addressing the lane.

As part of any works on Eby St., create a new mid-block pedestrian crossing from the market to Market Ln. This can include enhanced surface materials, a signalized crosswalk, and temporary, seasonal or permanent traffic calming measures. Design for the potential closure of Eby St. to vehicular traffic (Duke St. to King St.) on market days and for special events.

Establish, enhance and support the houses on Moyer Pl. and the west side of Eby St. (between Duke St. and King St.) as a corridor for boutique shops and services, restaurants and cafes.

If the opportunity arises through redevelopment, enhance the Moyer Pl. connection to Duke St. and extend Moyer Pl. to King St. as a pedestrian only lane. Pursue further extensions of Moyer Pl. in both directions as mid-block connections, from Duke St. to Weber St., and from King St. to Charles St. and/or Halls Ln. Regardless of the timing of redevelopment on a site-by-site basis, preserve for the ability to extend Moyer Pl. for the entire span of Charles St. to Weber St., even where existing buildings prevent direct connectivity in the interim.

Front new retail spaces and other active uses onto Moyer Pl., its extensions, or associated connections. Focus retail where it can activate corners and draw in pedestrians, and retain a boutique feel/compatible rhythm of unit sizes regardless of the nature of the redevelopment.

Design Moyer Pl., its extensions and related mid-block connections to a high standard for safety and provide pedestrian-scaled lighting and natural surveillance while preventing entrapment areas by placing loading and servicing areas away from the pedestrian realm.

Through either public or private works, expand Market Green and/or provide new and enhanced connections between Market Green and Market Ln./Moyer Pl.

Enhance Market Green to provide barrier-free accessibility and greater flexibility/adaptability to new programs, events, users and experiences over time.

Consider consolidated, shared parking and/or a new municipal garage within the Market District that provides parking relief for both Kitchener Market patrons as well as patrons of various nearby uses. As the market and other destinations experience overlapping peak traffic times (Saturdays), pursue creative parking options, particularly shared arrangements with off-peak users such as employee parking for office users who need parking during weekdays and events-related users who may need parking most during the evening.

Nodes & Corridors

06.1.0 INTRODUCTION

06.1.1 KITCHENER'S NODES & CORRIDORS

What Are Nodes & Corridors?

Kitchener's Nodes & Corridors are key intensification areas which help provide transit supportive development throughout the city. They can become community focal points of activity by providing concentrated opportunities for social interaction in addition to being places where one does their daily shopping. When integrated well with existing or planned neighbourhoods, the pedestrian public realm, cycling infrastructure, and the parks and open space network, Nodes & Corridors can become an indispensable resource for all users.

Nodes are categorized as City Nodes, Community Nodes and Neighbourhood Nodes. They are generally located at major intersections, provide a significant commercial function, and are often complemented with residential or institutional uses.

Corridors are categorized as Urban Corridors and Arterial Corridors. They are generally linear and are located along transit corridors (urban corridors) and major streets (arterial corridors), providing a significant retail and service industry function with compatible residential or employment uses.

Objectives

To create interesting, high quality buildings and open spaces within Kitchener's Nodes & Corridors that help create liveable, walkable, healthy, sustainable and desirable neighbourhoods.

To enhance the quality of the outdoor environment through quality landscaping, thoughtful public open spaces, and sustainable design practices.

To create safe, comfortable and attractive streetscapes and pedestrian environments that emphasize walking, cycling and transit.

To reinforce and enhance the character and quality of the districts and neighbourhoods where nodes & corridors are located; and

To promote development patterns that allow for high-quality future intensification.

Vision

Nodes & corridors present a unique opportunity to bring a variety of high-quality urban spaces and a broad mix of uses to all corners of the City at various concentrations. Properly planned, designed, and activated, they can become hubs of activity while providing a hierarchy of experiences at the neighbourhood, community and city scale. Properly coordinated and connected by transit, they can ensure a mix of great experiences for all who live, work, play and shop in Kitchener.

06.2.0 COMMUNITY DESIGN

06.2.1 INCLUSIVE DESIGN

Safety

Design for high levels of natural surveillance and optimal pedestrian visibility. Pedestrians should have clear, unobstructed vision along all publicly accessible routes, allowing for advanced detection of potentially unsafe situations. This includes visibility for a full range of eye levels including children and users of mobility aides.

Avoid dead-ends or entrapment areas. All spaces that can be accessed by pedestrians are to have multiple routes of escape, including areas on private sites such as loading/service areas.

Use Crime Prevention Through Environmental Design (CPTED) principles to design all spaces to a high standard for safety. A CPTED Report may be required for any development.

Prioritize pedestrian safety when designing lighting, landscaping and site function elements such as parking, access and servicing areas.

Universal Design

Design nodes & corridors for the convenience and comfort of users with mobility aides, including walkers, wheelchairs, scooter and strollers. All users are to have equitable means to navigate sites.

Be especially cognizant of the relationship to the site and nearby transit stops. It is critical that all users are able to safely, equitably and comfortably use transit to access nodes & corridors.

Carefully incorporate barrier free infrastructure into the landscape design and architecture of all projects to ensure equivalent, convenient and attractive means of use for persons of all abilities.

Age & Family Friendly Design

Provide public and private amenity spaces that are suitable for families, children, and older adults. Design these spaces to be shared amongst different age groups by making them large and flexible enough to accommodate more than one user type and activity simultaneously.

Where residential units are proposed, provide the greatest possible mix and variety of housing and unit, types, sizes and tenures.

Social Infrastructure

Nodes & corridors can act as community hubs for commercial and institutional spaces that can lend themselves well to social services and other social infrastructure. All nodes & corridors should have the potential to accommodate social infrastructure objectives.

Arts & Culture

Identify potential opportunities for public art installations and arts and culture spaces.

06.2.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Provide a continuous pedestrian network to encourage active walking and cycling between uses and throughout larger sites.

Connect building occupants to the outdoors through the generous passive daylighting of buildings, frequent and generous permeability between indoor and outdoor spaces, and direct pedestrian connectivity to trails, parks and open spaces.

Design for Climate Change

Integrate and enhance existing natural systems and introduce new green infrastructure.

Additional Information: Techniques may include natural system restoration, improved trail connections to parks/urban spaces, substantial tree planting and protections for local wildlife habitats, migration patterns and bird friendly design practices.

Additional Information: This should include green or high-albedo roofs, passive heating and cooling, high efficiency lighting and HVAC, dark-sky practices, low-impact stormwater management, on-site recycling and building design that anticipates future change.

Integrate sustainable technologies and design approaches wherever possible, focusing on adaptability and resilience, energy efficiency and generation and waste management.

Mitigate urban heat island effects by providing lighter, more permeable material treatments for parking areas and increasing tree canopy coverage to the greatest extent possible.

06.2.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Design pro-actively for microclimatic impacts through site design and architecture. Consider building placement, orientation, height, base design, stepbacks, projections, materials, landscaping and lighting as opportunities to improve overall microclimatic performance.

These impacts are to be determined through Wind and Shadow Studies, with mitigation recommendations from these studies implemented on the relevant plans.

Four Season & Winter City Design

Design pathways, transit waiting areas and public and private open spaces for winter activity and program that they are useable, comfortable, safe and attractive year-round.

Use vibrant colours, human-scaled lighting, public art, four-season landscaping and other techniques to bring warmth and visual interest to nodes & corridors.

06.2.4 STREET DESIGN

Blocks & Streets

From the master planning stage, create street, block and circulation patterns able to naturally accommodate a variety of potential future uses as a node or corridor intensifies.

Create land parcels and development blocks that are compatible with their surroundings. Seamlessly integrate development with finer-grained surrounding neighbourhood contexts.

Create a continuous pedestrian network both on-site and to off-site sidewalks, and trails.

Provide a coordinated streetscape (both within the public and private realm) that seamlessly incorporates the following interwoven elements:

Seating and gathering spaces, shade structures, human-scaled lighting, public art and wayfinding;

Trees, planters and hard and soft landscaping features using resilient species;

Thoughtfully designed infrastructure such as utility poles, bus shelters, garbage/recycling, fire hydrants, LID infrastructure and stormwater management; and

Unique surface materials and patterns, unobstructed and continuous connections, and wider areas to accommodate high pedestrian traffic.

Provide architectural and landscape enhancements at the corners of sites.

During streetscape reconstruction or as part of redevelopment, coordinate utilities in the right-of-way to ensure ample opportunity exists for street trees and other urban design elements.

Additional Information: It is critical that planning for future intensification includes an understanding of where future high-density buildings may be placed, scaled and oriented such that they satisfy the Design for Mid-Rise and Design for Tall Buildings sections of this manual.

Pedestrians & Cyclists

Provide direct, safe, continuous and clearly defined pedestrian and cyclist access from public sidewalks, parking areas and transit stops to building entrances, between buildings and to adjacent properties to

facilitate circulation between sites. Where cyclists are to share driveways with motorists, clearly mark those driveways as sharrows.

Provide a minimum 1.8m wide unobstructed pedestrian walkway along any façade adjacent to a parking area or with a customer entrance, and connect to the public sidewalk. Provide additional width where doors swing out or where parked vehicles can potentially interfere with pedestrians.

Distinguish walkways from driving surfaces by using contrasting surface treatments across drive aisles and vehicle entries/exits and by raising walkways to curb level.

Provide weather protection at building entrances, close to transit stops, and in shared spaces.

Provide sheltered bicycle parking in visible locations near building entrances and pedestrian walkways. Ensure that these locations do not conflict with pedestrian circulation.

Provide site furnishings such as seating, bike racks and pedestrian refuge elements at building entrances, along core pedestrian routes and in amenity areas.

Provide a range of short and long term bicycle parking at appropriate locations along sidewalks, P at building entrances, in public spaces and at transit stops. Maintain bicycle parking year round and explore opportunities for covered or indoor parking, particularly for employees.

Focal Points & Gateways

Provide gateway features at entrances of nodes and corridors. Gateway features should be coordinated with landscape design, public art, signage, lighting and streetscape elements.

Development should face gateway features and provide architecturally enhanced, articulated building elevations that contribute to a sense of place.

Wayfinding

Integrate wayfinding strategies into the overall design of an area. Wayfinding systems should focus on connecting people to destination points, including to and from transit stops, community spaces, retail areas, civic institutions, and parks and open spaces.

06.2.5 PARKS & OPEN SPACE

Access & Location

Locate parks and open spaces as focal points for new development and as central features in nodes and corridors.

Locate parks and open spaces at, adjacent to, or immediately, conveniently and equitably accessible from transit stops.

On large sites or consolidated blocks where multi-phase development occurs, include new public open spaces as part of the first phase of development.

Connectivity

Link nodes and corridors with parks, open spaces and natural areas via trails, complete streets, and other pedestrian and cycling connections to create a continuous network of public space.

Where existing parks, open spaces or trails have minimal connection points to the greater node or corridor, integrate these features with new sidewalks, trails, multi-use pathways and enhanced wayfinding, both through redevelopment opportunities and capital projects.

When designing new parks in existing nodes and corridors, comprehensively consider the active transportation network, including local, regional and commuter rail and bus lines, cycling grids and all pedestrian connections including sidewalks, trails and multi-use pathways.

06.2.6 COMPATIBILITY

Scale & Transition

Conserve low-rise neighbourhoods by focusing development within nodes & corridors.

High & medium density development adjacent to low-rise neighbourhood areas is to provide a suitable transition in scale, massing, building height, building length and intensity.

Preserve for the privacy and access to sunlight of adjacent and surrounding areas.

Provide a mix of building types and sizes. Concentrate height and density closest to transit stops. Pursue opportunities to provide affordable housing and access to retail and personal services which address the needs of lower or fixed income users.

For large sites or consolidated blocks with multiple tall buildings, provide the greatest building height either at the most prominent intersection or internal to the site where it will create the fewest negative impacts (see Design for Tall Buildings).

06.2.7 CULTURAL & NATURAL HERITAGE

Heritage Resources

Conserving cultural and natural heritage resources within Nodes & Corridors is of critical importance, as doing so promotes diversity, gives variety to the urban fabric, enhances the cultural history of neighbourhoods and encourages urban exploration and sustainability. Incorporating cultural and natural heritage assets as featured design elements within nodes & corridors creates desirable destinations and focal points for communities.

06.3.0 SITE DESIGN

06.3.1 BUILT FORM

Massing

Locate new buildings close to the street and at street corners.

Reinforce the street edge with subtle variations in setback to create an engaging public realm. Provide a consistent building setback for similarly scaled buildings. Increased setbacks may be considered for

unique site opportunities and constraints, to preserve or create prominent views or vistas, or to provide pedestrian amenity and public spaces.

Buildings are to be setback an appropriate distance from the front and exterior side property lines to define the street edge and to provide space for pedestrian activity and landscaping, including street trees.

Locate greater heights and massing along primary streets, at intersections and internal to larger development sites to provide good transition to lower-rise surrounding areas.

Design buildings for pedestrian comfort and compatibility with surrounding buildings in size, Design massing, height and scale. Avoid single storey buildings (or fake upper storeys), particularly in City and Community Nodes and Urban Corridors. A low to mid-rise form (2-8 storeys) is encouraged in all intensification areas subject to appropriate transitional measures and massing. High-rise forms (9 storeys and above) should be located on larger redevelopment sites, at significant intersections, on major streets or near transit stations.

New buildings are to respect and complement surrounding building forms, and maintain compatibility through various design techniques such as building setbacks, stepbacks, articulation and architectural rhythm/detailing.

Locate active uses at grade. Provide a high-level of articulation along street facing elevations, including a high percentage of glazing, high quality materials, and an architectural expression that is engaging and visually appealing.

Design buildings to locate interior uses such as seating areas, employee rooms, o Design ffices, waiting areas and lobbies, which benefit from glazing, along street-facing walls.

Avoid blank walls. Where unavoidable, screen from public view with landscaping, including a mix of deciduous and coniferous trees along the full extent of the blank facade. Use art, projections, recesses, canopies, colour and texture to reduce the impact of unglazed walls.

Enhanced urban design approaches will be expected of new buildings located at gateway intersections, in proximity to heritage buildings and within views and vistas.

Did You Know? A high quality built form and thoughtful building placement can encourage greater levels of interaction between people and places, increasing the public's desire to spend time and money on goods and se goods and services and identify positively with a place.

Additional Information: All buildings are to be designed such that they satisfy related built form sections of the urban design manual, including Low Rise Multi-Residential Buildings, Low Rise Commercial and Mixed Use Buildings, Mid-Rise Buildings and Tall Buildings.

Additional Information: Views and vistas are significant compositions of the built and natural environment that enliven the overall physical character of an area.

Materials & Articulation

Utilize high-quality, durable and sustainable materials. A building's material palette is to contain a variety of complementary, contemporary materials and finishes. No single material should form the overwhelming majority of a building's facade design. Avoid materials which appear monolithic, flat, or unresolved. Where a palette contains such materials, it is expected that options for colour, texture, patterns, finish and details will be explored through a collaborative design process.

Materials and architectural details are only appropriate for achieving a 'traditional' or historical Materials architectural style if they are demonstrated to be a significant, existing part of the historical neighbourhood character. Where this relationship is not established, it is expected that the building design be revised to more closely respond to these existing characteristics, or that a more contemporary design approach be utilized.

Employ colours, creative architectural details, and enhanced articulation to create unique, engaging and visually interesting environments for users.

06.3.2 SHARED SPACES

Outdoor Amenity

Provide a range of public urban spaces along major transit corridors, near station stops, and within large developments. These can include urban gardens, parkettes, squares and plazas.

Place new public spaces at grade, incorporate four-season design objectives, and design to be multi-functional and flexible to accommodate a range of users, programs and activities.

Locate shared spaces near major building entrances and buffer from parking and drive aisles.

Include hard and soft landscape elements, pedestrian-scaled light fixtures, interactive elements, public art, wayfinding and formal and informal seating options.

Locate all shared spaces to maximize accessibility to pedestrians, cyclists and transit users. This includes direct access from public sidewalks that minimizes points of conflict with motorists and limits the need to cross drive aisles and parking areas.

Landscaping

Plant street trees along public streets and along the full length of internal pedestrian walkways. Plant trees in permeable surface areas, with an adequate amount of structural soil that allows for trees to reach their full mature canopies.

Select trees, shrubs and other vegetation considering their tolerance to urban conditions, such as road salt and heat. Give preference to native species of the region that are of equal suitability.

Provide a minimum 3.0 metre wide landscaped area along the edge of a site.

Plant trees in landscaped islands in parking areas, with at least two trees together, and provide Plant adequate soil volumes for the trees to thrive.

Landscape any area between the building and the public sidewalk with foundation plantings, trees, and street furniture.

Define pedestrian walkways within parking areas with continuous planting areas.

Use sodded areas, grasses and shrub beds within parking areas to collect, store and filter stormwater in order to improve groundwater recharge.

Plant trees, shrubs, ground cover etc. on any unbuilt portions of the site. Where future phases are contemplated, temporary landscaping may be permissible, provided it is compatible with the permanent landscape site design.

Landscaped areas should anticipate the requirements for winter snow storage, and reduce/eliminate conflicts between landscape plantings and snow storage..

Public Art

Pursue opportunities to integrate public art into Nodes & Corridors, prioritizing pedestrian areas.

Signs

Integrate all signage into the landscape design and architecture of the site.

Signage on a site should be consistent in scale and character, but not identical.

Signage should not dominate other site elements, particularly the public realm and on site shared spaces.

Lighting

Provide site lighting that is human-scaled and promotes pedestrian comfort and safety.

Provide energy efficient lighting.

Provide lighting which respects and enhances the character of the site and neighbourhood, including compatibility with the architectural and landscape design of the area.

06.3.3 SITE FUNCTION

Vehicular Access & Parking

Locate surface parking to the side or rear of buildings.

Design site circulation to minimize potential conflicts between pedestrians and vehicles. Pedestrian circulation throughout and between sites is to be prioritized, and interrupted by vehicular traffic as infrequently as possible.

Divide large parking areas into smaller, well-defined sections using soft and hard landscaped areas featuring LID (low-impact development) and stormwater management practices. Provide shade trees (with appropriate soil volumes) within these landscaped areas to reduce heat-island effect and contribute toward the City's tree canopy objectives.

Screen parking areas from public view through building placement and design. Where parking is still visible, create low landscaped buffers and/or low architectural screening to minimize the visual impact of parking.

Provide a minimum 3.0 metre wide landscape area along the site's side and rear yards in order to provide tree screening and enhance site environmental benefits.

Consider on-street parking opportunities during the design of road reconstruction projects. Curb extensions should be considered, and may contain landscape features or streetscape elements.

Parking lot design should anticipate and accommodate safe pedestrian movement between parked vehicles and building entrances. Pedestrian walkways should be prioritized, minimizing conflict with drainage structures and parking stalls. Provide planned primary walkways between parking aisles (perpendicular to vehicle parking spaces), and provide secondary walkways between parking areas that connect to primary walkways.

Driveways

Share vehicular access to parking areas between adjacent properties in order to reduce the extent of interruption along the sidewalk and the streetscape, and to allow for vehicular circulation between sites.

Limit the number of driveway access points into a site to the minimum required for site functionality.

Parking Structures

Underground parking is preferred for large, intensive development projects. Structured parking is to be designed with consideration for how it will accommodate future intensification while remaining functional, accessible and without negatively impacting the long term design of buildings, shared spaces or the public realm.

Servicing & Utilities

All private, on-site servicing and utility elements, such as loading areas and mechanical equipment, are not to be visible from the public realm. This should first be accomplished through building placement and orientation, then through screening measures where impacts persist.

Regardless of their actual or perceived visibility, design servicing and utility elements as integrated parts of the architectural and landscape design of the project.

Coordinate and consolidate servicing and utility functions to limit their impacts, while considering access for maintenance.

Waste & Recycling

Outdoor storage locations are not to be visible from the public realm.

Public-use receptacles should be conveniently located for pedestrian users and attractively integrated into the site design.

Snow Storage

Prioritize pedestrian access and movement when designing and locating snow storage areas.

Provide for snow storage and clearing at transit stops for transit passengers.

06.4.0 AREA SPECIFIC GUIDELINES

06.4.1 Key Map

Legend

This map illustrates the locations of all nodes & corridors within Kitchener. Broadly, this section of the manual applies to properties that fall within any of the nodes & corridors seen below. For more detailed or site specific information, please contact city planning staff.

06.4.2 CITY NODES

What is a City Node?

City nodes are located at prominent intersections along existing or planned transit corridors. City nodes are the largest, highest order nodes providing commercial and institutional uses that attract people and activity at a city-wide or regional scale. City Nodes may include compatible residential uses. City Nodes are intended to intensify, be transit supportive and pedestrian friendly.

Guidelines

Buildings are to address an existing pedestrian oriented public street and/or create an internal pedestrian-only thoroughfare to focus building frontages onto.

All design within City Nodes-- street and building placement, block size, parking layouts, public All and amenity space size and location-- is to consider the impact on future intensification so as not to limit the Node's ultimate potential or frustrate future projects.

Prioritize pedestrian and cyclist circulation and demonstrate this through a pedestrian circulation plan that outlines pedestrian movement, pathways, connections and crossings.

Provide a high-percentage of glazing on street facing elevations.

Provide internal crosswalks that are easily identifiable, incorporate traffic calming techniques, and utilize colours and paving patterns which contrast with vehicular travel lanes.

Provide pedestrian-oriented landscaping. Illustrate the relationship between landscaping and the pedestrian experience on the pedestrian circulation plan.

Services and loading should not be located facing public streets. They are to be designed in a way that provides minimal interference with pedestrian circulation routes.

Provide one or more central amenity spaces of sufficient size to accommodate a range of public activities, from cafe seating and patio spaces to casual social spaces, public art, water features and other

attributes which create a pedestrian oasis. The amenity space is to be appropriately removed from vehicular traffic and placed such that it best facilitates recreational and leisure activities.

06.4.3 COMMUNITY NODES

What is a Community Node?

Community nodes are located at prominent intersections along existing or planned transit corridors. They are centres of activity for surrounding neighbourhoods, providing commercial uses with a mix of residential and institutional uses. Community nodes are intended to intensify, be transit-supportive and pedestrian friendly.

Guidelines

Buildings are to address an existing public street.

Provide pedestrian oriented entrances from public sidewalks.

Provide generous glazing on street facing elevations.

Ensure continuous, generous, uninterrupted pedestrian circulation internal to the site and connect seamlessly with public sidewalks, trails and surrounding sites.

Internal crosswalks should be easily identifiable, incorporate traffic calming techniques, and utilize contrasting colours and surface patterns.

Connect pedestrian site circulation to transit stops as directly as possible such that transit users have direct, convenient, safe and equitable access to buildings and are not inconvenienced in favour of motorists.

Provide landscaping complementary to the pedestrian experience.

Servicing, mechanical and loading areas should not be located facing public streets or be visible from internal pedestrian circulation routes.

Additional Information: In cases where it is impractical to provide high levels of transparency, explore options such as clerestory glazing.

06.4.4 NEIGHBOURHOOD NODES

What is a Neighbourhood Node?

The planned function of Neighbourhood Nodes is to serve the day to day commercial needs of surrounding residential areas.

Guidelines

Provide landscaping complementary to the pedestrian experience.

Services and loading should not be located facing public streets.

Ensure continuous, generous, uninterrupted pedestrian circulation internal to the site and connect seamlessly with public sidewalks, trails and surrounding sites.

Carefully establish compatibility with surrounding areas.

Consider ways to establish and enhance the identity of neighbourhood nodes as community Consider gathering points, including unique public art and wayfinding elements, community-oriented meeting and event spaces, and features such as community notice boards.

Additional Information: This will help maximize connectivity to the existing pedestrian and cycling network to encourage nearby users to walk or cycle rather than drive.

06.4.5 URBAN CORRIDORS

What is an Urban Corridor?

Urban Corridors are generally linear and located along existing or planned transit corridors. They are to be pedestrian oriented and integrated with neighbouring uses. Urban Corridors are to provide for a range of retail and commercial uses as well as transit supportive intensification opportunities.

Guidelines

Buildings are to address streets and intersections in placement, design and orientation. Provide active uses with generous glazing and pedestrian entrances along the street.

Create compatible built forms and contribute toward a continuous public realm, reinforced C through building massing and a high quality, uninterrupted pedestrian network.

Strengthen pedestrian and cycling connections to trails and sidewalks, improving and enhancing the network, connecting sites to one another and the broader network.

Provide parking primarily underground and in structured parking. Any surface parking (where appropriate) is to be located to the rear of buildings and away from pedestrian circulation routes. Design surface parking areas to support future intensification over time.

Provide public amenity spaces at strategic locations along the corridor to provide areas of rest, refuge and activity.

Limit vehicle access from the corridor. Provide access points primarily off of side streets and lanes. Allow only the minimum number of vehicular access points required for site function.

Focus intensification nearest to major transit stops or prominent intersections.

Provide landscaping that contributes positively to the public realm and services sustainability objectives such as Kitchener's stormwater or tree canopy objectives.

06.4.6 ARTERIAL CORRIDORS

What is an Arterial Corridor?

Arterial Corridors are generally linear and located along arterial streets, in locations that have historically developed with a range of auto-oriented, service commercial uses. They are intended to accommodate extensive retail uses.

Guidelines

Buildings are to address the primary, most pedestrian-oriented public street, with building mass located close to street corners where applicable.

Provide pedestrian-oriented access to the building and through the site, connecting all entrances to the public streetscape and transit stops in an equitable, safe, attractive manner.

Provide significant variations in massing, articulation and materials for buildings longer than 35m.

Locate outdoor storage to the rear or least visible interior side yard of the building. Screen with high quality, attractive materials wherever it might be visible from the public realm.

Integrate all signage with the building and landscape design.

Locate services and loading away from public streets and any internal pedestrian circulation routes.

Locate surface parking to the side or rear of the building and away from pedestrian routes where possible, with the exception of barrier free spaces.

Landscaping is to address stormwater impacts, heat island effect, and other objectives.

Provide weather protection and pedestrian refuge for users.

Provide separated cycling facilities for all ages and abilities, with extensive connections to the broader cycling network.

Locate bicycle parking near building entrances, where it is easily visible and accessible to cyclists.

Industrial Employment Areas

07.1.0 INTRODUCTION

07.1.1 KITCHENER'S INDUSTRIAL EMPLOYMENT AREAS

Vision & Context

Industrial Employment Areas are a significant part of the urban environment, making consequential contributions to built form, streetscapes, natural areas, and active transportation.

Industrial Employment Areas include various business activities such as manufacturing, warehousing, and industrial business parks.

These areas will fall under the new EMP zones. This section of the manual also provides guidance on urban design in areas that are currently designed as business park, general industrial and heavy industrial in the current Official Plan.

Working With the Guidelines

These guidelines apply to:

- (1) New development.
- (2) Additions and modifications to existing sites and buildings.
- (3) Redesign of selected public rights of way, to be undertaken by the City or Region in future.

The guidelines effectively operate as three different layers, or overlays:

- (1) At the base, General Guidelines that apply to all Industrial Employment Areas.
- (2) Special Considerations affecting only certain types of sites.
- (3) Area-Specific Guidelines, related to Special Character Areas.

Study Area

07.2.0 COMMUNITY DESIGN

07.2.1 INCLUSIVE DESIGN

Safety

Use Crime Prevention Through Environmental Design (CPTED) principles to design all spaces to a high standard for safety. Avoid creating any potential entrapment areas, dead-ends or hidden/obscured spaces. Be particularly thoughtful of how to provide appropriate safety in areas where opportunities for natural surveillance are limited or non-existent.

Prioritize pedestrian and user safety when designing lighting, landscaping and site function elements such as parking, access and servicing areas.

Universal Design

Design sites with a clear, continuous and visible pedestrian pathways that connect the public realm and parking areas with building entrances. Ensure that these pathways are barrier-free and minimize points of conflict with vehicular traffic.

07.2.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Design new buildings to withstand climate change by being resistant to extreme weather conditions, anticipating increased cooling demands through sustainable natural ventilation and efficient mechanical systems, and by being adaptable to changes in the needs of occupants over time as new technologies are realized and lifestyle choices evolve.

Design for Climate Change

Production, manufacturing and warehousing facilities can be large consumers of energy. Incorporate renewable energy systems where feasible, including solar, geothermal, wind and district energy options. Where possible, target a Net-Zero performance standard.

Look for opportunities on-site to offset environmental impacts including LID (Low Impact Design) infrastructure, rain water collection and re-use, renewable energy generation, living walls and roofs, permeable pavers and more.

Provide white, high-albedo and/or green roofs for all roof surfaces.

Did You Know? The large, flat roofs often found on industrial buildings are excellent opportunities to incorporate green roof/solar panels.

07.2.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Protect for user comfort within transit waiting areas, outdoor amenity spaces and pedestrian pathways. These areas should offer a seasonally appropriate mix of direct sunlight and shaded areas as well as protection from the elements.

Four Season & Winter City Design

Design transit waiting areas, outdoor amenity spaces and pedestrian pathways for winter activity such that they are useable, comfortable, safe and attractive year-round. Use vibrant colours, human-scaled lighting, art, four season landscaping and other techniques to bring warmth and visual interest to industrial employment areas.

Did You Know? Many industrial buildings use Smart building systems such as sub-metering to help optimize building performance. Other energy saving techniques include HVLS (high-volume, lowspeed) fans, which can be networked to save on heating and cooling costs while providing a more comfortable environment for worker.

07.2.4 STREET DESIGN

Pedestrians & Cyclists

Provide dedicated pedestrian circulation for employment sites. These networks should allow pedestrians to traverse from the public sidewalk to the parking lot to the main entrances of the building. Minimize the need for pedestrians to traverse driveways and parking areas.

Where applicable, connect pedestrian pathways directly to trails and parks.

Provide seating and weather protection for pedestrians, cyclists and transit users.

Coordinate streetscape and landscape design with utilities and infrastructure to minimize visual clutter and points of conflict.

Consider transportation demand management measures (such as indoor secure bicycle storage and showers) to encourage employees to cycle.

Focal Points & Gateways

Gateway and Terminus sites are identified in the Special Considerations section of this document. These sites should be designed as focal points, creating a sense of identity established through expressive, high quality architecture and landscaping.

Arts & Culture

Industrial employment areas do not often feature arts and culture initiatives. Consider ways to incorporate public art, and to empower other arts and culture programs.

07.2.5 PARKS & OPEN SPACE

Access & Location

Associate parks, trails, natural areas and open spaces with Industrial Employment Areas. Provide direct access and connectivity for pedestrians and cyclists to encourage active transportation and recreational opportunities for workers and visitors.

07.2.6 COMPATIBILITY

Scale & Transition

Provide adequate landscaped buffering which also screens loading, servicing or storage zones from view of the mixed use areas.

07.2.7 CULTURAL & NATURAL HERITAGE

Heritage Resources

A number of Kitchener's industrial employment lands are adjacent to Parks or Natural Areas, some of which include waterways, such as the Grand River or Strasburg Creek. These areas are to be sufficiently protected from potentially harmful runoff, as well as noise and light pollution.

Where sloping terrain is present, design the site such that it does not contribute to erosion. To achieve this, appropriate buffering is required, as determined by an environmental impact assessment. Siting outdoor employee amenity adjacent to Natural Areas is encouraged.

Where Employment lands meet Natural Areas, it is important not to create unused remnant When spaces (resulting in poor landscape maintenance, garbage accumulation, etc.). Where possible, include a multi-use trail along property lines abutting Natural Areas or Parks.

Where a property abuts a Natural Area, but it is not feasible to provide a trail, provide appropriate fencing, at least 2.0 metres high and free of large openings (through which garbage might blow) along the property line. However, solid or blank walls are not appropriate.

Conserving cultural heritage resources within industrial employment areas is of critical importance, as doing so promotes diversity, gives variety to the urban fabric, reflects and enhances the cultural history of neighbourhoods and encourages urban exploration, sustainability, and the perpetuation of Kitchener's living history.

Did You Know? Employment Areas frequently interface with Mixed Use areas. Where these Mixed Use areas contain, or permit, residential uses, a building setback of at least 20 metres is required by the Province.

Did You Know? Lancaster Corporate Centre abuts the Grand River and provides a multi-use trail. Trails encourage active transportation and promote natural surveillance, while also providing access to natural areas for City staff to do inspection or clean-up work s

07.3.0 SITE DESIGN

07.3.1 BUILT FORM

Massing

Use built form to screen loading areas, parking and mechanical equipment.

Screen rooftop mechanical elements where they are visible from the public realm.

Accessory buildings, such as sheds, are discouraged. If necessary, they are to be located behind the main building, or if located to the side, screened by landscape features.

Provide front building façades that are parallel to the street. In the case of a curving or irregular street, the building façade should curve or step with the street.

Orient the longest and tallest elevation of the building along the street where possible.

Buildings located on corner sites should orient their highest built element to the corner.

Materials & Articulation

Locate functions such as lobbies, offices, salesrooms and meeting rooms at the front of the building, with warehousing, loading, manufacturing or assembly areas at the rear.

Front facades of buildings should be well articulated and clad with high quality materials.

Provide regularly spaced, generously sized windows along the entire front façade.

Use massing, materials and architectural features to articulate the front facade.

Locate the main pedestrian entrance(s) along the front façade. Secondary entrances may be located at the side or rear, adjacent to parking lots.

Where buildings contain a single unit, or multiple units sharing an entrance, the main entrance should be visually enhanced through its placement, massing, articulation, the design of the roofline, and the creative use of materials and colours.

In the case of buildings that include multiple units with separate entrances, each unit should have a main entrance within the front façade. These units should be distinguished from one another by changes in cladding material or colour, or through building articulation.

Did You Know? Buildings in industrial employment areas frequently see additions or retrofits over time. Such changes are a good opportunity for sites that currently do not comply with the guidelines to achieve a greater level of conformity.

Retrofits & Additions

New building features are to be consistent with, or complementary to, the rest of the building and site design, including materials, colours, articulation, and fenestration.

Where an existing site does not meet the guidelines in the Urban Design Manual, retrofits and additions should work to better align the site in the overall with the objectives of the Manual.

Built Form Diagrams

07.3.2 SHARED SPACES

Outdoor Amenity

Where practical, provide outdoor amenity space for employees and customers. Spaces designed for frequent use should include hardscaped areas, seating, and weather protection.

On very large sites, (over 2 hectares), consider providing additional programmable amenity areas at the side and/or rear of the property.

Landscaping

Create a front landscaped area by providing sufficient building setbacks from the street. Avoid placing loading areas or parking between the building facade and the right-of-way. However, barrier free parking is permitted.

Landscaped areas are to contain trees, mid-height plants such as shrubs or tall grasses and groundcovers. Design these areas to be visually appealing and easily maintainable.

Include pedestrian walkways to access the front entrance and traverse the landscaped area.

Landscaped areas are not to be used to display or sell goods.

Provide side and/or rear landscape buffers of at least 5m where abutting a natural area or a mixed use area. Greater buffers may be required, as determined through an environmental impact assessment.

Plantings are to be predominantly perennial, and selected for their attractive qualities year-round.

Avoid invasive species. Where possible, native plant and tree species are to be used.

Consider features such as rainwater gardens or drainage swales to promote stormwater infiltration.

Larger species of trees should be mainly deciduous, in order to maintain views from the street La to the building façade.

Coniferous species should only be used when necessary for screening of winds or specific views, such as parking areas.

Signs

Major signage should be permanent in nature and affixed to the front façade of the building.

Any secondary signage used should also be permanent. Secondary signage may be free-standing (ground-supported) within the front Landscaped Area, but should not be more than 2.0 metres in height.

Avoid temporary signage of all types.

Billboards signs are discouraged or subject to regulations in the City's Sign By-law.

07.3.3 SITE FUNCTION

Vehicular Access & Parking

Locate parking areas away from the street to allow the building and landscaped area to define the site. Parking areas are to be well-designed, safe, visually appealing and functional. Design to accommodate separation of functions (parking from loading areas, etc.).

Locate primary parking areas at the rear of the property. If necessary, some parking, especially if needed for customers or visitors, may be located at the side of the property. Only barrier-free parking should be permitted in the front yard.

Parking lots should be well lit while in use to ensure adequate safety.

Include bicycle parking, located near the main pedestrian entrance(s). Covered and enclosed bicycle parking is recommended for employees.

All parking lots should be paved.

Did You Know? Industrial employment areas may require a number of types of parking, whether for employees or customers, company vehicles, or longer-term storage. There may be a need to accommodate large trucks and trailers, as well as automobiles.

Servicing & Utilities

Locate service, loading and storage areas at the side or rear of the site such that they are not visible from the street, whenever possible.

Fully screen servicing and loading areas wherever visible from the street.

Avoid storing dumpsters or industrial products outdoors. If necessary, fully screen from view from the street by landscaping or fencing, or by locating these elements behind the building.

Outdoor storage (aside from retail goods on display) shall not be permitted in front yards or exterior side yards.

Stormwater Management

New development shall comply with the City of Kitchener's Integrated Stormwater Management Master Plan criteria for stormwater design.

Consider providing rain gardens and bio swales wherever possible.

Consider providing permeable pavements wherever possible.

New buildings should incorporate green roofs, and they should be considered where possible during the retrofit process.

Did You Know? Employment areas have traditionally had low levels of vegetative cover, along with large, flat non-permeable surfaces (parking lots and building roofs). This results in substantial volumes of stormwater runoff draining into catch-basins or streams and rivers. In either case, this can transfer hazardous pollution into the water system.

07.4.0 AREA SPECIFIC GUIDELINES

07.4.1 SITE TYPOLOGIES

Introduction

Certain Employment Areas in Kitchener have distinct characteristics. These characteristics can be general, applying to the entire area, or specific to certain streets or sites within it.

Gateway Sites

See diagrams.

Terminus Sites

See diagrams.

07.4.2 LANCASTER CORPORATE CENTRE

Map Legend

See map.

Special Character

Unlike the other Employment Areas in Kitchener, Lancaster Corporate Centre functions primarily as an office park. It generally takes on a greener character than other Employment Areas, with substantial tree plantings and landscaping along the side of Riverbend Drive, and a relationship with the Grand River that includes a trail.

Lancaster Corporate Centre is effectively divided into two parts, separated by a narrow pinch point in the middle, where a public parking lot and trailhead are located. The area south of this point is more oriented to light industrial uses, rather than corporate office uses.

Key Sites

Gateways: Gateways are located at major entrances to the area: the north, the south (future Highway 7 access), where Guelph Street passes under Conestoga Parkway, and at the dividing point between the northern and southern portions of the Employment Area. Buildings located at these sites should be of a high architectural quality, and be at least three storeys in height. These sites should be the key ‘showcases’ of the area, introducing the public realm design.

View Termini: View terminus points are located at the ends of Bridgeport Rd. E. and Guelph Street. Buildings located on these sites should make use of and emphasize their special condition, aligning entrances, taller elements or other special features to the view corridor.

Special Interfaces: Many of the sites back onto Natural Areas, especially the Grand River valley. Those sites should follow the recommendations laid out in this section. However, it should be noted the sites in this area, particularly north of the ‘pinch point,’ generally already do this effectively (albeit without buffering or fencing).

Priority Streets

Riverbend Drive

Public Realm: The spine of this Employment Area, Riverbend Drive is relatively well landscaped north of the ‘pinchpoint.’ South of it, the area needs substantial improvement. There exists an area wide landscaping plan that is to be implemented through future development. Furthermore, in future, sidewalks should be included on both sides of the street. This is especially important here, because the street serves as an entry point to the Grand River hiking trails.

Built Form: Riverbend Drive is characterized by relatively substantial buildings, several storeys Built in height, north of the 'pinchpoint.' This quality of architecture should be applied during redevelopment of the southern portion of the area, with the understanding that permitted uses may differ slightly between the two.

07.4.3 SHIRLEY/BINGEMANS CENTRE

Map Legend

See map.

Special Character

The western half of the Shirley/Bingemans Centre area is mostly characterized by wide lots occupied by traditional heavy industries. In the eastern half, lots are smaller, but many remain unbuilt. Additionally, there are several car dealerships at the eastern end, which tend to have mid-sized lots.

The introduction of Highway 7 will have the effect of turning the area's western end into a more significant gateway. Although a limited access highway, Highway 7 will create views over the river and to the rear of a number of Industrial Employment properties. It is therefore important that any future development of these properties consider highway views and make use of landscape and architectural treatments to screen loading and storage areas.

Key Sites

Gateways: Gateway sites are located at the eastern entrance to the area, at Lackner Boulevard and at the future Highway 7 connection. The eastern gateway should introduce the small and medium lot portion of the Area. The Lackner Boulevard gateway should introduce the large lots, which may in future take on a more corporate character similar to the northern end of Lancaster Corporate Centre. The Highway 7 connection, in an area of medium-sized lots, should serve as a general entrance to the area for vehicles arriving into Kitchener.

View Termini: The Lackner Boulevard terminus is especially important, because of the size of the street and because of its central position in the area. It aligns to the largest property in the area, occupied by Bingemans Grand Experiences (see Bingemans area specific guidelines).

Special Interfaces: Like the Lancaster Corporate Centre area, many of the sites back onto the Grand River valley. Also like the Lancaster Corporate Centre area, an existing public trail already runs through much of the adjacent Natural Area (or runs through easements on private property). Explore opportunities to connect the trail to Shirley Avenue/Shirley Drive/Bingemans Centre Drive.

Priority Streets

Shirley Drive

Public Realm: Shirley Drive currently has little landscaping within the right-of-way and no pedestrian infrastructure. It should eventually be redesigned to include sidewalks on both sides of the street and consistent street tree planting. **Built Form:** In consideration of the smaller lot sizes, future built form along the eastern portion of Shirley Drive should be finer and smaller, and if necessary may include front Landscaped Areas of less than 5 metres.

07.4.4 HURON/TRILLIUM

Map Legend

See map.

Special Character

One of the two main Employment Areas located centrally in Kitchener, Huron/Trillium is characterized by a mix of light manufacturing and warehousing. It is mostly made up of one to two storey buildings of varying sizes, large surface parking lots (often in the front yard) and moderate tree coverage and landscaping. It backs onto the Huron and Trillium Natural Areas.

Key Sites

Gateways: This area contains a number of significant gateway sites, including Beasley Drive, and both ends of Strasburg Road, Trillium Drive and Washburn Road. The most important of these is Beasley Drive, because of its formal quality as an entry point to the area. Its condition as a wide, but short, boulevard is striking. Any future redevelopment of the Beasley Drive sites should include elevated, architecturally articulated elements that wrap around the corners and roughly mirror one another in massing and orientation. Major pedestrian entrances should be at the corners. The other gateway sites demand less formality, but should nevertheless be emphasized by elevated elements at the corners.

View Termini: View termini include the end points of Beasley Drive and Battler Road, both ends of Shoemaker Street, both ends of McIntyre Drive and the bend in Washburn Road. In future, these points should either be aligned to a major building entrance, or emphasized as a landscaped driveway.

Special Interfaces: Many of the sites back onto Natural Areas, including the Trillium and Huron Areas and parts of Strasburg Creek. Those sites should follow the recommendations laid out in this section. Additional trails should be considered in future in the Trillium Natural Area and around portions of Strasburg Creek.

Priority Streets

Beasley Drive

Public Realm: Although short in length, Beasley Drive is important as a formal entrance way to the Area. It currently has two roadways, separated by a planted median. Each roadway is comprised of one lane in the mid-block condition, but splits into two lanes at the intersections. In future, its roadways could be narrowed to provide room for sidewalks, bike lanes and tree plantings on both sides of the street. This would have to be done subject to accommodation of truck turning.

Built Form: Buildings along Beasley Drive should be of an especially high architectural quality.

Trillium Drive

Public Realm: Similar to Shirley Drive, Trillium Drive has inconsistent landscaping and no sidewalks. In future, sidewalks and regular street trees should be considered on both sides.

Strasburg Road (Battler to Bleams)

Public Realm: Strasburg Road is a major road currently containing four lanes of traffic, and a sidewalk on one side. However, with only moderate narrowing of the lanes, Strasburg can support sidewalks on each side of the street, bicycle lanes and quality street tree plantings.

Built Form: Due to the size of Strasburg Road, buildings should be set back at least 10 metres. They should also attempt to align their façades to the curvature of the street.

07.4.5 MANITOU/WABANAKI

Map Legend

See map.

Special Character

Like Huron/Trillium, Manitou/Wabanaki is located centrally in Kitchener and characterized by a mix of light manufacturing and warehousing uses. Its buildings tend to be smaller than those in Huron/Trillium, and usually one storey in height. It also includes part of the former Budd Automotive site, including the portion occupied by Budd Park (the portion at the intersection of Bleams Road and Homer Watson Boulevard is designated Mixed Use). The Area is split into two portions by the Schneider Creek Greenway.

Key Sites

Gateways: This area contains a number of significant gateway sites, including those at both ends of Bleams Rd., Manitou Dr., and Wabanaki Dr. and at the intersection of Wilson Ave. and Goderich Dr. Those at the exterior of the area (the western end of Bleams Rd., the southern end of Manitou Dr., the northern end of Wilson Ave., and the northern end of Wabanaki Dr.) should be highlighted with elevated architectural features and entrances at the corners. Those in the interior, located beside Natural Areas (the eastern end of Beams Rd., the western end and the mid point of Wabanaki Dr.) should be highlighted using special landscaping elements that can serve as a transition between the Employment and Natural Areas.

View Termini: View termini include the end points of Otonabee Drive, Wabanaki Drive, Sasaga Drive and Beasley Drive. The other view terminus points should be highlighted with special architectural features or building entrances.

Special Interfaces: : Many sites back onto Natural Areas such as the Schneider Creek Greenway, Homer Watson Park and smaller green areas adjacent to Hidden Valley, such as Petrifying Spring. Additional trails should be considered in future around Schneider Creek and the Grand River.

Priority Streets

Home Watson Boulevard, Regional Road

Public Realm: The very broad right-of-way contains substantial unused space, four lanes (separated by a median) and one sidewalk. Following future redesign, there should be more than enough room for sidewalks on both sides and a separated bike trail (traditional bicycle lanes are not appropriate here

because of the extent of traffic). Street trees should be added to both the median and each side of the road.

Built Form: Due to the size of Homer Watson Boulevard, buildings should be set back at least 10 metres from the right-of-way. Built form should be at least three storeys in height to provide visual presence on the street. As much as possible, their façades should align to the street's curvature. Curb cuts should be limited, but there should be adequate pedestrian and bicycle connections between the sidewalk and cycle track and the Employment buildings.

07.4.6 BINGEMANS

Map Legend

See map.

Character Areas

Following collaborative urban design sessions, the following character areas were identified as important to framing the context for future development of the Bingemans property:

Entertainment Complex - Comprised of more permanent entertainment uses, this includes the existing waterpark, arcade and restaurant development.

Festival Area/Outdoor Events/Concert Space - Provides a more flexible space for temporary attractions which include indoor outdoor events, concerts etc.

Hospitality/Meeting Area - Includes the existing convention space and is an area for other hospitality opportunities and related facilities oriented towards the existing woodlot.

Camping and Outdoor Recreation Camping - The northernmost camping area adjacent the Grand River is within the floodplain where there are limited redevelopment opportunities. The camping area at the southeast corner of the site represents a longer term opportunity for river activation beyond camping.

Corporate Office - Includes long term office opportunities in a campus-like setting.

Built Form

Ensure there is a positive relationship between new buildings, existing buildings and viewsheds (to the river and the street).

New buildings should respect and complement surrounding building forms through various New design techniques such as building setbacks, terracing, articulation and rhythm and detailing.

Locate active uses at grade where appropriate. Provide a high-level of articulation for building facades that face a public street, are located at a gateway, or face primary pedestrian connections/trails. This includes a high percentage of glazing, high quality materials and an architectural expression that is engaging and visually appealing.

New buildings at the intersection of Bingemans Centre Drive and Shirley Drive should serve as gateway buildings with views to both the river and the Bingemans Centre Drive.

Shared Spaces

Employ themes of entertainment coupled with outdoor education, health and wellness to showcase innovation.

Use the Bingemans frontage along Bingemans Centre Drive to provide wayfinding elements such as changing signage, banners, visible technology, and strategic landscaping to activate the streetscape. Utilize existing grades, berming and high-quality landscaping along the street.

Place new open spaces at grade, incorporate four season design and be multi-functional and flexible to accommodate a range of users, programs and activities.

As part of any future development application, plant trees along associated public streets and As along the full length of primary pedestrian walkways. Integrate and enhance existing natural systems, and introduce new green infrastructure where appropriate.

Improve supportive relationships, thematic integration and connectivity between character areas. Include hard and soft landscape elements, pedestrian-scaled light fixtures, interactive elements, public art and wayfinding and informal seating.

Provide bicycle parking facilities in visible locations near new building entrances and new pedestrian walkways. Ensure that these locations do not conflict with pedestrian circulation.

Implementation of these guidelines may be scoped based on the extent of the development application.

Site Function & Connectivity

Plan for an interconnected street network with continuous pedestrian linkages to maximize pedestrian network connectivity both on-site and to off-site sidewalks, trails, parking areas and transit stops to building entrances. Implement through each development application individually to ensure that the plan is realized over time.

Design site circulation to minimize potential conflicts between pedestrian and vehicles.

Minimize the visual impact of parking on public views through building placement, landscape screening, grading and other design strategies.

Provide opportunities for future connectivity to Woolwich Township via river activation/usage.

Additional Information: As part of the next major development application, prepare a conceptual streetscape design to help guide the implementation of these objectives.

Green Areas

08.1.0 INTRODUCTION

08.1.1 KITCHENER'S GREEN AREAS

The Importance of Green Areas

For any city, green areas can act as the lifeblood of the urban environment. They promote healthy lifestyles, focus community pride, foster social interactions and help create a sustainable future. They provide important functions for people of all backgrounds and identities, including active and passive recreation, pedestrian and cycling connections, gathering and event spaces, and places of refuge and reflection.

Green Area Classifications

The City of Kitchener has established a range of park and open space types, which enhance the urban environment and character of neighbourhoods while providing both passive and active recreational opportunities. The following park typologies have been developed as part of the City of Kitchener Parks Strategic Plan and is as follows:

Natural Areas: Parkland generally intended to be preserved in its natural state (eg. forest, woodland and swamp, marsh, valleyland, etc.) including cultural communities (eg. plantation and cultural meadow).

City Parks: Parks that provide multi-activity or multi-sport venues and/or serve specialized recreational, social and economic functions for the entire City that may also draw regional-scale audiences.

District Parks: Community-level parks providing access to scheduled and/or unscheduled outdoor and indoor recreation facilities and amenities serving multiple neighbourhoods.

Neighbourhood Parks: Local parks providing walkable access and passive open space areas, playground facilities and other outdoor recreational and leisure amenities.

Urban Greens: Urban green spaces designed for high public use and aesthetics in a diversity of settings including the urban core, within neighbourhoods and along trails and typically include hardscaped areas, a concentration of public amenities and higher level of design detail.

Greenways: Linear green spaces providing linkages among parks, trails and other open space areas and public realm elements within the urban environment

Trails: Off-road pedestrian corridors providing opportunities for a range of recreational activities and active transportation routes connecting various destinations.

08.2.0 COMMUNITY DESIGN

08.2.1 INCLUSIVE DESIGN

Safety

Design park circulation patterns to encourage street crossing at intersections and to maximize pedestrian safety.

Minimize points of conflict between pedestrian and vehicular traffic. Where unavoidable, mark these points through contrasting surface treatments, signaling, signage, and other markers.

Design and program green areas to maximize natural surveillance, provide clear sightlines into, through and from the space, and create circulation networks that discourage unsafe activity.

Diversity

Provide parks, open spaces, and recreational opportunities for persons of all identities, ages, abilities, and cultural and economic backgrounds. Green areas of all types are to be designed and maintained to meet community needs, respond positively to changing community standards, and prioritize the end user and the public.

Universal Design

Always design Green Areas to be accessible and inclusive for all potential users.

Design green areas to maximize inclusivity by providing equivalent means for all users to access the site and enjoy programming opportunities.

Design green areas for barrier free access. Minimize changes in grade where appropriate to accommodate persons of all abilities.

Provide equitable barrier-free access and circulation through green areas, including P accessible pathways, seating/furnishing, play areas, signage, parking and any on-site facilities such as public washrooms.

Provide a variety of spaces for active and passive recreation for persons of all abilities.

Ensure that accessible pathways coincide with general circulation patterns, connecting to adjacent sidewalks and properties with appropriate grading and/or barrier-free ramps.

Provide wide pathways that can comfortably accommodate a full range of users including those with wheelchairs and other mobility aides (scooters, walkers, crutches, etc).

Provide level, firm, stable, slip resistant surface materials for accessible pathways and recreational areas.

Provide signage at trail access points with information about the physical characteristics and topology of the trail, including: length of trail, type of surface, and location of amenities.

Age & Family Friendly Design

Parks and open spaces should be designed with frequent rest areas, including barrier-free seating and pathways, weather protection and adequate shade.

Park spaces should be programmed for users of all ages including play equipment for young children, sports and fitness facilities for teenagers and seating areas and fitness equipment for adults and older adults.

Crosswalks to and within parks and open spaces should be frequent, well-designed and safe for older persons, persons with mobility aids, children and families with strollers.

Prioritize winter maintenance for those most impacted by adverse conditions.

Social Infrastructure

Parks and open space do not typically provide social services. However, park infrastructure such as seating areas or gathering spaces should be welcoming and accessible to all, with no hostile design elements that allow for the segregation of marginalized or low-income people.

Arts & Culture

Parks and open spaces are important spaces for the celebration of arts and cultural traditions. Parks of all types and sizes should be designed to accommodate cultural events, celebrations and both temporary and permanent art installations.

08.2.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Green spaces are to comprehensively provide gathering places, recreational facilities and leisure opportunities for persons of all ages, identities, abilities, and cultural traditions.

Provide thoughtful outdoor recreation for all users including children's playground equipment, sport and fitness equipment, programmed areas such as basketball courts, volleyball pits, skate-parks, skating rinks, climbing walls and other creative options which encourage participation and provide a low barrier to entry.

Did You Know? Parks and open spaces are proven to have a positive impact on a person's physical, social and mental well-being.

Design for Climate Change

Incorporate renewable energy systems into park and open space design, where feasible. Preserve for and accommodate new technologies as they are developed.

Design parks and open spaces for water efficiency including Low Impact Development (LID) measures. Prioritize a reduction in overall water use, innovative stormwater management, and grey water collection and re-use.

Parks and open spaces should be designed to adapt for climate changes and potential natural P disasters. Use natural and resilient landscaping to withstand severe climatic conditions. Use preventative and precautionary strategies to limit the impact of extreme weather events.

Design for Wildlife

Design green areas to accommodate local birds and wildlife. Pursue opportunities to enhance and expand existing habitats and create new ones. Provide educational opportunities for green area users where possible, raising awareness and understanding of local wildlife.

Conserve, enhance and promote biodiversity of all forms and at all scales. Tree removal and grading should be scheduled to minimize impacts on seasonal wildlife and full cut-off lighting fixtures should be used to preserve the dark sky and to lessen migratory bird strikes.

08.2.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Provide for pedestrian refuge through landscape design and architecturally sheltered areas to offer protection from rain, wind and snow, and to provide shade.

Account for the microclimatic impacts of surrounding existing and planned built form, including shadows and cumulative wind impacts. These factors should inform the design and placement of rest areas and programmed spaces to ensure optimal conditions for users.

Four Season & Winter City Design

Provide four-season design for all green areas in Kitchener and consider all constraints and opportunities to create comfortable, useable, fun spaces year-round.

Consider snow disposition and how the removal and maintenance thereof affects the quality and usability of the space.

08.2.4 PARK DESIGN

Access/Location

Design urban areas to allow for appropriate public access to natural areas and community assets.

Maximize street frontages and number of pedestrian and cyclist access points. Larger scale parks should have greater street presence and a greater number of points of public access.

Park frontages are to maximize pedestrian permeability, provide natural surveillance, and positively integrate the park into the fabric of the streetscape.

Design and place green areas to be community focal points.

Locate district and community scale parks as primary destinations which are visible and accessible from surroundings and offer a variety of activities and amenities for all users.

Use surrounding built form to frame green areas, including development that fronts onto and directly accesses parks. Surrounding built form should minimize shadow impacts onto parks with no new shadows being created wherever possible. At minimum, preserve 5 hours of cumulative direct sunlight onto park spaces under equinox conditions.

Design green areas to serve a variety of community needs including passive and active recreational programming for users of all ages, abilities and interests.

Locate building entrances, active uses and transit stops along the edges of green areas.

Locate elements such as vents and grates away from pedestrian routes.

Did You Know? Maximizing street frontage promotes safety, accessibility and visibility.

Did You Know? Appropriate framing helps define and activate public spaces, improves natural surveillance, and increases visual interest for park users.

Additional Information: Passive recreation includes trails, community gardens, seating/gathering areas, pavilions, art installations and interpretive or educational displays. Active recreation includes sports fields, skating rinks, playgrounds, event and performance areas.

Connectivity

Connect, enhance and expand green areas to reinforce Kitchener's open space network and provide a variety of green areas located within a 5 minute walking distance to most homes.

Provide for a continuous off-road, open space community trail network with frequent connections to the on-road active transportation network at key transportation nodes. Connect to community facilities and destinations (such as hospitals, libraries, schools and community centres).

Maintain and enhance pedestrian and cycling connections from adjacent streets, pathways and community amenities.

Design green areas to accommodate a range of mobility options, desire lines, and 'off-path' travel by encouraging exploration through material selection, landscaping and spatial design.

Provide unobstructed access between green areas and abutting public sidewalks.

Private open spaces are to contribute positively to the open space network and integrate with the public realm. They are to uphold evolving standards for diversity, inclusivity and accessibility.

Did You Know? Providing a high level of connectivity requires coordination and cooperation among all involved parties; the public, private developers, city and regional staff, and all other stakeholders.

08.2.5 CULTURAL & NATURAL HERITAGE

Heritage Resources

Locate and design green areas to respect and complement the scale, character, form and siting of on-site and surrounding cultural and natural heritage resources.

Conserve and integrate built and natural heritage resources into green areas in a manner that conforms with heritage conservation policies, principles, standards and guidelines as well as in a manner that follows best arboricultural practices.

Integrate, feature and focus open space design around cultural and natural heritage features.

Sensitively integrate public art, signage, information displays and other features such that they respect and complement cultural and natural heritage features.

Consider the existing and desired public experience and level of interaction with cultural and natural heritage features when designing green areas.

Create and enhance views to and from cultural and natural heritage resources, including visibility from related resources, streets, pedestrian paths, open areas and adjacent properties.

If a park or open space is located within a Heritage Conservation District or Cultural Heritage Landscape, the guidelines detailed in the according district plan should be read in combination with guidelines detailed within this manual.

08.3.0 SITE DESIGN

08.3.1 SHARED SPACES

Landscaping

Employ tree protection and conservation techniques that protect the integrity of the root soil zone as well as the existing growing and drainage characteristics of the site.

Use a mixture of tree species and other plant materials to promote comfortable microclimatic conditions including deciduous trees for shading and coniferous trees to protect from winter winds.

Place trees and other plant materials such that they do not obstruct natural surveillance, create unsafe entrapment areas or otherwise negatively impact the space.

Place trees and other plant materials to take advantage of maintenance efficiencies, reduce the need for watering, and facilitate stormwater, heritage and sustainability objectives.

Select trees and other plant materials that are low maintenance, drought tolerant, disease resistant, and varied in colour, texture, and scale. Encourage growth with generous soil volumes.

Provide trees and other plant materials that complement adjacent streetscape design.

Surface Treatments

Incorporate materials that are sustainably and certifiably sourced.

Incorporate surface patterns and designs that add visual interest, encourage interactivity and exploration, and contribute to public art, cultural heritage and wayfinding objectives.

Create a comprehensive strategy for surface treatment throughout a green area-- both hard and soft surfaces-- that encourages freedom of movement, creates barrier-free access, and promotes the active use of the full extent of the space.

Surfaces are to support both passive and active travel and recreation options.

Surface materials should promote sustainable practices, including porous materials to reduce surface runoff, reclaimed and recycled materials, and native species for softscaped areas.

Create, reinforce and enhance greater network connectivity by thoughtfully connecting internal circulation patterns to nearby sidewalks, trails, lanes, connections and open spaces.

Additional Information: This can include a hierarchy of defined pedestrian routes with varying paving patterns, materials, rhythms and scales. It can also include accommodation for natural travel patterns through less formal surface treatments, and/or surfaces that blend or fit seamlessly together.

Seating

Provide comfortable, accessible seating options that accommodate and encourage a range of social, community and individual needs. This includes scalable configurations made of both fixed and moveable furniture that can cater to small groups or large events, provides options to sit in either the sun or the shade and protects from harsh weather elements. Provide elements that are multi-functional, adaptable, and encourage the creative use of public spaces.

Where appropriate, provide seating other than standard benches. Precast or cast-in-place concrete, low masonry walls, cut boulders, raised planters and linear seat walls can create a variety of options for a variety of users.

“Hostile” “Hostile” or “Defensive” design is not an acceptable practice. Hostile design involves techniques meant to discourage people from using spaces in unintended ways. This includes studs embedded into flat surfaces to prevent sleeping and skateboarding and bench design that intentionally reduces user comfort to prevent loitering. Hostile design targets vulnerable end users while simultaneously making public spaces less desirable for everyone, particularly seniors, children and people with mobility or mental health needs.

Concentrate seating in areas adjacent to-- and accessible from-- pedestrian pathways and Con where good natural surveillance is provided.

Where planter walls provide for seating, design both the planter and plant materials to complement the user experience.

Locate and maintain seating such that it can function year round.

Public Art

Provide high quality public art that is meaningful, visually expressive, inclusive and accessible.

Public art should be spatially and contextually appropriate.

Public art should encourage public interactivity, via physical, visual, aural or other associations.

Public art should reward curiosity and exploration, whether through location, contextual responses, or the nature of the art itself. Locate public art thoughtfully and sensitively, framing or establishing views, responding to prominent natural or built features, marking or creating gateways and focal points, and providing meaning through the art's placement and orientation.

Integrate public art into the overall design of the green area.

Did You Know? Art creates subjective interpretations of its value, intent and purpose. Good public art challenges our senses and assumptions, elicits emotional responses and acts as a fulcrum for debate and reflection. The best public art does not shy away from its role in creating social exchange or speaking with a point of view. As long as it is respectful and inclusive, public art should be allowed to perform these functions freely.

Lighting

Provide pedestrian scaled lighting for any areas of pedestrian movement or activity.

Create a lighting plan that identifies ways to sensitively design lighting that is creative and appropriate for a given green area's size and type.

Design lighting that is specific to the intended function of each space, minimizes light pollution, spill-over and trespass, is bird friendly and dark sky compliant, is high efficiency and supports sustainability objectives.

08.4.0 AREA SPECIFIC GUIDELINES

08.4.1 GREEN AREA TYPOLOGIES

Natural Areas

Conserve natural features such as woodlands, wetlands, and valleylands and the natural connections among them, to sustain healthy habitats for plants and animals.

Provide ecological connectivity to adjacent and broader natural systems to create, enhance and reinforce continuity for native plant species and bird, insect and animal habitats.

Work to increase tree canopy coverage where appropriate.

Preserve, enhance and complement native and existing plant communities.

Provide landscape buffers around natural features, such as woodlands, wetlands and valleylands to protect ecological functions.

Locate multi-use trails and pathways outside of buffers and vegetation protection zones.

Integrate natural areas as public open spaces and community assets to provide a range of natural heritage-focused amenities and recreational opportunities, including educational components, stormwater management features, and trails.

Design natural areas to incorporate public access and utility without compromising natural heritage features or habitats.

Pursue opportunities to educate the public on the importance of natural areas.

City Parks

City Parks are the highest order park space in the city and serve as focal points in Kitchener.

City Parks are to be designed as major destinations for residents of and visitors to the city.

Plan and design City Parks to provide passive and active recreation opportunities for all users.

City Parks should be located at the intersection of major streets to act as gateways into communities and the city.

Design City Parks to offer the widest possible range of programming opportunities.

District Park

Locate District Parks to balance community-wide interests and the interests of the neighbourhoods and individuals, ensuring that parks are central to the population they serve and that they are accessible by public transit and within a reasonable walking distance.

Distribute District Parks equitably throughout the City by allocating needed parkland to areas that are currently under-served, including intensification areas and other areas of high projected growth.

Provide significant frontage on adjacent streets to promote views and reinforce their focal nature.

Consider the placement of schools, community centres, libraries, and other recreation or cultural facilities in relation to where park and open spaces are planned to maximize programming, maintenance, and operational efficiencies.

Hard and soft landscape elements and features are to be fully integrated into the design of District Parks, with thoughtfully defined and articulated activity areas, circulation, entry points, seating and gathering areas.

Locate District Parks as primary destinations which are visible and accessible from the surrounding public realm and offer a variety of activities and amenities for all users.

Neighbourhood Parks

Neighbourhood Parks are to be designed as community focal points, with two street frontages.

Achieve a balanced distribution of parks and open space facilities and activities to meet the diverse recreational and leisure needs of the public.

Connect Neighbourhood Parks directly to school areas and other community facilities to encourage mutual use of outdoor facilities, where applicable.

Where viable, local retail uses and cafes should face directly onto parks and open spaces.

The perimeter of parks should be lined with buildings that face onto the park. Backlotted housing, or housing with the rear property line against parks, should be avoided.

Community gardens provided as part of the park space should be placed in a visible, easily accessible area.

Urban Greens

Provide Urban Greens in key commercial and mixed use areas which have street frontages and are highly visible and accessible to pedestrians.

Provide adequate screening with landscape and/or architectural features where it is unavoidable to locate an Urban Green away from back of house activities (e.g. close to an existing building) or where building servicing/mechanical elements are visible or audible.

Streetscapes along Urban Greens are to be designed to a high standard, with high quality materials. Streetscape elements are to integrate seamlessly into the park space.

Consider creative approaches to site layout, programming, public art, recreational amenity, seating, shelter and other design elements toward the goal of creating Urban Greens which are unique, expressive, and a highly valued part of urban life.

Trails & Greenways

Prioritize safety when designing trails. This can be achieved by separating trails from areas of vehicular movement, minimizing vehicular crossings over trails and ensuring trails do not create hidden areas or obstruct visibility.

Design for safety also includes providing natural surveillance, pedestrian scaled lighting, avoiding dead ends or entrapment areas, and providing frequent, easy access to and from trails to surrounding sidewalks, streets and neighbourhoods.

Connected lengths of trails make long trips possible and increase usefulness for commuting and exercise. Seek and plan for opportunities to extend trails to increase their connectivity to existing areas and infrastructure.

Provide trail access points along the existing and planned bicycle and pedestrian networks.

Provide a range of trails to meet the needs of all ages and abilities.

Where trails may serve a recreational and commuter cycling function in high user areas, consider separate lanes for pedestrians and cyclists, to minimize conflicts.

Stormwater Management Facilities

Provide significant frontage for Stormwater Management Facilities to promote views and reinforce their focal nature within the community.

Provide opportunities for passive recreation with particular attention to safety and access.

Coordinate the landscape design, such as look-outs, seating areas, fountains and gazebos, with the overall character of the community.

Tall Buildings

09.1.0 INTRODUCTION

09.1.1 TALL BUILDINGS IN KITCHENER

Make it Kitchener

Kitchener is growing up. As the largest city in Waterloo Region and a key part of the Toronto-Waterloo innovation corridor, Kitchener is becoming a dense, lively, safe and sustainable urban environment for people to live, work, play and shop.

What is a Tall Building?

A high-rise building is defined in the Official Plan as any building that is nine (9) storeys or more.

Working With the Guidelines

Tall building design is a complex and multidisciplinary process involving an array of interdependent considerations. Each site is unique. Each context provides specific issues to be addressed and opportunities to be explored. End users and the public have different needs and expectations for different typologies, neighbourhoods, and markets.

Achieving good tall building design therefore must be approached as a ‘best-fit’ solution to many (sometimes competing) needs and interests. The elements of tall building design are too diverse and multidimensional to prescribe a ‘one-size-fits-all’ set of standards.

Still, targets must be set to provide the City’s expectations for good tall building design. This involves both identifying design elements as well as providing values or formulas that represent good design practices for the City of Kitchener.

It is the City’s intention to use these guidelines to generate constructive discussion and provide a framework against which to consider and test individual site restrictions, broader contexts, and design aspirations. We want to encourage creative solutions to problems and deliver innovation and design excellence.

Therefore the expectation is not for every project to meet every guideline in all cases. A project may fall short (within reason) of a guideline if it compensates by exceeding targets for other (related) guidelines, or if the project demonstrates justifiable design solutions to achieve a guideline’s intention through other means. The City also recognizes that in some cases, site-specific considerations may create conditions that cannot be anticipated within design guidelines; with proper justification, projects will be examined based on how well they are designed for these conditions, and not solely on which specific guidelines they are not able to meet.

The Tall Building Design Guidelines should not be read in isolation of other in effect policies, regulations or design guidelines.

09.2.0 BUILT FORM

Definitions

For the purpose of these guidelines, tall building built form design is broken down into three subcategories; Ground Floor & Base Design, Tower Design, and Top Design. These are generalized terms

intended to help focus discussion; the City does not necessarily intend for these three elements to be discrete from one another or to prescribe a specific “preferred” shape for tall buildings in the City of Kitchener.

09.2.1 GROUND FLOOR & BASE DESIGN

Base Design

A tall building’s base includes the ground floor and any additional floors with a direct relationship to the streetscape and public realm. This can include traditional multi-storey podiums, portions of a tower which extend to the ground floor and structured parking areas.

Design the base to prioritize pedestrian utility, comfort and safety.

Bases should feature a high percentage of transparency. Bases should maximize connectivity and permeability at ground level, creating and reinforcing pedestrian & cycling connections.

Bases should not exceed 70 metres in overall building length. Buildings longer than 70m should demonstrate enhanced streetscaping, materials and building articulation.

Fully integrate bases into the public realm. Avoid conditions such as ‘tower in the park’ or ‘fortress’ design.

Provide visual variety through well-articulated massing and high quality materials.

Provide protection from harsh weather.

Provide balconies for residential units along street-facing elevations. Consider outdoor amenity spaces for other uses along street facing elevations.

Integrate above ground structured parking into the base design and place it behind active uses along street edges.

Where visible, screen/clad above-grade structured parking using high quality materials consistent with and complementary to the overall building design. Avoid blank walls or ‘disguising’ structured parking behind facades that give a faux-residential or office appearance, particularly those employing tinted, reflective or opaque glass.

Where it is not feasible to integrate ‘back of house’ activities underground or within the building mass, design these spaces using high-quality architectural elements and landscape design to screen these activities from public view and to limit unwanted activity.

Ground Floor

The lower 5m of a base forms the most immediate relationship of a building to the public realm and should be designed in all cases with high quality materials, highly articulated, engaging and visually expressive architectural features and human scaled massing.

For tall buildings with retail or other active uses at grade, provide a ground floor height of 4.5m (minimum) to permit a variety of retail types and activities.

Where a shorter ground floor height is proposed, the lower 5m (minimum) of the building is still to be considered critical to the public realm even if it includes part or all of the second storey.

Design the ground floor to be comprehensively integrated with the surrounding streetscape and landscape to achieve a high quality pedestrian environment.

09.2.2 TOWER DESIGN

Tower

A Tower is the 'middle' component of a tall building, connecting the base to the top and housing the building's primary function.

Towers are highly visible elements of the urban environment and must meet Kitchener's highest standards for design excellence.

Guidelines for tower design are divided into two subsections; Size & Proportion and Separation & Placement.

Size & Proportion

A tower's size concerns Tower Floor Area and overall building Height.

Height is measured (in metres) from average finished grade to the top of a building's mechanical penthouse or highest occupied storey, whichever is greater.

Tower Length is the horizontal measurement of a tower's longest facade.

Tower Floor Area is a measurement of a typical tower storey's gross floor area. Included are all spaces interior to the building envelope. Balcony areas do not need to be included. Tall building towers are categorized according to Area as Compact (<850 sq. metres) or Large (>850 sq. metres).

Tower Proportion is a measurement of tower Length divided by tower Width of a typical tower storey. Tall building towers are categorized according to their horizontal proportions as Point towers (1.6).

Therefore a tall building's tower Size falls into one of four categories; "Compact Point Tower", "Compact Slab", "Large Point Tower", and "Large Slab".

Compact Point towers are preferred for intensification areas and smaller sites, particularly within multi-tower proposals.

The appropriateness of larger or slab-like forms will partially be a function of site size, shape and orientation, and whether a large tower can achieve good separation and compatibility while mitigating unwanted impacts.

Height is also an important factor when determining an appropriate tower Size.

Mitigate the actual and perceived massing impacts of towers by breaking up their mass both horizontally and vertically, through the creative incorporation of changes in materials, balcony and floorplate design, architectural features and unit/amenity locations.

Large Point Towers and Large Slabs must demonstrate significant design measures to reduce the visual impact of their mass.

Where there is a net improvement to a building's overall impact, floor area lost when moving toward a smaller tower Size can be made up within a larger building Base or additional 'Upper Base' levels.

There are many factors shaping tower design. These guidelines can help determine at the schematic design stage what tower form is most appropriate on a given site. A similar GFA can result in different tower sizes depending on site size, location, costs, parking requirements etc. In order to provide the greatest variety of unit types, sizes and tenures, the City of Kitchener has not put a limit on floorplate size, given the other guidelines can be met.

Relative Height

Relative Height, or a tower's height when compared to neighbouring towers or existing or planned surrounding context, is an important factor in tall building design.

For towers that are part of a multi-tower development:

If the towers are Compact Point Towers or Compact Slabs, the Height of the shorter tower should be no more than 90% of the Height of the taller tower. If the towers are Large Point Towers or Large Slabs, the Height of the shorter tower should be no more than 85% of the Height of the taller tower.

For neighbouring towers that are separate developments:

Towers should have Heights that are visibly distinct when viewed from ground level. Generally, a tower should be shorter than an adjacent tower if its site is part of a transition to low or mid-rise surrounding neighbourhoods, and a tower should be taller than an adjacent tower if its site is closer to higher order transit stops or significant landmark destinations.

For towers adjacent to lower-rise surrounding areas:

Towers must demonstrate compatibility with their surroundings and transition in height and scale through appropriate design of the project's built form. If a site does not allow for sensitive transition between a tower and lower-rise neighbourhoods it may not be suitable for a tall building.

Separation

Separation refers to the physical and perceived space between a tower and its surroundings. Achieving adequate separation requires a unified design approach covering the following interdependent considerations; Physical Separation and Tower Overlook.

Physical Separation is the measured setback in metres from a tall building tower's faces to its side and rear property lines, or to the centre line of an abutting lane, trail or easement.

Physical Separation is calculated by multiplying the building's Height by the tower Length and dividing by 200.

When adjacent towers are on the same site, the total Separation between towers is to be calculated as the sum of each individual Physical Separation.

Overlook

Overlook is the overlap that exists between two neighbouring towers. It is measured as a percentage of tower Width or Length. It is determined by a perpendicular projection of one tower facade onto its neighbouring tower facade.

Ideal Overlook, where site size allows, is 0%. Target ranges for acceptable maximum Overlook are determined based on their Physical Separation calculation as follows:

<10m Physical Separation	50% Maximum Overlook
10m -14m Physical Separation	40% Maximum Overlook
>14m Physical Separation	30% Maximum Overlook

Tall buildings that are part of multi-tower developments should do everything possible to meet their Overlook target on-site.

While these targets still represent good practice for off-site towers and should be achieved where possible, it is not the intention of this guideline to unnecessarily frustrate development due to existing surrounding built form. Therefore;

Where a tower does not meet its target Overlook, mitigating design techniques should be employed such as; exceeding its target for Physical Separation, maximizing perceived space between towers through creative tower Shape, Placement and Orientation, creative balcony and unit layouts to maximize privacy and/or an increased difference in Relative Height.

Placement

Placement refers to a tower's Position and Orientation on its site relative to other towers, its base, its surrounding context and open spaces. Placement should also factor in Tower Size, Separation, Relative Height and Overlook as part of a comprehensive tall building design.

Good Placement helps to minimize undesirable impacts on amenity spaces and the public realm. Diverse Placement amongst neighbouring and nearby towers prevents the creation of unwanted canyon effects and helps to avoid the creation of an homogeneous or visually lifeless skyline.

Good Placement is highly dependent on each site's specific context and should be evaluated as achieving a 'best fit' on a site-by-site basis.

Proper placement also maximizes compatibility within a tower's greater urban context, including surrounding neighbourhoods and the Kitchener skyline.

A tower should step back from its base a minimum of 3m along any street-facing elevation, except where zoning may require otherwise.

Similar or identical neighbouring towers should be oriented distinctly from each other. This is often achieved by rotating one tower 90 degrees relative to the other, but ideal orientation will depend on tower shape, form and location relative to streetscapes, microclimatic impacts, the public realm, and other open spaces.

Top Design

A well designed top integrates mechanical and occupied/programmed penthouses, amenity spaces, building signage and telecommunications equipment as part of a coherent architectural expression that formally resolves the tower design and completes the visual, architectural and urban form of the project as a whole.

A tower top includes any rooftop elements above the highest occupied floor, but can also incorporate an appropriate number of upper-level tower floors to provide quality material and massing transitions,

additional setbacks, further articulation to the floor plate and other design elements which add to the expression of the building and its perception from the public realm.

Compact Point Towers with an architecturally significant top feature that makes a positive contribution to the skyline may not be required to include that feature's additional height when calculating building Height for the purposes of calculating Tower Separation, Overlook and Relative Height.

09.3.0 SITE DESIGN

09.3.1 INCLUSIVE DESIGN

Safety

Design tall buildings to provide Natural Surveillance by employing high percentages of glazing, active uses at ground level, and windows and balconies with views onto the public realm, particularly along Base storeys.

Create a connected pedestrian environment by avoiding physical/visual barriers and potential entrapment areas (dead-ends, hidden and/or fenced in areas).

Back of house areas should be well-lit.

Use lighting and landscaping to maximize safety and comfort.

09.3.2 SHARED SPACES

Public & Private Open Spaces

Public and Private Open Spaces are communal areas which contribute to the quality and character of the environment in and around a tall building. They facilitate physical, recreational and social activity, incorporate green and landscaped areas into urban life and provide valuable uses for building occupants and the public.

Tall building development requires a mixture of both private and public open spaces.

The location, type, size and intended use of open spaces on a tall building site can vary depending on community need, building uses and site characteristics.

Publicly accessible open spaces can be large or small, and should be flexible in their design to adapt to various programming opportunities and seasonal conditions.

Open spaces should prioritize pedestrian comfort and safety, universal accessibility, and high standards for design.

Provide open spaces with weather protection while preserving access to sunlight and air movement.

Connect new open spaces to existing parks, pedestrian connections and natural areas.

Create different types and sizes of parks and open spaces to support district, neighbourhood and local activities that contribute to placemaking and a connected public realm.

Create mid-block connections where appropriate to facilitate pedestrian movement.

Include amenity spaces for occupants. These should be communal spaces for outdoor activity such as rooftop terraces, courtyards, or urban green spaces.

Where non-commercial ground floor units are present, define the threshold between private residential uses at grade and the public realm through measures such as streetscaping, landscaping and elevation changes.

A well designed tall building provides an on-site hierarchy of complementary public and private amenity spaces functioning in tandem and can include:

Natural Areas which preserve and manage existing natural features;

Parks at the city, district or neighbourhood scales;

Landscaped Courtyards and Mid-Block Connections through single or consolidated blocks, or internal to a tall building base or rooftop condition with no direct street frontage;

Landscaped Setbacks between the public right of way and the building facade featuring hard or soft landscape treatments, seating areas, decorative elements, etc;

Animated gathering spaces in the form of hardscaped Plazas, easily visible and accessible from the public right-of-way;

More intimately scaled Urban Greens designed to provide rest and refuge;

Greenways & Trails linking parks, trails, open space areas and other public realm elements within the urban environment;

Private & shared Balconies, Gardens and Patios, Green Roofs, Commercial Patios, Terraces, and meeting places/wayfinding points/areas for reflection around features such as Fountains, Public Art and historically significant spaces.

Did You Know? Tall buildings create ample opportunities to provide a variety of open spaces at many scales, for many users.

Public Realm (Streetscape)

The Public Realm connects a tall building to its greater urban environment and includes pedestrian connections and open spaces. Good public realm design integrates the building successfully into the local urban fabric.

Design the public realm to be Human-Scaled, Varied, Visually Appealing and Landscaped.

Streetscape & Landscape Design

Provide high-quality, sustainable streetscape and landscape design by:

Protecting existing natural features and providing sufficient soil depth, volume and growing medium for new trees;

Providing unobstructed, accessible and high quality pedestrian pathways and seating areas;

Providing energy efficient, pedestrian-scaled lighting;

Providing pedestrian-oriented street furnishings, public art, and interactive features.

Design streetscapes to satisfy the needs of a diverse range of users by providing access, safety, comfort, mobility, and leisure for people of all ages and abilities.

Design streetscapes to optimize the pedestrian experience for any time of day or night, local or seasonal weather conditions, nearby activities and events, and other immediate contextual considerations.

Pedestrian Weather Protection

Ensure weather protection elements, such as overhangs and canopies, are well-integrated into the building design, detailed and scaled to support the streetscape, and positioned to maximize function and pedestrian comfort.

Mid-Block Connections

On larger sites, use existing or create new publicly accessible mid-block pedestrian connections.

Mid-Block Connections should be direct, logical and continuous to limit the need for added wayfinding measures.

Mid-Block Connections should link to off-site public and private land uses, natural areas, parks, and other active transportation routes.

Provide active secondary building entrances along public mid-block pedestrian connections for convenience, to provide animation for the routes and to promote safety.

Mid-Block Connections should be designed for pedestrian movement, with surface materials, furnishings, landscaping and pedestrian-scale lighting that are high-quality, functional, universally accessible and environmentally sustainable.

Views & Skyline

Tall buildings should protect, enhance and create view corridors and vistas.

When a tall building frames an important view from the public realm, ensure that the view is maintained, and where possible, enhanced.

Locate and design buildings with prominent architectural features at the end of terminating views and street intersections. It is important to consider views to a tall building from any area of the city where the tower may have a visual impact. Tall buildings are a prominent part of the city's image and skyline.

Consider the view quality of building occupants, and create the best views possible for the largest number of people while balancing the need for privacy.

09.3.3 COMPATIBILITY

Scale & Transition

Proper compatibility creates harmonious relationships between a tall building and its surroundings.

Complement adjacent built form through compatible height, scale, massing, and materials.

Sensitively transition to surrounding urban contexts, accounting for both the existing context and the planned vision for an area.

Implement design cues (materials, architectural features, colours, rhythms) from good surrounding built form.

Implement Setbacks (from property lines) and Stepbacks (from the edge of the base to upper-level base storeys, the tower, and top features).

Tall buildings should not interrupt or impose upon an existing or planned neighbourhood character or the public realm.

Tall buildings should be contemporary and not replicate existing or historical architectural styles.

All tall buildings should have a human-scaled relationship to the public realm.

In areas with existing or planned tall and/or mid-rise buildings, Relative Height, Separation, Overlook, creative tower Orientation, compact floor plate size and point-tower form should all be considered as factors contributing to good compatible design.

It is important to respond to a new tall building's place within the greater context of the city as a whole. Tall buildings create substantial viewsheds, are visually prominent, occupy key locations, are often visible and perceivable from significant distances and contribute to a city's skyline.

Where the nature, size, shape or context of a parcel makes achieving good separation and compatibility impractical or impossible, that site may not be suitable for a tall building.

09.3.4 CULTURAL & NATURAL HERITAGE

Heritage Resources

Locate and design tall buildings to respect and complement the scale, character, form and siting of on-site and surrounding cultural heritage resources.

Conserve and integrate built heritage resources into tall building developments in a manner that conforms with heritage conservation policies, principles, standards and guidelines.

Conserve the integrity of the cultural heritage values, attributes, character, and three-dimensional form of an on-site built heritage resource. Facade retention alone is not an acceptable method of heritage conservation.

When a tall building is adjacent to a built heritage resource:

Design the Base to respect the scale, setbacks, stepbacks, proportions, visual relationship, topography, and materials specific to built heritage resources;

Integrate the existing heritage character into the Base through high-quality, contemporary design cues;

Provide additional tall building setbacks, stepbacks and other appropriate Placement or design measures to respect the heritage setting and to protect or enhance view corridors;

Conform with HCD Plans policies and guidelines.

Tall building proposals containing heritage properties on or adjacent to the development site may be required to provide a Heritage Impact Assessment and Conservation Plan as part of the application review process, to evaluate the impact the proposed development or site alteration will have on the

heritage property and to recommend an overall approach to conservation of these resources and mitigate negative impact upon them.

09.3.5 DESIGN FOR SUSTAINABILITY

Adaptability & Resilience

Tall buildings help shape their environment for decades to come. Design for flexibility in anticipation of future change through unit type variety, size and adaptability to new uses. Employ high quality design, materials and construction practices that can withstand changing climate conditions and which encourage building longevity.

A green roof can help minimize surface runoff, reduce urban heat island effect, provide noise insulation, improve local air quality, and contribute to the aesthetic of rooftop amenity space.

Provide low impact stormwater management techniques where possible, including porous paving materials, landscaped areas, and vegetative swales.

Provide water efficient and drought resistant landscaping by using native planting materials and low impact development practices. Explore opportunities for water collection and reuse.

Energy Efficiency & Generation

Use natural and passive techniques for lighting, ventilation, summer cooling and winter heating.

Utilize building envelope design and materials that limit thermal bridging and heat loss.

On-site energy generation, such as district heating and cooling systems, combined heat and power, and geothermal can be feasible and cost-effective for tall buildings, especially those in high-density, mixed use developments.

Provide light-coloured and/or green roofs to reduce solar heat absorption and energy demand.

Minimize light pollution through the use of dark sky/nighttime friendly compliant practices. Incorporate high efficiency lighting (LED).

Waste Management

Provide on-site facilities for handling, storing and separating recyclable and solid waste. Consider facilities for the separation and collection of organic waste.

Bird Friendly Design

Daytime bird strikes generally occur from ground level to tree top level, while migratory birds are attracted at night to tall structures that are excessively lit.

Design tall buildings to minimize bird collisions with glass. Avoid untreated reflective glass or clear glass that reflects trees and sky. Glass should have visual markers and any reflection should be muted within the first 12 metres of building height. Locate and manage lighting to reduce reflections that may cause confusion for migratory birds.

09.3.6 DESIGN FOR OUTDOOR COMFORT

Microclimate

Microclimate refers to the environmental impacts created by a tall building. Kitchener features hot, humid summers and cold, dry winters. The city has prevailing westerly winds, and the angle of the sun's path and its intensity varies significantly throughout the year. The Kitchener street network and parcel fabric is an organic grid, creating many different orientations for buildings. It is important to design with these varied conditions in mind and to understand the microclimatic effects created by tall buildings. This includes sunlight/shadowing, heat island effects, wind conditions and snow disposition as well as cumulative effects created by multiple adjacent structures.

Provide both a sun/shadow analysis and a wind study to demonstrate how a proposed development is designed to mitigate unwanted microclimatic impacts.

Design a built form that provides sunlight access to the public realm during the winter months, shaded areas for the summer months, and comfortable, safe wind conditions year round.

When designing a tall building, explore alternative tower sizes, placements, orientations and massing concepts that maximize desirable microclimatic conditions year round.

Maintain daily access to at least 5 hours of cumulative direct sunlight to nearby sidewalks and open spaces under equinox conditions, beginning with sidewalks located on the opposite side of adjacent ROWs.

Skyview

Skyview is the amount of sky that can be seen from public open spaces, above and between buildings. Utilize the design tools presented in this document to preserve access to skyview.

Mid-Rise Buildings

10.1.0 INTRODUCTION

10.1.1 KITCHENER'S MID-RISE BUILDINGS

Kitchener's Mid-Rise Buildings

Great mid-rise buildings are a vital component of any well-designed city. They are the bonding agent that links together downtowns with central neighbourhoods and intensification areas with low-rise communities. They create and reinforce the urban fabric in ways that make a city feel seamless, contiguous, and crafted to the scale of the human experience.

Mid-rise buildings frame and reinforce urban streetscapes, trails, lanes and other pedestrian and cycling networks. They can provide a consistent, attractive environment to live, work and play between major destinations, landmarks and civic institutions.

A carefully designed mid-rise fabric makes a city safer, more walkable, more transit supportive, more human scaled and more complete.

What is a Mid-Rise Building?

A mid-rise building is defined in the Zoning By-Law as any building that is between four (4) and eight (8) storeys. In some cases, a 4-storey building may be considered low-rise. Please see the Low-Rise Multi Residential and Low-Rise Commercial and Mixed-Use sections for details.

A Vision For Mid-Rise

While a mid-rise building can be a landmark, a prominent destination, or a focal point of a community, mid-rise in Kitchener is generally seen as the connective tissue of city building; the spaces between landmarks, bridging transit stations with parks and civic spaces, cultural institutions with high-order retail streets, mixed-use towers with community areas.

They make it not only possible, but desirable to walk between destinations, and they provide density at a human-scale that can filter into central spaces and help create the type of critical mass that leads to higher functioning urban spaces.

10.2.0 BUILT FORM

10.2.1 COMPATIBILITY

Massing & Placement

Place, mass and orient buildings to address streets, intersections and public realm elements, such as parks, open spaces, trails and multi-use paths.

Provide massing that responds to the existing and planned context of the area, including concentrating height and mass toward more intensive adjacent areas, and responding to the character and rhythms of low rise adjacent areas.

Scale & Transition

Complement adjacent built form through compatible height, scale, building length, massing, and materials.

Sensitively transition to surrounding urban contexts, accounting for both the existing context and the planned vision for an area.

Implement design cues (materials, architectural features, colours, rhythms) from good surrounding built form.

Implement Setbacks (from property lines) and Stepbacks (from the edge of the base to upper-level storeys) to help achieve good transitions.

Mid-rise buildings are to be contemporary and not replicate existing or historical architectural styles.

Mid-rise buildings are to have a human-scaled relationship to the public realm.

In areas with existing or planned tall and/or mid-rise buildings, Relative Height, Separation, Overlook and Orientation should all be considered as factors contributing to good compatible design, not just on an individual site but throughout an area.

Did You Know? Mid-rise buildings are critical for transitioning from tall buildings to surrounding low-rise neighbourhoods, a situation which is frequent in Kitchener's Major Transit Station Areas.

10.2.2 BUILDING COMPONENTS

Mid-Rise Components

A mid-rise building's built form design can be broken down into three nested elements; the ground floor, the base, and the building. The 'base' includes the 'ground floor', and the 'building' includes both the 'ground floor' and the 'base'.

The 'ground floor' is the first storey of a mid-rise building, but also includes elements within a building's first 4.5 metres-- the human-scaled zone that activates and animates the streetscape.

The 'base' is the The first few storeys of a mid-rise building, including the ground floor and any additional floors directly related to the streetscape and public realm. Generally, this would include the storeys forming the streetline facade and not those stepped back.

Ground Floor Design

For mid-rise buildings with retail or other active uses at grade, provide a minimum ground floor height of 4.5m to permit a variety of retail types and activities.

Where a shorter ground floor height is proposed, the lower 4.5m (min.) of the building is still to be considered critical to the public realm even if it includes part or all of the second storey.

Where retail or office at grade is not required and residential uses are permitted, the design of the ground floor is to provide adequate public/private transition and allow for future conversion to retail uses where appropriate.

Design the ground floor to be comprehensively integrated with the surrounding streetscape and landscape to achieve a high quality pedestrian environment.

Additional Information: The first 4.5m of a building forms the most immediate relationship between built-form and the public realm. It is to be designed in all cases with well articulated materials, engaging architecture and human scaled massing.

Additional Information: Where residential units are proposed on the ground floor, consider strategies for how to adapt to potential future uses, such as by providing a raised floor over the slab that can be removed to provide additional ground floor height for future commercial and at-grade accessibility.

Base Design

Prioritize pedestrian utility, comfort and safety and fully integrate the base into the public realm.

Design bases with a high degree of permeability. Maximize connectivity at ground level, creating and reinforcing pedestrian & cycling connections.

Bases should not exceed 70 metres in overall building length. Buildings longer than 70m must demonstrate enhanced streetscaping, materials and building articulation.

Place the building and arrange site functions to take advantage of changes in grade and other contextual conditions to limit visibility to servicing and back of house areas.

Provide visual variety through well-articulated massing and carefully detailed materials.

Mid-rise buildings are to maintain a consistent scale of materials, projections and rhythms with neighbouring buildings regardless of site size or overall building footprint.

Provide protection from harsh weather where appropriate.

Provide balconies for residential units along streetline facades. Consider outdoor amenity spaces for other uses along street facing elevations.

Integrate above ground structured parking into the base design and place it behind active uses along street edges. Refer to the Design for Structured Parking section of this manual.

Where it is not feasible to integrate service/utility/parking activities underground or within the building mass, use high-quality architectural elements and landscape design to screen these activities from public view and limit unwanted activity.

Maintain established or planned setbacks to create continuous street walls.

Building Design

Separation refers to the physical and perceived space between a tower and its surroundings. Achieving adequate separation requires a unified design approach covering the following interdependent considerations; Physical Separation and Tower Overlook.

Physical Separation is the measured setback in metres from a tall building tower's faces to its side and rear property lines, or to the centre line of an abutting lane, trail or easement.

Physical Separation is calculated by multiplying the building's Height by the tower Length and dividing by 200.

When adjacent towers are on the same site, the total Separation between towers is to be calculated as the sum of each individual Physical Separation.

Overlook

On long narrow sites, where units face interior lot lines, calculate and evaluate the Physical Separation distance as established in the Design for Tall Buildings section of this manual.

Physical Separation is calculated by multiplying the building's Height by its Length and dividing by 200.

Mitigate the actual and perceived massing impacts of a mid-rise building by breaking up the Mitigate mass horizontally and vertically, through the creative incorporation of changes in materials, balcony and floor plate design, architectural features and unit/amenity locations.

Provide setbacks for upper storeys where a mid-rise building is taller than the existing or planned streetline height for that area.

Provide rear and side setbacks for upper storeys to provide contextually appropriate transitions from mid-rise buildings to lower-rise surrounding neighbourhoods.

Provide side setbacks for upper storeys where appropriate to create space between neighbouring mid-rise buildings, increasing skyview and sunlight access.

Integrate mechanical penthouses with the overall architectural expression of the building. Where visible, screen with high-quality materials and consider surrounding with a green roof and/or rooftop amenity space.

Avoid placing telecommunication equipment on mid-rise buildings.

Provide consistent, clean, contemporary massing and materials. Mid-rise buildings do not necessarily benefit from extensive decorative elements or frequent changes in colour, material or forms. Smaller mid-rise buildings in particular can quickly become too 'busy' visually.

Additional Information: It is understood that requiring stepbacks on multiple or all sides of a building can be impractical. In some cases, the intent of a stepback may be met through greater setbacks instead. It can also be demonstrated through shadow and contextual analysis where a stepback may not effectively mitigate certain impacts and may not be needed.

Did You Know? Because the calculation is scalable to different building forms, it can be applied to mid-rise buildings to help determine a separation that promotes safety, privacy, access to light, and good urban design.

Materials & Details

Build mid-rise buildings with high-quality, resilient and sustainable materials. A building's material palette is to contain a variety of complementary materials, carefully detailed and articulated for proportional and visual harmony while being consistent in their architectural intent. Avoid materials which appear monolithic, flat, or unresolved. Where a palette contains such materials, it is expected that options for colour, texture, patterns, finish and details (including reveals, how the material frames openings, etc) will be explored through a collaborative design process.

Additional Information: A good mid-rise building is one that finds a balance between being too monotonous (one material or detail repeated over and over) and being too busy (too many conflicting materials and design elements).

Focal Points & Gateways

Depending on the context, mid-rise buildings can become neighbourhood focal points and/or provide an important gateway function. Where appropriate, use creative, vibrant, well-designed built form and landscaping to create and reinforce these relationships.

10.3.0 SITE DESIGN

10.3.1 INCLUSIVE DESIGN

Safety

Provide Natural Surveillance with high percentages of glazing, active uses at ground level, and windows and balconies with views onto the public realm and private shared spaces.

Avoid physical/visual barriers and potential entrapment areas (dead-ends, hidden and/or fenced in areas without multiple means of egress).

Provide evenly-lit, human scaled lighting for shared spaces and service areas.

Provide landscaping which maximizes both real and perceived safety and comfort for users.

Universal Design

Promote accessibility and visitability through enhanced barrier-free access to on site pedestrian circulation paths and shared spaces, common elements, amenities and units where possible.

Age & Family Friendly Design

Provide an appropriate mix of units that includes options for growing families and downsizing older persons. This includes unit sizes, types and tenures as well as options for storage, parking, bicycle parking and shared spaces which cater to a broad and inclusive set of users.

Arts & Culture

Integrate public art, artistic or sculptural architectural elements and community cultural spaces into the design of mid-rise buildings where appropriate. Prioritize community-based public art initiatives on mid-rise sites where adjacent to lower-rise surrounding neighbourhoods.

10.3.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Provide the greatest possible connectivity from and through the site to the open space network. Mid-rise building occupants should have direct, continuous access to pedestrian friendly streets, parks, open spaces and trails.

Design for Climate Change

Design for flexibility in anticipation of future change through unit type variety, size and adaptability to new uses. Employ high quality design, materials and construction practices that can withstand changing climate conditions and which encourage building longevity.

Provide either a green roof or a high-albedo roof surface on all flat roof surfaces.

Provide low impact stormwater management techniques where possible, including porous paving materials, landscaped areas, and vegetative swales.

Provide water efficient and drought resistant landscaping by using native planting materials and low impact development practices. Explore opportunities for water collection and reuse.

Use natural and passive techniques for lighting, ventilation, summer cooling and winter heating.

Utilize building envelope design and materials that limit thermal bridging and heat loss.

On-site energy generation, such as district heating and cooling systems, combined heat and power, and geothermal can be feasible and cost-effective in high-density, mixed use developments.

Minimize light pollution through the use of dark sky/nighttime friendly compliant practices. Incorporate high efficiency lighting (LED).

Provide on-site facilities for handling, storing and separating recyclable and solid waste. Consider facilities for the separation and collection of organic waste. Consider providing ongoing waste monitoring and auditing to maintain high standards for waste diversion.

Did You Know? A green roof can help minimize surface runoff, reduce urban heat island effect, provide noise insulation, improve local air quality, and contribute to the aesthetic of rooftop amenity space.

10.3.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Provide both a sun/shadow analysis and a wind study to demonstrate how a proposed development is designed to mitigate unwanted microclimatic impacts.

Design a built form that provides sunlight access to the public realm during the winter, shaded areas in the summer, and comfortable, safe wind conditions year round.

Maintain daily access to at least 5 hours of cumulative direct sunlight to nearby public areas and open spaces under equinox conditions, beginning with sidewalks located on the opposite side of adjacent ROWs. Demonstrate through the shadow study how this is achieved. Evaluate shadow impacts onto adjacent low-rise properties as well, targeting the same performance.

10.3.4 SHARED SPACES

Outdoor Amenity

Mid-rise buildings are to provide a mixture of both private and public shared spaces.

The location, type, size and intended use of shared spaces should vary to address and accommodate community needs, building uses and site characteristics.

Publicly accessible shared spaces can be large or small, and should be flexible in their design to adapt to various programming opportunities and seasonal conditions.

Provide shared spaces with weather protection while preserving access to sunlight and air flow.

Connect new shared spaces to existing parks, pedestrian connections and natural areas.

Create mid-block connections where appropriate to facilitate pedestrian movement.

Include amenity spaces for occupants. These are communal spaces for activity such as Include rooftop terraces, courtyards, or urban green spaces.

Where non-commercial ground floor uses are present, locate indoor amenity spaces such as lobbies, party rooms, gyms, etc. at ground level and oriented toward the street, to provide active uses and natural surveillance onto the public realm.

Where residential ground floor units are present, define the threshold between private residential uses at grade and the public realm through measures such as streetscaping, landscaping and elevation changes.

A well designed mid-rise building provides an on-site hierarchy of complementary public and private amenity spaces functioning in tandem.

Additional Information: Mid-rise buildings should be able to comprehensively meet the full range of shared space objectives, through the creative and sensitive design of built-form, landscaping and site design.

Landscaping

All sites are to be comprehensively landscaped including substantial tree planting, generous landscape buffers, and planting beds which provide screening between pedestrian pathways and drive aisles, parking areas and site function and servicing elements.

Use landscaping to accentuate, unify and complement different areas of the site.

Pedestrians & Cyclists

Mid-rise buildings are to be designed comprehensively to meet the safety, comfort and convenience needs of pedestrians, cyclists and transit users first and foremost. While vehicular parking, servicing and loading are an important part of site functionality, those functions are not to impact the quality, useability or generosity of pedestrian spaces.

Public Art

Pursue opportunities to Integrate public art into mid-rise building design in thoughtful, creative ways, and associate public art with the public realm and outdoor shared spaces.

Lighting

Consider a variety of human scaled lighting options, including bollard lighting, accent lighting around important features (seating areas, walkways, etc.), embedded lighting in seat walls, retaining walls, site surface materials and others. Consider using coloured lighting, programmable lighting and other emerging lighting technologies to enhance and reinforce the quality of the urban environment.

10.3.5 CULTURAL & NATURAL HERITAGE

Many of Kitchener's most highly valued cultural heritage resources are mid-rise in form. Many others are low-rise, but feature additions which create new hybrid mid-rise forms. New mid-rise buildings and additions to existing heritage resources are to be respectful and complementary to Kitchener's established cultural heritage assets and landscapes. This consideration should extend to existing buildings without cultural heritage designations that may nevertheless have architectural or historical value, including the appropriate conservation of styles and eras that may not currently be in favour (such as brutalist, mid-century or late modernist, international-style, post-modernist, etc.)

Did You Know? There was a time when early industrial buildings were considered expendable (at best) or a blight standing in the way of progress (at worst). Many assets were lost but those that remain are now among the most desired spaces in the city. It is important that we learn from our past when evaluating existing buildings, regardless of what popular opinion might be in the moment.

Did You Know? Kitchener has been fortunate in that many of its cultural heritage assets have been preserved. This has contributed enormously to Kitchener's eclectic, vibrant identity. The ongoing conservation of all building types, styles, and eras will be tremendously important in perpetuating this identity as development accelerates.

10.3.6 SITE FUNCTION

Vehicular Access & Parking

Locate parking at the rear of buildings or underground, wherever possible. Some surface parking may be provided to the side of buildings where necessary to meet minimum parking requirements, but that parking must be set back further than the related buildings, be visually screened from the public realm and shared spaces, and not cause conflicts of any kind with pedestrian or cyclist movement.

Locate structured parking entrances to the rear or side of buildings. Where garage access is provided along a street frontage, ensure that it does not pose a pedestrian safety risk and that it is attractively and positively integrated into the architectural design of the building.

Screen parking areas from the public realm and shared spaces with landscaping, low screening walls, berms, and other well designed site features.

Provide secure, indoor bicycle parking, located for the convenience and safety of cyclists.

Design all site circulation for cyclists and pedestrians as well as motorists, including alternate materials and colours for pedestrian crossings and sharrow markings where cyclists need to use drive aisles to property access and move through a site. Cyclist and motorist circulation routes should be separated wherever possible, favouring the safety and convenience of cyclists.

Sites should be limited to one vehicular access driveway wherever possible.

Servicing & Utilities

Incorporate all private, on-site servicing , meters and utility elements into the design of the building and show on building elevation drawings as part of the site plan approvals process. Where possible, locate these elements away from public view. Otherwise, screen these elements visually with landscaping and architectural features that are integrated into the building design as a whole.

Waste & Recycling

Provide adequate space for waste vehicles and containers. Locations of waste containers should not block fire routes, parking or sidewalks.

Waste and recycling storage areas are to be fully enclosed and placed where they are not visible from the public realm.

Provide safe, weather protected areas for the sorting of recyclables. Include options for organic materials wherever possible.

Where facilities are located outside, provide safe, continuous pedestrian access such that the use of these is not frustrated by motorists (parking or driving) or snow storage locations, and that they can be accessed without requiring passage through shared amenity spaces.

Low-Rise Multi-Residential

11.1.0 INTRODUCTION

11.1.1 TOWNHOUSES & LOW-RISE MULTI-RESIDENTIAL SITES

Introduction

Low-rise multi-residential buildings and townhouses provide important housing options for Kitchener residents. Well designed low-rise multi-residential buildings help add density to new and established neighbourhoods at a compatible, complementary scale. They help diversify communities, improve housing variety and increase affordability.

It is important that townhouses and low-rise multi-residential buildings integrate into their neighbourhoods and that the people who live there are made to feel like they belong. This includes having an active and direct relationship with the public realm, sidewalks, trails and open spaces. It means designing low-rise multi-residential buildings for urban life and a human experience; to be designed for pedestrians, cyclists and transit users.

What is a Low-Rise Multi-Res Building?

Townhouses and Low-rise multi-residential buildings exist in many forms. These typologies are listed below. Low-rise multi-residential buildings are three storeys or fewer, except along arterial roads, where they may be up to four storeys in height.

Typologies

Street Townhouses

Townhouses are generally 2 to 4 storeys in height, sharing a side wall with a neighbouring unit and forming blocks of at least 3 units. They include units with individual driveway access on a public street.

Cluster Townhouses

Cluster townhouses are typically 2 to 4 storeys in height and have units stacked vertically Cluster and/or horizontally. These units are typically oriented to the street and have shared access to a public or private street.

Back-to-Back Townhouses

Back-to-back townhouses are typically 2 to 4 storeys in height and share a rear and side wall. The building block has two fronts and each unit has its own entrance at grade.

Stacked Back-to-Back Townhouses

Stacked and back-to-back townhouses are typically 3 to 4 storeys in height. They share a rear and side wall and have units stacked vertically. There are a variety of ways in which units are organized. Each unit has its own entrance at grade.

Low Rise Apartment Buildings

Low rise apartment buildings are 3 storeys in height or fewer and share entrances and interior circulation (corridors, elevators, stairs).

Low Rise Hybrid Buildings Low rise hybrid buildings are typically 3 to 4 storeys in height and share side and back walls and have units stacked vertically. Ground level units have direct access whereas upper units gain access through a shared entrance.

A Vision for Low-Rise

Townhouses and Low-rise multi-residential buildings are important as they help create a transition between mid-and-high-rise buildings and lower density neighbourhoods. They can bring activity and continuity to the streetscape when designed as an integrated, unified part of their neighbourhood. Low-rise multi-residential buildings are also a valuable alternative to taller forms when seeking to achieve greater densities in established or new low-rise neighbourhoods.

Low-rise multi-residential buildings are to be designed with a rational and specific architectural intent. This means that whatever their visual style, buildings are to be massed, clad, articulated and detailed authentically, such that they reflect the needs, behaviours and tendencies of both occupants and community members. Architectural elements are to be integrated rather than decorative. They are to be complementary of neighbourhood character but not direct replications of existing features, particularly where a change in typology (such as taking a characteristic from a single detached house and applying it to an apartment building) would render those features out of scale, awkward or inappropriate.

11.2.0 BUILT FORM

11.2.1 COMPATIBILITY

Massing & Placement

All built-form elements visible from the public realm or shared spaces are to be designed to a high level of quality that is consistent with the architectural expression of the project as a whole.

Minimize the visual impact of parking through the thoughtful placement, orientation and articulation of built form as well as garage, parking structure and surface parking design.

Provide appropriate visual variety in massing, materials, colours and articulation both within the elements of an individual unit and between units. Avoid repetition that hinders wayfinding or creates a homogeneous built form, while also avoiding visual clutter.

For stacked townhouses, apartment buildings and hybrid buildings, a contemporary architectural style is generally preferred.

Design unit accesses to be clearly defined, consistent, easy to identify and without adding unnecessary visual clutter to a building's elevations.

Site buildings to face and activate the public realm. Buildings should occupy a minimum of 75% of a site's street frontage. Front doors should directly address the street and public realm.

Provide direct building access from a public sidewalk to maintain visibility and connectivity.

Limit townhouse block length and provide greater articulation for longer blocks.

Design all building elevations facing any streets, parks, trails and open spaces to appear and function as fronts, including features such as porches, front doors and large windows.

New buildings should be consistent with the existing neighbourhood setback pattern.

Site buildings such that units in opposing blocks are consistently facing front-to-front and/or back-to-back. Avoid back-to-front facing relationships.

Provide a minimum facing separation distance between buildings or blocks of units of 12m for P 2-storey buildings and 15m for 3 or 4-storey buildings.

All available space between the street and the building is to be landscaped, including street trees and entry features.

Avoid any situation in which a back yard fronts onto a public street.

Where a functional 'back yard' is provided in an interior yard, a minimum 7.5m interior yard setback should be provided. Additionally, a landscaped setback between the property line and the back yard should be provided to allow for privacy screening.

Do not allow driveways to be a dominant front-yard feature. Place to the rear of buildings wherever possible. Otherwise, minimize their impact through site layout and landscape design.

Did You Know? Good compatibility requires a good faith, collaborative effort from all to understand and respond to neighbourhood strengths and weaknesses and site-specific opportunities and constraints.

Scale & Transition

Provide articulated vertical and horizontal massing elements which give a building or block of buildings visual and spatial depth and variety while maintaining a human-scaled experience.

For stacked townhouse blocks, apartment or hybrid buildings longer than 35m, provide stepbacks for upper storeys where appropriate, to add diversity and amenity to the urban fabric. Consider stepbacks for buildings of 3-4 storeys adjacent to 1-2 storey buildings.

For sites adjacent to commercial and/or employment uses, use additional transition measures F such as increased setbacks, enhanced landscape screening and building organization and orientation that is designed intentionally to provide enhanced compatibility.

Consider the massing, height, length, depth, roof design, materials and rhythms of neighbouring buildings when designing for compatibility. Avoid direct replication of elements, particularly of historical building styles that cannot be replicated authentically with contemporary materials and construction practices.

11.2.2 BUILDING COMPONENTS

Façade Design

Roof elements should not visually dominate the building.

Place high-activity living spaces (kitchens, living rooms, etc.) such that they have generous views onto the public realm and shared spaces.

Strategically employ building materials, colours, and other architectural interventions to avoid excessive repetition and long, unarticulated building facades.

Avoid blank walls that are visible from the street, on or off-site shared spaces or the public realm.

All visible elements of a building, including utilities (meters, conduits), HVAC (a/c units, vents) All and loading/servicing areas are to be integrated into the design of the building and shown on elevation drawings as part of the building elevation approval process.

Materials

Use high-quality, resilient and sustainable materials and detail facades in an authentic manner which reflect contemporary construction methods and building technologies.

Materials which are visually flat or monolithic in their finish are suitable for accent areas only.

Materials and architectural details are only appropriate for achieving a 'traditional' or historical architectural style if they are demonstrated to be a significant, existing part of the historical neighbourhood character.

Porches, Balconies & Patios

Where appropriate, provide balconies on upper levels and porches/patios at grade to promote natural surveillance and animate street frontages, shared spaces and the public realm.

Organize porches, balconies and patios to reduce overlook onto other private spaces.

Design porches, balconies and patios with a scale and rhythm that suits the surrounding neighbourhood context but with materials and details that integrate seamlessly with the architectural expression of the building.

Entrances

Ensure that front entrances to units are clearly visible from the street and directly accessible from the sidewalk via a generous and barrier-free walkway, enhanced with landscaping.

Use an apartment or hybrid type dwelling when another design would not provide clearly visible individual unit entrances from the street.

Ensure that entrances are clearly defined and emphasized through architectural elements that are clean, recognizable and appropriately scaled and detailed to suit the building mass.

Incorporate windows, clerestory glass and sidelights into entrance designs to encourage natural surveillance and give permeability to the building facade. Avoid clustering opaque doors to units close together or without glazing between them providing natural surveillance.

At-Grade Elements

Maintain the existing grade at the property lines and avoid using artificially raised or lowered grades.

Limit the height of stairs to the first floor to 3 to 5 steps above grade.

Avoid the use of retaining walls and minimize their height, particularly along street frontages, open spaces, parks, ravines and other areas of the public realm.

11.3.0 SITE DESIGN

11.3.1 INCLUSIVE DESIGN

Safety

A Crime Prevention Through Environmental Design (CPTED) Report will be required of any proposals featuring 'cantilevered' building elements over drive aisles, parking areas, areas of pedestrian circulation and underground parking structures.

Use human-scaled lighting and landscaping to maximize safety and comfort. Limit the height of trees and shrubs where they may impact pedestrian or motorist sight lines.

Universal Design

Design not only to existing barrier-free requirements, but consider ways to provide increased visitability to all residential units.

Did You Know? Owners and occupants are not the only users of low-rise residential buildings, and friends, relatives and other visitors should have their needs considered and not be unnecessarily frustrated by non-equitable design.

Did You Know? Low-rise multi-residential buildings are among the most common housing types for young families and seniors, and are also among the most frequently visited by friends and relatives who are, themselves, young families and seniors.

Arts & Culture

Areas with low-rise multi-residential buildings do not often incorporate arts and culture initiatives. Consider ways to incorporate public art into low-rise multi-residential buildings, and to empower other arts and culture programs and initiatives.

11.3.2 DESIGN FOR SUSTAINABILITY

Design for Climate Change

Use Low Impact Development (LID) standards where possible to manage snowmelt and rainwater on site through evaporation, infiltration and water re-use.

Employ sustainable building features such as green roofs, extended eaves and photovoltaics. Roof structures should be designed to support these applications.

Provide a 6m² area on-site for a common garden and composting area, where possible.

Use locally sourced and manufactured materials where possible.

11.3.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Low rise buildings can still have shadow, wind and other microclimatic impacts on their surroundings. Consider these impacts and design to mitigate where possible.

11.3.4 SHARED SPACES

Outdoor Amenity

Shared outdoor amenity space is to be provided at-grade, and in large, continuous areas where possible, to provide the most flexibility for the usage and programming of the space.

Provide a flexible mix of seating options, access to sunlit and shaded areas, and user amenities such as barbecue facilities, dining areas, moveable furniture and options for recreation or leisure activities.

Where indoor amenity space is provided, make it directly accessible to outdoor shared spaces wherever possible, to maximize programming opportunities.

Did You Know? Generous, well-designed shared spaces enhance visitability by providing areas, both indoor and outdoor, for families and friends to gather. High-quality shared spaces are particularly important for buildings with small units, allowing for better and larger social gatherings.

Did You Know? Providing adjacent indoor and outdoor shared spaces creates more opportunities to enjoy both spaces. Indoor kitchen facilities complement outdoor BBQ areas, refuge is created for sudden changes in weather, and individual comfort preferences can be accommodated with minimal effort.

Pedestrians & Cyclists

Provide pedestrian paths between buildings or townhouse blocks that are a minimum 3m wide and are not intruded upon by building services, utility meters or HVAC equipment.

Mid-block pedestrian connections should be provided every 60 to 80m to ensure site permeability.

Connect pedestrian mid-block connections to sidewalks, adjacent sites and destinations such as transit, parks, open space, retail, schools community facilities and natural areas.

Site buildings to frame and enclose pedestrian pathways and position windows and openings Site to provide natural surveillance onto the walkway.

Design pedestrian mid-block connections such that they best represent potential desire lines through the site to discourage the creation of improvised pathways through landscaped areas or across potentially dangerous vehicular areas.

Landscaping

Respect and enhance the existing landscape design of streets and neighbouring properties.

Preserve and integrate existing trees, vegetation and natural landscape features into the landscape design of new development.

Minimize impervious surfaces by reducing driveway and surface parking areas and providing permeable or semi-permeable surface materials as alternatives to concrete or asphalt.

Preserve natural drainage flow and incorporate vegetated swales where appropriate.

Employ native, non-invasive vegetation and drought-tolerant species.

Consider green roofs on buildings or structured parking.

Provide soft landscape distributed throughout the site, including tree cover over parking areas, sidewalks, laneways, driveways and other hard surfaces.

Public Art

Incorporate public art where possible, particularly for larger sites such as apartment buildings or hybrid buildings. Integrate into the building and landscape design.

Signs

All signage, including address signage, should be integrated into the design of the building, avoiding visual clutter and making buildings easy to identify without being too large or overwhelming.

11.3.5 SITE FUNCTION

Vehicular Access & Parking

Locate parking at the rear of buildings or underground, where possible. Where parking is provided in front of a building, limit driveway widths and use shared driveways to minimize the frequency of curb cuts, increasing space for on-street parking and reducing pedestrian/vehicle conflicts.

Separate pedestrian, cyclist and motorist circulation where possible to maximize safety and comfort. Where routes are shared between modes, include alternate materials and colours for pedestrian crossings and sharrow markings for cyclists using drive aisles to navigate a site.

Minimize the visual impact of front garages by limiting their width to less than 50% of the Minimi facade, encouraging single-car garages in tandem parking with front yard landscaping.

Limit driveway widths to provide greater area for landscaping, particularly to incorporate stormwater management and opportunities for low-impact development.

For townhouse units less than 6 metres wide, avoid individual front garages.

Avoid the creation of basement garages that require sloped front driveways.

Use landscaping, building placement, low screening walls and other site features to conceal views of parking areas from the street and neighbouring properties.

Locate parking areas and their access points away from street corners.

Garages should not project ahead of the front facade of the building.

Provide convenient and accessible bicycle parking. For apartments, provide secure, indoor bicycle parking. Ensure that sites and neighbourhoods are designed to accommodate cyclists.

Servicing & Utilities

Integrate all private servicing, meters, HVAC equipment and utility elements into the design and minimize their visual impact, particularly from the public realm and on-site shared spaces.

Waste & Recycling

Provide adequate space for waste vehicles and containers. Locations of waste containers should not block fire routes, parking or sidewalks and should be adequately separated from shared spaces such that their functionality does not impact shared spaces users or activities.

Waste and recycling storage areas are to be fully enclosed and screened from public view, first through their location, placement and orientation, then through passive screening elements such as landscaping, and finally through enhanced enclosures where no other option exists.

Low-Rise Commercial & Mixed-Use Buildings

12.1.0 INTRODUCTION

12.1.1 KITCHENER'S LOW RISE COMMERCIAL & MIXED USE

Introduction

Low-rise commercial and mixed-use buildings are important to the vitality, health and economic activity of Kitchener. They are a significant and persistent part of the daily life of most people and occupy substantial portions of the urban fabric. High quality commercial and mixed-use buildings help maintain and promote prosperous and vibrant communities.

It is important that low-rise buildings reflect the human experience; to be designed for pedestrians, cyclists and transit users in addition to motorists; to offer appealing, inviting spaces that are highly connected, universally accessible and sensitive to the broad range of user needs; and to be sustainable and inclusive, attractive and engaging.

What Are Low-Rise Commercial & Mixed-Use Buildings?

A low-rise commercial building is defined as a building between 1 and 4 storeys in height that provides one or more commercial uses. A low-rise mixed-use building is defined as a building between 1 and 4 storeys in height that provides a mix of non-residential (commercial, retail, institutional) and residential.

A Vision for Low-Rise

Low-rise commercial and mixed-use buildings can often act as neighbourhood centres for activity. When integrated well with the community, they can become community gathering spaces and provide local retail, commercial and service options.

Low-rise commercial and mixed-use buildings help build out and reinforce neighbourhood character. They often help to transition from areas of intensification to low-rise neighbourhoods, and should be designed with the same sensitivity and care given to larger, more prominent buildings.

12.2.0 BUILT FORM

12.2.1 COMPATIBILITY

Massing & Placement

Orient building height and mass to architecturally address intersections, streets and corners.

When a building is adjacent to low-rise residential areas, provide complementary massing, proportions, scale, rhythms and materials to suit the established residential character.

Design sites to prioritize the safety and comfort of pedestrians, cyclists and transit users. Create a human-scaled public realm with contemporary, urban shared spaces.

Site buildings consistently and close to street edge to create a defined and continuous street wall. Prioritize walkability and high-quality streetscape design.

Locate the longest side of the building along the primary street, where possible.

For multi-building sites, locate larger anchor buildings towards the rear of the site with smaller buildings located close to the street edge.

Locate buildings to minimize shadow impacts on adjacent properties and open spaces.

Ensure that all building accesses are directly connected to the public sidewalk.

Maximize the amount of street frontage occupied by the building facade, with 50% as a minimum target.

Scale & Transition

To ensure appropriate transitions, the roof of the proposed low-rise commercial/mixed-use must respect the relationships of the adjacent roof forms in the existing streetscape.

Ensure the building is compatible with the existing or planned context and provide appropriate transitions to neighbouring properties.

Avoid blank walls and provide, through materials, details, massing and glazing, rhythms that are compatible with surrounding areas even on the rear and side of buildings.

11.2.2 BUILDING COMPONENTS

Façade Design

Provide glazing, clearly defined entrances and architectural articulation on all building facades.

Provide highly visible, easily accessible building entrances with a high percentage of glazing on all street or public realm facing elevations.

Integrate all circulation and accessibility elements, including steps and ramps, into the architectural and landscape design of the site.

Differentiate between units, while maintaining a cohesive design, through the use of colour, different materials, projections/recesses and architectural features.

Where blank walls are unavoidable, reduce their visual impact through material variety and articulation as well as other architectural techniques.

Design commercial units to allow for a range of uses to preserve for future market flexibility. Design elevations with both vertical and horizontal architectural elements that create a human scaled environment and prevent flat and/or featureless facades.

Provide ground floors with enough height (4.5m or more) to accommodate a variety of uses over time. Design storefronts and other facade elements to create an animated street front.

Include awnings, arcades or other forms of pedestrian shelter to add depth to the facade.

Materials

Utilize high quality, durable and sustainable materials. No single material should form the overwhelming majority of a building facade, particularly those visible from the public realm.

Materials and details are only appropriate for achieving a 'traditional' or historical architectural style if they are demonstrated to be a significant, existing part of the historical neighbourhood character. Regardless of the building systems or construction methods used, provide a balanced approach to material texture, colour, style, rhythm and articulation.

Employ colours, creative architectural details, and enhanced articulation to create unique, engaging and visually interesting environments for users.

Entry & Access

Articulate primary building entrances with architectural treatments such as increased glazing, canopies, awnings or double height entry features.

Integrate signage and architectural features to define and accentuate all user/customer entries.

Locate primary building entrances on the front of the building facing the highest-order public street and ensure that they are clearly visible and directly connected to the public sidewalk.

Ensure that there is barrier free access at the ground level of all buildings.

Signage

Create a coordinated program of signage that is consistent but not identical.

Integrate retail signage into the design, it should not overwhelm or clash with the architectural expression of the building.

Avoid the use of back-lit sign boxes, billboards, freestanding signs and roof signs.

Focal Points & Gateways

Create focal points and gateways in appropriate locations. Larger scale sites with multiple buildings may have multiple focal points and/or gateways into the site.

Consider views and sightlines, particularly for pedestrians, when choosing the location and nature of focal points.

Focal points on commercial sites may be built-form elements, outdoor amenity spaces, landscape features, public art installations or a combination thereof.

Design buildings in corner locations with unique and expressive architectural elements and Design enhanced landscapes to highlight key intersections or gateway locations.

Wayfinding

Appropriate wayfinding is critical to the safe and convenient functionality of low-rise commercial and mixed-use buildings. Integrate wayfinding design into the project in the overall.

12.3.0 SITE DESIGN

12.3.1 INCLUSIVE DESIGN

Safety

Design low-rise commercial and mixed-use buildings using CPTED design principles. A CPTED Report may be required.

Design the site layout, building placement and orientation, landscape design, lighting design and pedestrian pathways/shared spaces to maximize user comfort and safety.

Universal Design

Provide equivalent means for all users to encounter, navigate and experience the site, particularly when accessing building entrances and utilizing outdoor shared spaces.

Age & Family Friendly Design

Prioritize the safety of children and older users when designing site circulation, driveways and parking areas. Ensure good visibility for people at all eye levels, including mobility aide users and the very young.

Social Infrastructure

Avoid hostile design, or any design approaches intended to exclude or inhibit use by vulnerable members of our community.

Integrate community services where appropriate.

Arts & Culture

Art installations and cultural programs are not often associated with low-rise commercial and mixed use building. However, they often act as community focal points and therefore represent excellent opportunities to integrate local arts and culture initiatives and can help prevent arts & culture deserts from forming in our neighbourhoods.

12.3.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Design sites for the convenient and comfortable use of pedestrians and cyclists.

For larger sites, provide pedestrian/cyclist options that encourage walking/cycling between destinations, rather than returning to a car after each stop and parking elsewhere on site.

Design for Climate Change

Low-rise commercial and mixed-use buildings are not an effectively sustainable typology by default and all opportunities should be explored to incorporate sustainable design features which lessen their environmental impacts.

Implement sustainable materials, construction practices and energy-efficient designs.

Provide high-albedo or green roof design for all flat roof surfaces. Green roofs are particularly encouraged on larger roofs such as those associated with large format retail.

12.3.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Provide pedestrian shelter at or near primary building entrances and in amenity spaces to protect against wind, rain and snow while providing a mixture of direct sunlight and shade.

Mitigate against high winds by creating substantive vegetative buffers where appropriate.

Avoid building designs with long, flat walls which can accelerate winds.

Four Season & Winter City Design

Preserve access to sunlight during winter conditions, particularly along pedestrian circulation routes, in shared spaces and in front of primary building entrances.

Use light and colour to create warmth and vibrancy during the winter months.

12.3.4 SHARED SPACES

Outdoor Amenity

Locate outdoor shared spaces to maximize their accessibility and utility to users, especially pedestrians and cyclists. Locate in areas of high pedestrian traffic, near primary building entrances, and close to the public realm.

Design open spaces to include a combination of hard and soft landscaping, pedestrian lighting, seating options and other amenities.

Integrate a variety of open spaces with buildings throughout the site to function as focal points/gathering places.

Provide accessible seating and bicycle parking that is conveniently located near building entrances.

Preserve and integrate healthy existing mature trees into the design of public open space.

Consider providing pedestrian plazas at the corners of public street intersections which includes landscaping, a variety of hard surface materials, textures and colours, seating, resting, leisure and recreational opportunities, integrated signage and public art.

Landscaping

Use landscape buffers to screen parking, loading and servicing from adjacent uses and public views.

Create tree-lined streets with a full, continuous canopy, where possible.

Plant trees wherever possible within on-site landscaped areas, including landscape boulevards.

Provide hard and soft landscaping between the built form and public right of way to create a more pedestrian-friendly urban condition.

Use landscaping to accentuate, unify and complement different areas of the site.

Pedestrians & Cyclists

Design sites to provide multiple clear and connected pedestrian and cycling connections to different units, parking areas and open spaces.

Maximize sidewalk width along storefronts and public streets.

Provide mid-block pedestrian connections through parking lots and between buildings.

Define pedestrian routes with landscaping, trees, street furniture, and surface materials. Where pedestrian crossings exist over drive aisles, they are to be of a contrasting material.

Provide publicly accessible bicycle parking in close proximity to primary building entrances.

Public Art

Pursue opportunities to integrate public art into low-rise commercial and mixed-use buildings.

Associate public art with the public realm and outdoor amenity spaces.

Locate public art to be accessible to pedestrians, avoiding traffic islands or parking boulevards.

11.3.5 SITE FUNCTION

Vehicular Access & Parking

Locate surface and structured parking away from public street frontage, preferably at the rear of the buildings and internal to sites. If a parking structure must front onto a public street or open space, ensure that it contains active at-grade uses that animate the streetscape and enhance the pedestrian experience.

Minimize the number of driveway accesses into a site and design to mitigate potential conflicts with pedestrians and cyclists. Do not access sites from residential streets unless unavoidable.

Ensure that barrier free parking spaces have direct access to building entrances and are not placed across a drive aisle. Where unavoidable, maximize accessibility and safety with enhanced crossing design.

Locate bicycle public and user bicycle parking in secure and highly visible areas.

Ensure parking areas are connected to the building entrance via a pedestrian walkway.

Screen any surface parking area that is visible from the street through the landscape design.

Break up large parking areas through the use of different paving materials for pedestrian routes and landscaped islands. Avoid large, uninterrupted parking areas.

Servicing & Utilities

Locate loading and service areas away from street frontages or anywhere that might conflict with the public realm or pedestrian/cycling movement.

Service, loading and waste storage areas are to avoid negative impacts on the public realm, including visual, noise, and odour impacts.

Store goods within buildings and dedicated outdoor locations (such as garden centres) that do not conflict with pedestrian and cyclist circulation.

Locate transformers away from public views.

Screen rooftop mechanical elements, HVAC and utility meters from public view.

Drive-Through Facilities

Design drive-through facilities to be compatible with the desired urban form of the area and the public realm.

Ensure that no part of a drive-through facility is located between the building and street.

Design drive-through facilities to a high CPTED standard.

Minimize possible conflicts with pedestrians, cyclists and other motorists.

Structured Parking

13.1.0 INTRODUCTION

13.1.1 KITCHENER'S PARKING STRUCTURES

Vision & Context

Structured parking-- whether in stand-alone garages or as part of a larger development-- is a significant part of Kitchener's built form. Due in part to technical and financial constraints, underground parking structures do not often extend more than one to two levels below grade, resulting in multiple levels of above-grade structured parking on many high-density projects.

Once circumstances have pushed parking above grade, it becomes part of the city's built form and urban fabric and assumes a responsibility for good, compatible design no different from any other use. This includes materials, articulation, massing, and public realm design.

Above grade structured parking also makes a significant contribution to the shape and form of its associated development; offices, residential and mixed-use complexes. Parking can occupy the majority

of a building's first few levels, is often visible from the public realm and has direct impacts on the streetscape.

Structured parking as a built form/use is unique, however, and appropriate design responses are sometimes different from those of other uses. Likewise, evolving standards and expectations for how (and how much) parking is provided mean that structured parking designs need to be sustainable, flexible and adaptable; from being positioned to add more amenity for bicycles, ride sharing options and electric vehicles, to allowing for adaptive reuse over time.

13.2.0 BUILT FORM

13.2.1 COMPATIBILITY

Massing & Placement

Wherever possible, place structured parking behind other uses (retail, office, residential) on all sides, for the full extent of all parking levels and the complete length of each facade.

Where structured parking is exposed or otherwise visible, it is to be designed as a fully integrated component of the site and building design, including massing, materials, and articulation, while designing to high standards for safety, sustainability and accessibility.

Consider the greater multi-modal transit network when designing and orienting parking structures to create safe and convenient pedestrian connectivity between modes.

Additional Information: If parking (when part of a larger development) does not fit behind active uses, the project may be too dense for its site.

13.2.2 BUILDING COMPONENTS

Façade Design

Avoid blank walls.

Avoid tinted or opaque glass.

Avoid facade design that mimics other uses, such as residential or office.

Openings

Provide visually permeable openings, either through glazing or open-air screening.

Provide openings with an architectural rhythm that is compatible with surrounding buildings.

Openings are to promote safety and natural surveillance for both users of the garage and the public.

Screen openings with high quality materials, used in creative ways. The nature of parking garages makes them excellent candidates for facade treatments that are sculptural and expressive. This should include public art.

Creatively use colour and lighting on internal parking decks to add interest to parking areas.

Did You Know? Disguising parking as residential or office often gives the impression that those are vacant or abandoned spaces, and can significantly impact perceived safety and pedestrian comfort.

Adaptability

Consider ways to design parking structures so as not to frustrate their future adaptability to changing travel and usage conditions over time. This includes conceiving of structured parking areas as hybrid spaces capable of accommodating events/exhibitions/performances and preserving for future adaptive reuse to active uses, office space or residential units.

Where possible, design for adaptability by creating flat surfaces for parking levels with discreet ramps rather than continuously sloped 'spiral' parking structures.

Where possible, design for adaptability by sizing and proportioning the floor plates of structured parking areas such that they are translatable to efficient layouts for other uses.

Where possible, design the facade, openings, and pedestrian circulation for efficient adaptability to future potential uses. This does not, however, include facade design that attempts to visually replicate other uses while the structure is used for parking.

Did You Know? Long term, parking demand is expected to fall dramatically. Planning for the conversion of parking structures to other uses promotes sustainability and affordability.

Entry & Access

Locate garage driveways and entrances where they interfere least with pedestrians and cyclists, the streetscape and the public realm.

Prioritize pedestrian and cyclist access and circulation in the public realm and on-site.

Design pedestrian access points and circulation areas to be inviting and well-lit, with generous doorways/stairwells/elevator areas.

Design all entries and access points (vehicular, cyclist and pedestrian) as integrated, thoughtfully resolved elements of the overall design.

Signage & Wayfinding

Provide clear, memorable wayfinding and signage both internally and externally. Multiple egress paths should be easily identifiable and accessible from anywhere within the garage. Consider using colour, graphics, art, and other techniques to create easily recognizable features.

Identification signage is to be thoughtfully incorporated into the design of the parking structure, avoiding visual clutter.

Focal Points & Gateways

Parking structures often function as gateways, with people arriving at a garage before leaving their car to access other modes of transportation or to explore an area on foot. Consider ways to enhance this experience, through engaging architecture, public art, the location and design of entrances, and the relationship between the garage and nearby points of interest.

13.3.0 SITE DESIGN

13.3.1 INCLUSIVE DESIGN

Safety

Avoid long, uninterrupted above-grade parking decks. These can become permanent barriers to pedestrian movement, create entrapment areas and threaten pedestrian safety. This is of particular concern for large developments in which multiple buildings sit atop a shared parking garage. Consider all options to maximize pedestrian safety, comfort and connectivity.

Universal Design

Design parking structures for a full range of users, including consideration for how to accommodate users with mobility aides, visual or auditory impairment, and other needs. This includes providing appropriate paths of travel between parking spots and stairs/elevators/ exits/other uses, with consideration for slope, visibility, travel distance and other factors.

Age & Family Friendly Design

Design parking structures to accommodate the needs of families and persons of all ages, including drop-off areas, storage options (eg. expanded secure bike parking for families) and consideration for ways to enhance the safety and comfort of young children and seniors.

13.3.2 DESIGN FOR SUSTAINABILITY

Health & Well Being

Design parking structures to encourage other forms of active transit including walking, cycling and public transit.

Avoid or limit potential impacts to air quality, noise, and other factors which can negatively affect physical and mental health.

Design for Climate Change

Provide sustainable strategies such as water collection and recycling, green or high-albedo roofs, sustainable landscaping and passive/energy efficient building systems such as providing solar panels as shade structures on the upper deck which also generate electricity for electric vehicles.

Resources such as Parksmart can act as a valuable guide for identifying and implementing sustainable approaches to structured parking design. Techniques include; priority parking spaces for electric vehicle charging stations, dedicated carshare and carpool parking spaces, complementary tire inflation stations, sensors and displays communicating where available spaces are located, and more..

13.3.3 DESIGN FOR OUTDOOR COMFORT

Microclimates

Where appropriate, create open-air parking structures that allow for the natural movement of air.

13.3.4 SHARED SPACES

Outdoor Amenity

When designing a standalone parking structure, provide appropriately located, programmed and sized shared spaces tailored to both users and the public.

Landscaping

Focus parking-related landscaping on sustainable design, particularly strategies which offset the impacts of vehicle usage and emissions associated with parking structures, such as CO2 sinks, living walls, trees and low-impact stormwater planters/permeable surfaces.

Public Art

Thoughtfully and creatively implement public art into the architecture and urban design of the building and site. Public art should not be used to compensate for or cover up blank walls or lower-quality architecture, as these are to be avoided in the first place.

Lighting

Comprehensively integrate lighting design with parking structures. Creative lighting can add colour, warmth, visual variety and a human scale to enhance the quality of parking areas.

13.3.5 SITE FUNCTION

Cycling

Design all parking structures to accommodate cyclists, including both class A and class B bicycle parking and enhanced circulation that ensures the safety, convenience and comfort of cyclists. Users who travel by bicycle should not be inconvenienced in favour of motorists.

Where possible, provide cyclists with separated interior and exterior pathways such that they are not placed in direct conflict with motorists.

Where cyclists are required to traverse vehicular drive aisles to reach bicycle parking locations, provide clear, frequent sharrow markings to indicate to both drivers and cyclists that cyclists will be riding in these areas.

Consider ways to provide enhanced access to bicycle parking, including; wall mounted racks at the ends of vehicular parking spaces; bicycle parking areas located immediately adjacent to building lobbies, exit stairwells, etc. and; eliminating any barriers that might discourage cyclists such as poor visibility, steeply sloped ramps, poor indoor air quality and other factors.

Did You Know? By associating bicycle parking with vehicular parking spaces, people are able to access both modes of transportation equitably. This can encourage increased use of cycling on a more everyday basis.

Waste & Recycling

Wherever possible, locate waste & recycling rooms such that the roll out of bins on pickup days does not require movement across drive aisles, up or down ramped areas or otherwise creates conflict between motorists and maintenance persons.

