



CITY OF WATERLOO

STATION AREA PLANNING

5 STATION AREA PLANS

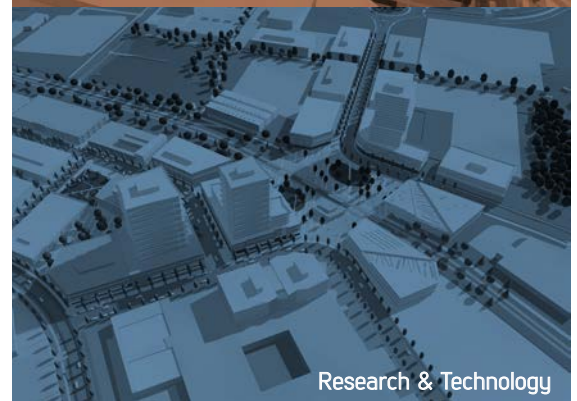
JUNE 2017



Laurier-Waterloo Park



University of Waterloo



Research & Technology



Northfield



Conestoga

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1



INTRODUCTION

INTRODUCTION

1.1. The Opportunity

The introduction of LRT through the heart of the City of Waterloo will connect significant employment lands, two major universities, Conestoga Mall, Waterloo Park, and residential neighbourhoods. Future change around the ION stations presents a tremendous opportunity to improve mobility, support placemaking, and create a series of vibrant, mixed-use communities along the corridor.

The ION LRT and aBRT, which the Region is introducing to connect Waterloo, Kitchener and Cambridge, are part of a larger growth strategy to support intensification along the Region's Central Transit Corridor and improve transportation choice to key destinations and jobs. The investment in rapid transit is being supported by adjustments to the Region's iXpress bus transit network to create a system of feeder bus routes that will connect the corridor to all corners of the Region.

The overlay of the rapid transit corridor and connecting bus network will elevate the role of station areas within the City, transforming them into important places of access and transfer within the city and regional transit network.

An opportunity exists to capitalize on and reinforce the station areas as centres of activity, with higher densities, a mix of uses and a high-quality public realm so that more people are able to live, work and access the services they need by transit.

Eight of the Region's new LRT stops will fall within the City of Waterloo. The City has identified five "station areas" for which Station Area Plans will be developed. These station areas generally include the lands within reasonable walking distance of the future stations: Laurier-Waterloo Park, University of Waterloo, Research & Technology, Northfield, and Conestoga.

With over 33,000 jobs, numerous corporate headquarters and two world-class universities, these five station areas represent an unparalleled opportunity for economic development, supporting innovation and job growth within the City and Region.

The City already has one of the top start-up ecosystems in the world. The introduction of LRT creates an opportunity to strengthen the relationship between the institutions and jobs along the corridor to build on existing synergies and create a more attractive environment for new jobs and investment.

The LRT investment will support strong, vibrant and connected communities, helping to promote intensification around the station while also enhancing connections to and from stable residential neighbourhoods.

The areas closest to the ION stations will be the focal points for transformation and reurbanization. They have the greatest potential to evolve into more urban, mixed-use and higher-density places. At the same time, surrounding stable neighbourhoods are not expected to see significant change or growth. Instead, they will be protected and will benefit from improved access to local destinations, transit services, job opportunities, and community amenities.

1.2. Why Create Station Area Plans

The areas around the ION stations are expected to capture growth and experience significant change over the long term. As a detailed planning framework is already in place for the Uptown Waterloo station areas, the City is commencing work on the five station areas outside Uptown, from the Laurier-Waterloo Park station area to the end of the corridor at Conestoga Mall.

The Station Area Plans will help guide change to capitalize on the opportunity of the LRT investment. The plans define a vision for the areas around the LRT stations and provide policy and design direction to guide development and public realm improvements to create a series of vibrant, attractive places to live, work, play and study. The plans also identify new mobility investments at the stations and along the corridor. These improvements can help maximize the benefits of the LRT by improving access for people who live away from the corridor, and making it easier for people to walk and cycle.

More than just a vision for the corridor, the Station Area Plans will be used to inform amendments to municipal policy and planning regulations. By bringing forward a coordinated set of Station Area Plans, Official Plan Amendments, Zoning By-law Amendments, and urban design guidelines, a contemporary policy framework for each station area can shape and manage change so that new private developments contribute to the objectives of the plans.

The five Station Area Plans will aim to:

- Encourage intensification around the future ION stations to increase transit ridership, encourage walking and cycling, and make more efficient use of the City's infrastructure and services;
- Promote community-building to support the unique character of each of the station areas and create attractive places for working, living, learning and recreation;
- Stimulate new investment and promote economic development by encouraging job growth and commercial vitality;
- Support placemaking through public realm improvements, public art, new open spaces and enhanced amenity; and
- Create the basis for regulatory amendments, including updates to the Official Plan, Zoning By-law, and urban design guidelines

1.3. The Study and Station Area

As illustrated in Figure 1-1, the **Study Area** encompasses the lands around five ION stations within the City of Waterloo. The Study Area forms the primary area of focus for the Station Area Planning process.

Within each Study Area there is a more scoped **Station Area**. The station area represents the primary focus of recommendations within the Station Area Plans. The station areas typically exclude hazard lands and established neighbourhoods that are not in close proximity to the stations, as these areas offer limited potential to accommodate growth around the ION stations.

The **Laurier-Waterloo Park study area** is located primarily within Waterloo Park and includes Wilfrid Laurier University to the east and the southern end of the University of Waterloo campus. It is characterized by substantial park and green space, the two university campuses, multi-use paths and cycling trails, and major destinations such as the Waterloo Memorial Recreation Complex, the Robert Langen Art Gallery, and Luther Village on the Park seniors' complex.

The **University of Waterloo study area** consists of the properties between Columbia Street and University Avenue, and is bounded by Westmount Road to the west and King Street to the east. Key features of the station area include the University of Waterloo main campus, the University Shops Plaza, the former Blackberry business park, and the evolving Northdale neighbourhood.

The **Research and Technology study area** is located where the Laurel Trail meets Wes Graham Way between the R&T Park and Phillip Street employment areas. The station will serve an important role as a point of access for this growing cluster of research, technology and knowledge-based office uses. It is characterized by an emerging cluster of high-tech research and development activity, the former Blackberry campus, the Laurel Trail, areas of vacant land to the west, and residential neighbourhoods to the eastern and northern edges of the station area.

The **Northfield study area** is located west of Conestoga Parkway within a major employment district at the northern end of Waterloo. The area is home to a range of industrial, warehousing, office and retail activities such as the new Northfield Station office development, the Waterloo Innovation Park, and the Waterloo Corporate Campus on the former NCR lands, which are planned for office and commercial uses. It is also characterized by a generally auto-oriented environment with residential neighbourhoods to the west.

The **Conestoga study area** is centred around Conestoga Mall, a major regional shopping destination that also serves as a key transit node. Key features of the station area include the mall and existing transit terminal, established employment nodes to the south and west, the King Street corridor, and medium to high-density residential areas to the north and east.

Study Areas and Station Areas

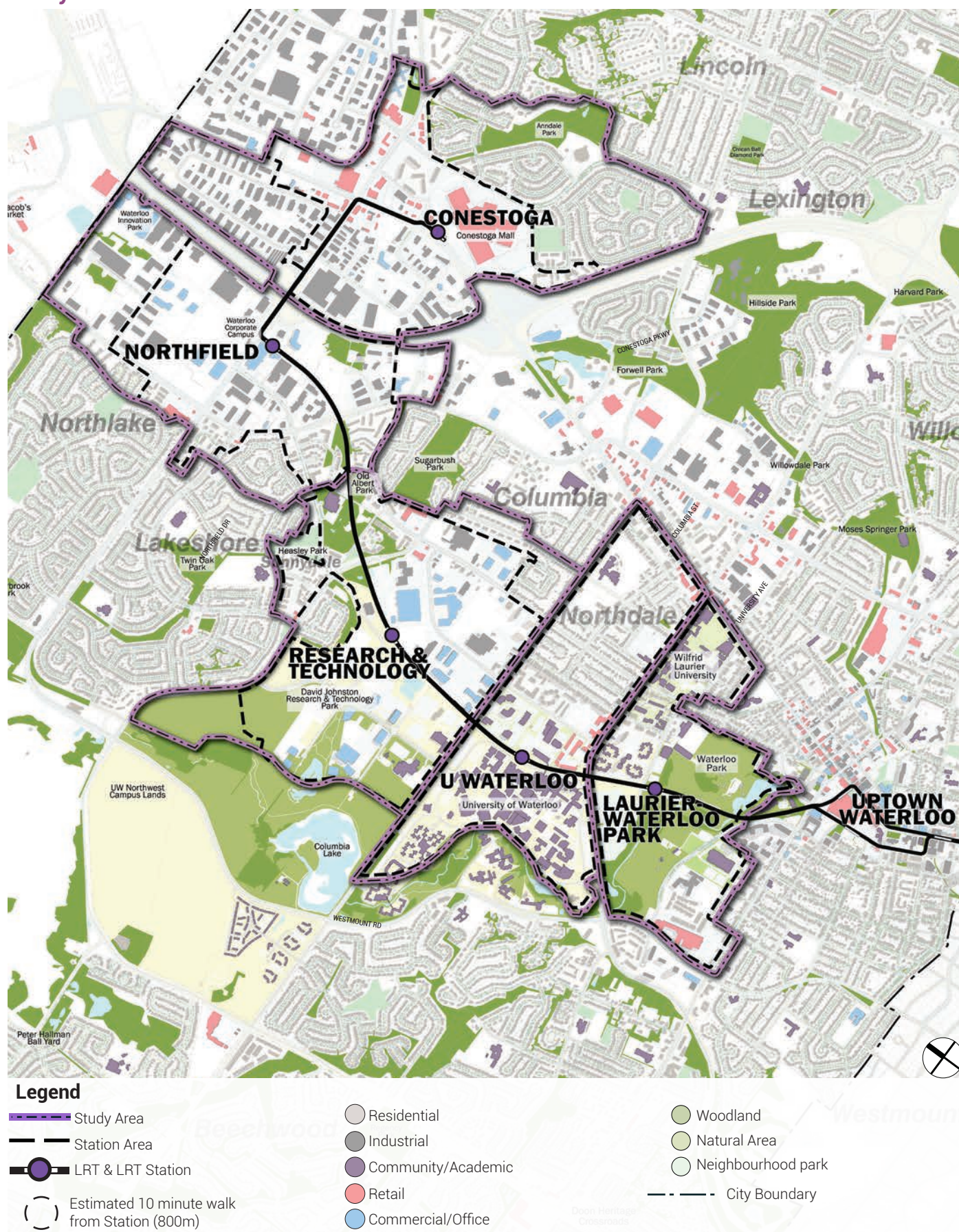


Figure 1-1. Map showing the boundaries of the five study areas and station areas

1.4. The Corridor Today

Total Area: 730 hectares

No. of Residents: 20,500 residents (28/ha)

No. of Jobs: 33,000 jobs (45/ha)

Population/Jobs per Hectare: 71/ha

A range of important regional destinations

The corridor connects a number of Waterloo's key destinations. The corridor will provide access to some of the City's most prominent institutional and recreational uses within and surrounding Waterloo Park, including the Perimeter Institute, the Waterloo Memorial Recreation Complex, the University of Waterloo and Wilfrid Laurier University. Continuing north, the corridor encompasses a number of large employment areas, transitioning from high-tech industries and professional offices around the R&T Park to manufacturing and warehousing facilities at Northfield station. Finally, the corridor connects directly to Conestoga Mall, a major regional shopping destination. The two most northern stops - Northfield and Conestoga Mall - will also act as the gateway to the Region from the north and conversely a departure point for destinations such as St Jacob's.

An employment corridor contributing to the City's prosperity

The corridor benefits from a tremendous diversity of employment and business opportunities, including research and development, high-tech businesses, corporate offices, start-ups, light industrial activities, and retail. It traverses the David Johnston Research & Technology Park, the Phillip Street corridor, the Waterloo Innovation Park, and the Northfield employment district. The presence of the University of Waterloo and Wilfrid Laurier University within close proximity to significant employment areas presents opportunities for synergies between these activities.

A dynamic corridor undergoing significant changes

A number of events have brought, or are expected to bring, significant change to the station areas, and much of this change will be accelerated with the introduction of LRT. The City has committed to the revitalization of Waterloo Park and a master plan for the park was completed in 2009. The corridor is home to the University of Waterloo and Wilfrid Laurier University, which continue to expand and increase their presence within the City. Blackberry's recent downsizing has had significant implications on the local supply and demand of office space. In its place, a growing start-up culture has emerged. Conestoga Mall has long served as an important regional retail destination, and with intentions to grow, it has potential to strengthen its presence within the Region.

A place with the ability to accommodate significant transit-oriented growth

Strong residential and employment growth is expected across the corridor over the coming years. With a number of vacant or underutilized properties and large areas of existing surface parking, it is expected that significant long-term population and employment growth can be accommodated along the corridor. Compact, transit-oriented development will bring vitality to the station areas while preserving the established neighbourhoods around the periphery of the corridor.

Existing Land Use Map

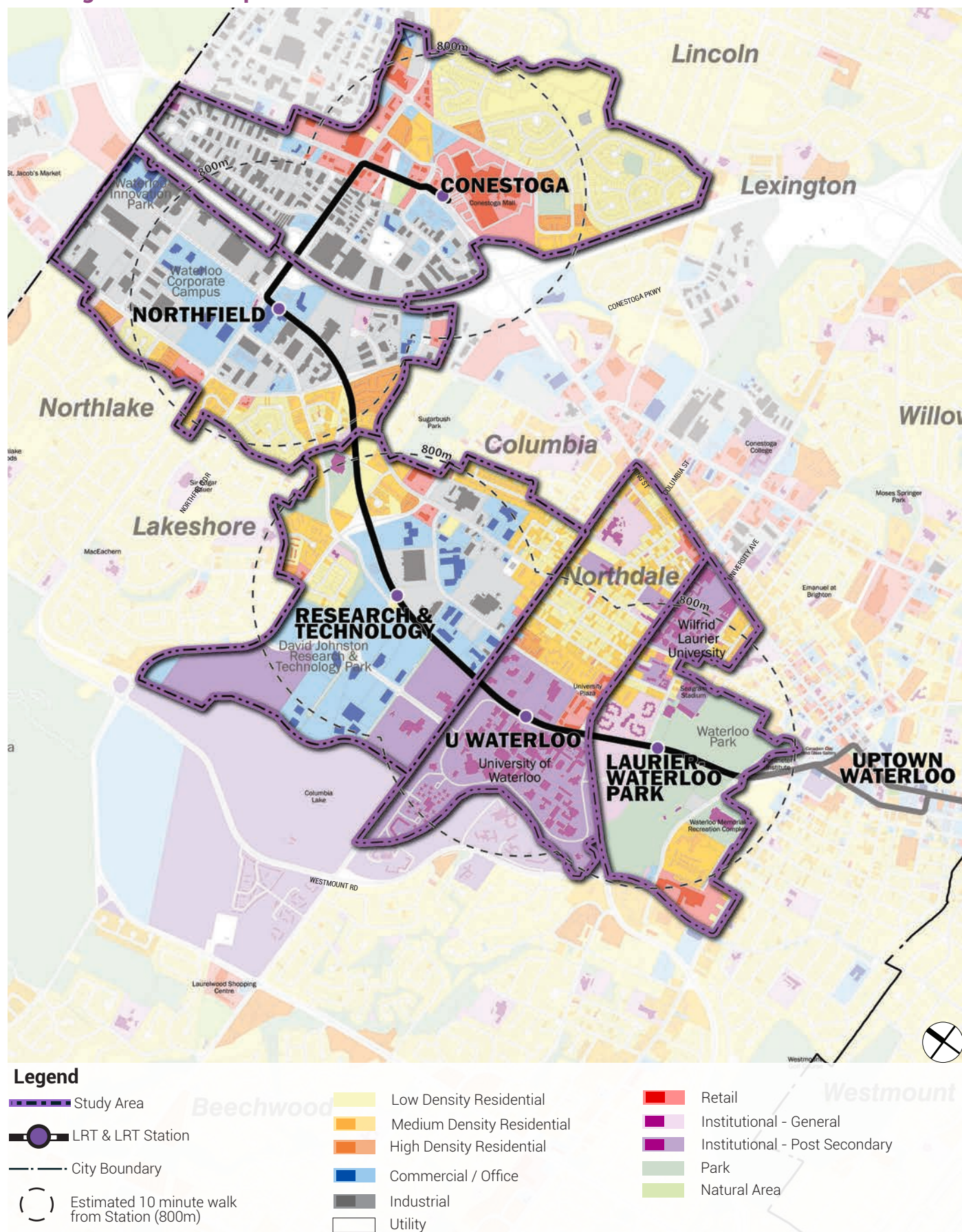


Figure 1-2. Existing land uses within the study areas

A place that today remains predominantly auto-oriented...

The predominance of large institutional and employment uses mostly suburban in character has led to large blocks and limited street connectivity. Although the City has been experiencing intensification at select nodes and corridors, the predominant built form along much of the corridor is still suburban in nature. Consequently, travel around the station areas can be difficult without a car. This is reflected in walk-shed maps of the study areas (Figure 1-5), and can be contrasted with walk-shed maps of Uptown Waterloo, an area which was developed around a finer grain and exhibits stronger pedestrian connectivity as a result. Pedestrian and cycling mobility can be challenging in some areas as a result of large surface parking lots, missing sidewalks, and a lack of streetscaping.

...But with the potential to establish a more balanced and sustainable mobility network

Much of the corridor possesses a number of assets that will play an important role in the shift toward an interconnected mobility network. It is traversed by the Laurel Trail and Trans Canada Trail, which are important regional routes for active transportation that will become increasingly valuable with the introduction of LRT. It is crossed by bus routes providing connections to other areas of the City and Region, including iXpress routes running along major corridors which provide an attractive option for travel east and west of the corridor. Finally, the area's large proportion of students and young professionals has the potential to create significant demand for improved active transportation and transit, which will help to grow ridership.



Figure 1-3. Portions of the study areas are auto-oriented with poor street connectivity and unfriendly pedestrian environments.



Figure 1-4. Tremendous assets such as the Laurel Trail can help to improve mobility throughout the station areas.

Study Area Walksheds

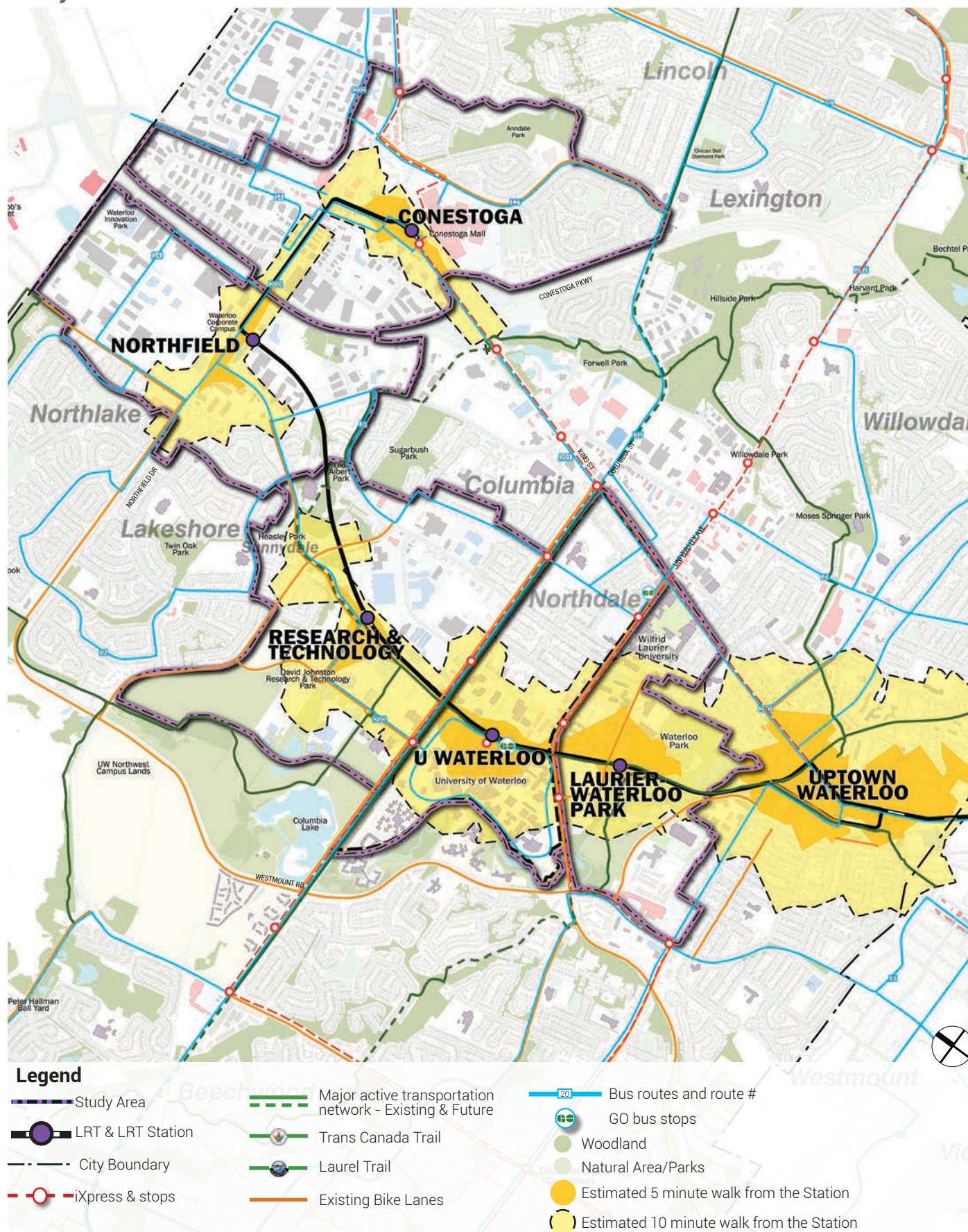


Figure 1-5. Walkshed map illustrates the areas and destinations which people can walk to within 5 and 10 minutes from the LRT stations.

1.5. The Process and What We've Heard

The City of Waterloo Station Area Planning study has been underway for several years, and has involved extensive consideration for the existing context of the corridor, market conditions, and the interests of stakeholders and the public. The study is being undertaken in three phases, as follows:

- **Phase 1**, which was completed in 2014, involved an analysis of existing conditions across the station areas, including land uses, densities, market strengths, and growth forecasts.
- **Phase 2** involves the creation of the Station Area Plans and the enactment of accompanying amendments to the City's Official Plan and Zoning By-law.
- **Phase 3** of the process will involve the implementation of the projects and action items identified in the Station Area Plans.

This document represents the outcomes of Phase 2. The Station Area Plans have been developed through extensive consultation with City and Region staff, local stakeholders and the public.

Phase 2 began in early 2015 with a preliminary background review and analysis, informed by a review of previous studies, existing policies and targeted stakeholder interviews representing a broad cross-section of local landowners, businesses, institutions, and community groups. The results of the background review were presented at the project launch and first public open house in April 2015, which helped to define the characteristics, opportunities and challenges associated with each of the five study areas.

In June 2015, a full-day visioning workshop was held with key stakeholders and staff. The workshop facilitated thoughtful discussions of key issues, opportunities and directions for each of the station areas and from a corridor-wide perspective. The workshop was followed by a public open house in the evening, which invited all members of the community to review the ideas generated during the day session. The visioning workshops resulted in the formulation of clear, long-term visions for each station area.

Through continued discussions with staff and key stakeholders, the draft Station Area Plans have been refined and finalized. An additional public open house took place prior to the Plans being finalized to gather input on the draft plans from key stakeholders and the community. The final Station Area Plans and corresponding regulatory changes are expected to be delivered to Council in June 2017.

Phase 2 Station Area Planning Process



Figure 1-6. Phase 2 of the station area planning process is intended to be completed by June of 2017.

There were many great ideas generated during the June 2015 community workshop and visioning exercise:

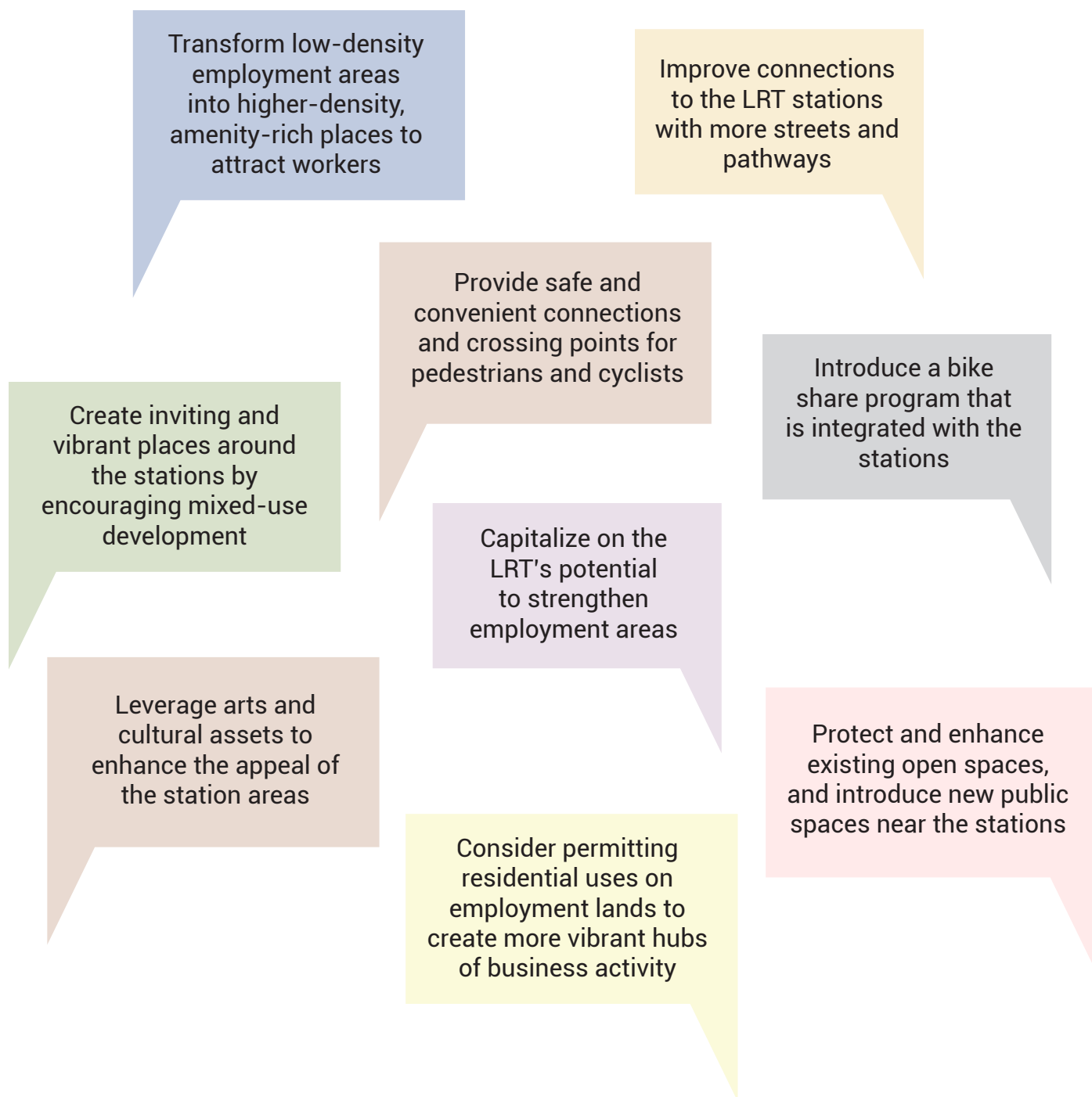


Figure 1-7. Key messages that emerged from the June 2015 community workshop and visioning exercise.

1.6. Structure of the Station Area Plans

The Station Area Plans provide a framework to guide change, including development and capital investment, within the five station areas.

Chapter 2 addresses corridor-wide considerations, including:

- An overall vision for the corridor and principles for station area planning across the corridor; and
- Overarching directions and guidelines for creating transit-supportive places throughout the corridor.

Chapters 3 to 7 encompass the five Station Area Plans. Each Station Area Plan includes:

- An assessment of existing conditions, policies and growth potential;
- A vision for the station area;
- Strategies to guide local mobility, built form and land use, public realm improvements, and economic development;
- A visual demonstration of the key directions and guidelines, as applied to a select site within the station area; and
- Implementation and phasing considerations.

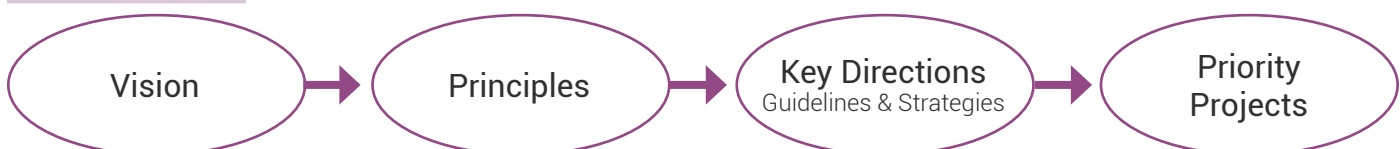
Chapter 8 addresses implementation of the Station Area Plans, including:

- Recommendations for local policy amendments and other regulatory tools;
- An identification of priority projects;
- Financing considerations;
- Strategies to leverage the LRT to promote economic development in the station areas;
- Transportation Demand Management strategies to support a shift away from the private automobile; and
- A strategy for monitoring the implementation of the Station Area Plans.

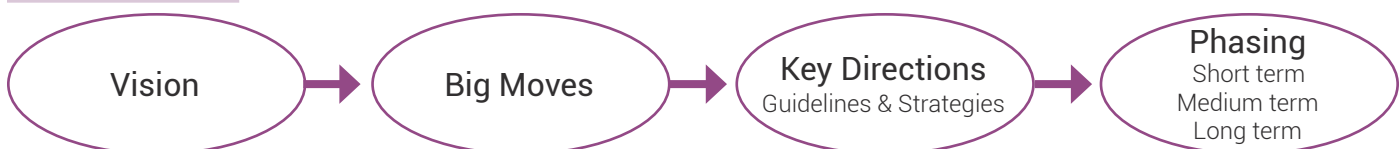
The Framework of Recommendations Within the Plans

Recommendations within the Plans are structured at both the corridor-wide and station-specific scales. The plans are written so that the two scales work together. Readers should therefore review both corridor-wide and station specific recommendations. Each recommendation flows from an overarching Vision of the corridor or station area. They are informed by a series of Principles or station-related Big Moves and are captured by a set of Key Directions. The implementation section of each Plan identifies the suggested phasing of Key Directions, and the document concludes with a recommended set of Priority Projects for the corridor.

Corridor Wide



Station Areas



2

CORRIDOR-WIDE CONSIDERATIONS

JUNE 2017

CORRIDOR-WIDE CONSIDERATIONS

2.1. Reorienting the Station Areas to Front onto Transit

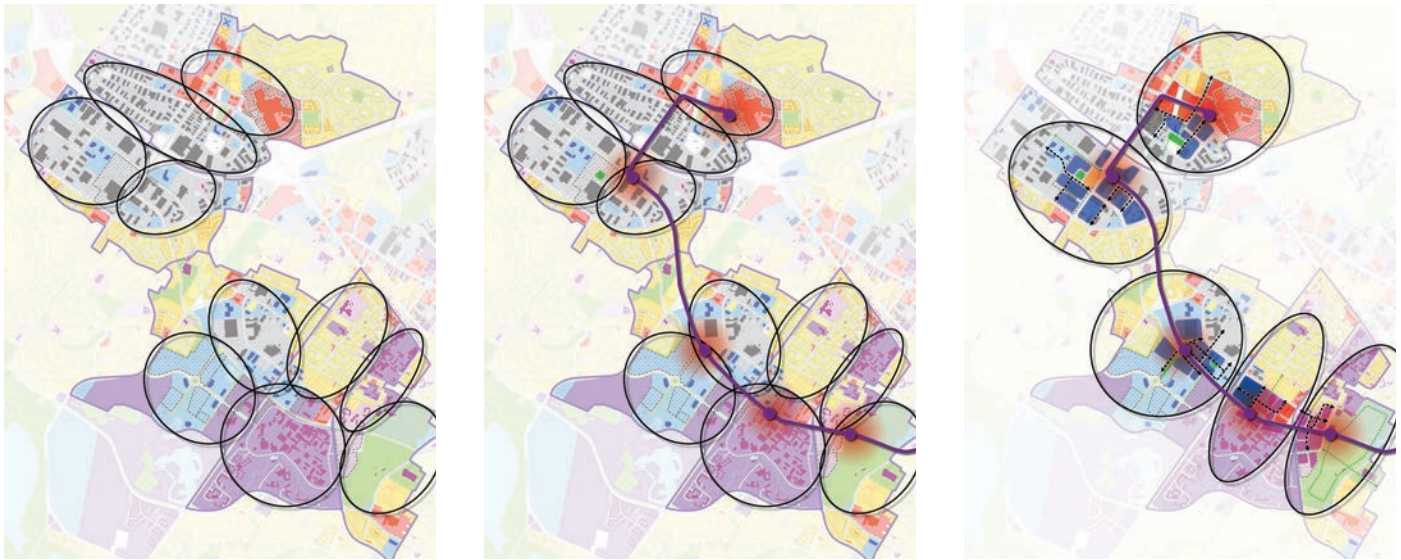


Figure 2-1. The corridor today (left) is comprised of a series of distinct and separate places. The introduction of LRT (middle) creates the need to reorient the station areas towards the LRT (right) through the pattern of buildings, streets, uses and open spaces.

The corridor has developed over the years as a series of distinct and separate places.

Large block sizes and limited street connectivity has meant that the station areas have developed independently with little connection or physical relationship to each other. This fragmentation was compounded by the freight rail line running from Northfield south through Uptown, which created a barrier between the two sides of the corridor.

The introduction of LRT weaving between a pattern of independent places means that uses are often oriented away from the stations.

While the lands along the corridor contribute to the City's vitality by supporting a range of retail, institutional, recreational and working environments, it is not easily apparent how they all work together. At the stations there is an "infrastructure deficit" created by a lack of streets, open spaces, connections and mix of uses, which are required to support places intended to be the focus of activity.

There is a need to reorient the station areas towards the LRT by ensuring that the pattern of buildings, streets, uses and open spaces are organized in a way that reinforces the station as the central place for people within the area.

The LRT creates an opportunity to re-examine the unique context within the station areas, the role they play together, and how the relationships between them can be strengthened to create new synergies and more common focus. This will help to create more complete communities along the corridor, support ridership, and facilitate more active forms of transportation.

2.2. A Vision for the Corridor

Waterloo's LRT corridor includes five station areas north of Uptown. Each station area will serve an important role within the City, and together they will provide a full range of employment, academic, recreational and retail opportunities. The corridor will be a highly attractive place for businesses to locate, with vibrant employment hubs complemented by a range of amenities. A variety of housing will serve a diverse demographic, support commercial activity, and bring vitality to the station areas. An enhanced network of pedestrian, cycling, and transit routes will facilitate travel to and from the stations, and will seamlessly connect the station areas to form an integrated corridor where residents and employees can live, work, learn, and play.



Figure 2-2. Modern high-tech employment hubs contain a mix of uses and range of neighbourhood amenities (Seattle, WA)



Figure 2-3. Providing a mix of housing types can help to cater to a greater diversity of residents



Figure 2-4. Integrating modes of pedestrian, cycling and transit is key to encouraging a more sustainable modal split



Figure 2-5. Connecting recreational areas to a network of cycling and pedestrian trails can help to enhance access for users

2.3. Principles for Station Area Planning

To support the vision, a series of station area principles have been established. The following principles form the backbone of the key directions and guidelines set out in each of the five Station Area Plans.

1

Leverage the LRT to stimulate new investment, and promote job opportunities, business attraction, and economic development.

The LRT line represents a substantial investment in the City and Region's growth and vitality. This large investment should be complemented with smaller, more localized capital investments, policies and programs intended to lay the groundwork for new private investment and economic development; strengthen connections between employment hubs and post-secondary institutions; and support a range of job opportunities along the corridor.

2

Ensure that new development around the stations features compact, transit-supportive land uses with appropriate densities to encourage walking, cycling and transit use.

The immediate areas around the station should be the primary focus for higher-density development, the greatest range of amenities, and high-quality public spaces to create vibrant places. Stable residential neighbourhoods will be protected, and will benefit from improved access to new amenities and mixed-use destinations around the each station.

3

Create a strong emphasis on first-mile and last-mile connections at the LRT stations by all modes.

The LRT has the potential to drastically improve the way people travel within the city. To realize its full potential, there is a need to facilitate travel to and from the stations. Automobile use will need to be facilitated, but dependency should be reduced by providing attractive and safe options for commuters to complete their journey to work using active transportation modes and transit. Facilitating transfers between all modes will help make it possible to live, work, study and play along the corridor without the need to drive.

4

Encourage community-building that is sensitive to the distinct character of each of the station areas.

Each station area serves a distinct role within the City. Community-building efforts should work to strengthen and reinforce the character and function of each of the station areas and leverage important assets such as parks, regional shopping centres, universities, employment districts and neighbourhoods, while enhancing the ways in which the station areas relate to one another.

5

Promote public art, cultural assets and compatible amenities that help create place and identity.

There are important community assets within the station areas, including public art and cultural amenities within Waterloo Park, the University of Waterloo, and at Conestoga Mall. The conservation of these public assets, along with continued investment in arts and cultural features and activities around the stations, can help reinforce the distinct character of each of the station areas. The LRT creates an opportunity to strengthen these attractions by improving access to various arts, cultural and open space amenities for residents, workers, and visitors.

6

Support placemaking around the stations by enhancing the public realm and creating vibrant, attractive and safe public spaces.

With the introduction of LRT, more residents, students and employees will be walking and cycling to and from the stations on a daily basis. This means that the public realm will play an increasingly prominent role in everyday life. Recognizing that development and intensification around the stations will occur over a long timeframe, it will be critical to define and protect for a high-quality, interconnected network of public spaces and streets from the outset so that they can be implemented incrementally as development occurs.

7

Establish an implementation framework to guide decision-making, and identify the regulatory tools needed to shape change and foster investment.

The City will require a strong policy and regulatory framework to ensure that incremental change over the coming decades actively supports LRT ridership, helps to introduce a mix of uses and intensification around the station, and contributes to the public realm and mobility network. A shift toward more urban places will require a rethinking of how issues such as parking, urban design standards, and the appropriate range of land uses are addressed.

2.4. Corridor-Wide Key Directions

The creation of transit-supportive places at each of the station areas will take time. In the short term, improvements will take the form of mobility enhancements that will help to improve access to and from the ION stations. Over the longer term, new development should help to establish more transit-supportive station areas by putting in place a pattern of new streets, open spaces, buildings and uses aimed at encouraging greater levels of activity around the station and supporting transit ridership. The following key directions and guidelines should be used to guide development and investment around the station areas. They are supported by more station-specific guidelines and strategies outlined in each of the five Station Area Plans.



Figure 2-6. By locating more active uses next to the stations and integrating the stations with the community's open space network, Stockholm's Hammarby Sjostad neighbourhood promotes higher levels of activity around its LRT stations.

➤ 2.4.1. Create more active and animated places through higher densities and a greater mix of uses

Putting more people and uses in close proximity to transit services can support transit ridership and make it easier for people to access the station. A greater mix of uses around the stations also improves the ability for transit users to access nearby destinations, services and amenities.

To help support stable residential neighbourhoods around the station, new, higher-density development will be a focus around the stations. Existing neighbourhoods are not expected to experience significant change or growth, however they will benefit by improved access to transit and new amenities around the stations.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish minimum density requirements for new development, based on the recommended density and built form targets provided in Figure 8-8, to ensure there are enough people and uses to support transit ridership.
- Prohibit auto-dependent uses such as drive-in retail or services within 400m of an ION station.
- Plan for a full mix of uses, including employment, retail and residential development within 250m of each station in order to create a station environment that is active throughout the day and into the evening.
- Encourage vertically-integrated, mixed-use development within 250m of the station. This could be achieved by incorporating new uses such as street-related retail, community or service uses into new residential or office developments, or residential development on the upper storeys of an office building.
- Protect stable neighbourhoods by organizing new development so that the greatest height and density is located at the station, with transitions in scale and density to surrounding areas and stable areas.

➤ 2.4.2. Complement higher densities with new gathering spaces and open areas

As densities increase, greater pressure will be placed on surrounding streets and open spaces. The provision of new public or private parks, open spaces and plazas can help support transit ridership by creating an attractive environment for pedestrians, employees and residents. New gathering spaces can strengthen the identity of the station by creating an organizing point for new development, supporting public activity, and creating a place for the provision of pedestrian and cycling amenities.

RECOMMENDED GUIDELINES AND STRATEGIES

- Complement new development with the provision of publicly accessible open spaces oriented in a way that contributes to the image and amenity of the station area.
- Target station-related open spaces as locations for public art and pedestrian/cycling amenities, such as wayfinding, seating, bike racks and/or drinking fountains.
- Co-locate smaller plaza spaces with active uses such as shops, restaurants or cafés to support opportunities for spill-out patios or street vending that can help to animate the station area.
- Leverage new redevelopment to secure publicly accessible open spaces that enhance local amenity.
- Coordinate the location of new open spaces with existing and planned trail or paths linking to the station to support access and contribute to the City's wider open space network.

➤ 2.4.3. Design buildings to support pedestrian comfort and increase street level activity

The design of buildings can play a significant role in improving the pedestrian experience by helping to establish a more comfortable pedestrian environment, supporting passive surveillance, and contributing to street life and animation.



Figure 2-7. The design of buildings in Seattle's South Lake Union district helps to support pedestrian comfort by providing shelter from the elements and integrating extensive ground floor glazing that contributes to a more active streetscape.

RECOMMENDED GUIDELINES AND STRATEGIES

- Site buildings as close to the street as possible so that they can contribute to street enclosure and promote passive surveillance of the street.
- Orient building entrances towards streets and incorporate frequent entrances in buildings with active street level uses to increase permeability.
- Design ground floor of buildings with active street-related uses to be flush with the street, and incorporate extensive use of transparent glazing to promote street life and provide visual interest for pedestrians.
- Encourage the use of canopies and building podiums to mitigate the impacts of rain and wind and improve pedestrian comfort. Colonnades should be discouraged as they conceal active street-related uses from the street.
- Buildings should incorporate sufficient setbacks to support a minimum 5m zone between the planned street edge and building face. This is enough to accommodate sufficient space for a planted boulevard/furniture zone and sidewalk.
 - Additional setbacks of up to 3m in places may be permitted to accommodate patio space for restaurants or coffee shops.
 - Buildings with residential uses at street level should incorporate sufficient setbacks to establish a private amenity zone of between 4 and 6m from the sidewalk edge and have a ground floor elevated between 0.9 and 1.2m from the street for privacy.

➤ 2.4.4. Establish a Pedestrian Transfer Zone at key transfer points

The ability to spread the benefit of LRT throughout the station areas and across the city will depend on the ease with which LRT users can transfer between the station and other modes of transportation. At the stations, this will mean the ability to easily walk or cycle to bridge the gap between the LRT and area destinations. For destinations away from the corridor, this will mean the ability to support transfers between the LRT and connecting transit systems.

The establishment of a Pedestrian Transfer Zone designed to support transferring passengers at stations and important points of transit access within each of the station areas will be an important strategy for the creation of a more integrated mobility network.

➤ 2.4.5. Seamlessly integrate local and regional bus routes with the LRT

Convenient and seamless integration between GRT bus routes and the LRT within the City of Waterloo will be a key ingredient to the LRT's success. Opportunities to adjust east-west bus routes to feed into ION stations should be investigated and pursued. Such adjustments would extend the LRT's coverage beyond a typical walking distance, provide connections to destinations outside of the immediate vicinity of an ION station, and improve the viability of public transit as an attractive alternative to driving alone.

Schedule coordination, where possible, should be investigated as a short-term measure to improve connections between the two modes; however, as service level and frequency increase over time, schedule coordination will become a less critical issue.

RECOMMENDED GUIDELINES AND STRATEGIES

- Incorporate pedestrian-oriented lighting to improve visibility and enhance safety for transferring passengers at all times of the day and night.
- Use wayfinding signage to support decision-making and improve transfers between different mobility systems.
- Provide enhanced amenities such as waste receptacles and benches to support pedestrians moving between systems.
- Support cyclists traveling to and from the station with bike parking and appropriate right-of-ways
- Pursue high-quality public realm and landscape treatments to delineate the area of transfer, improve safety for pedestrians crossing streets or bisecting pathways and provide shade or shelter during hot summer or cold winter months.
- Locate transit connections as close as possible to the ION stations to support convenient transfers.

RECOMMENDED GUIDELINES AND STRATEGIES

- Work with the Region to facilitate the coordination of bus stops with LRT stations in order to minimize travel distances between the two systems.
- At stations where there is a confluence of transit services, ensure that new development supports the integration of transit services and provides supportive public realm enhancements.
- Encourage the provision of waiting areas within new development adjacent to important points of transfer between the LRT and bus network.

➤ 2.4.7. Establish a finer grained street and block network

Increasing the density and mix of uses within station areas should be complemented with sufficient infrastructure in the form of new streets, sidewalks and pedestrian connections to support users who will need to be able to conveniently walk to and from the station.

A review of existing walk-sheds along the corridor highlights how areas with the most interconnected and finely grained street network, such as Uptown Waterloo, connect to more destinations within a comfortable walk of the station. An effort should be made in each of the station areas to draw from the Uptown Waterloo example and create a more finely grained street and block network.

➤ 2.4.6. Improve the pedestrian experience at and around station areas

Given that most transit users are pedestrians at either end of their journey, the ability to comfortably walk to and from transit is fundamental to creating transit-supportive places. While the creation of a finer grained network of streets is important for improved connectivity, creating pedestrian-friendly streets will also make the walk more enjoyable while enhancing safety and activity around the station.

While in some stations a network of sidewalks leading to and from the stations already exists, in others efforts should be made to fill the gaps in the sidewalk network. The incorporation of wayfinding both at the station and at key destinations away from the station can help to support decision-making and highlight how convenient it may be to walk to the station.

RECOMMENDED GUIDELINES AND STRATEGIES

- Require new development to establish an interconnected network of private or public streets and blocks organized to support access to and from the station.
- Where possible, extend existing streets to improve connectivity between the station and surrounding areas, and minimize travel distances for pedestrians, cyclists and drivers.
- Where new streets are developed as private roads, ensure that they are developed to municipal standards so that they feel like an extension of the public street network.
- New streets that form key connecting components of the street network should be developed as a public right-of-way and assumed by the City.
- Where site constraints make it unfeasible to extend surrounding streets, facilitate connectivity through the establishment of mid-block pedestrian and cycling connections.

RECOMMENDED GUIDELINES AND STRATEGIES

- Provide sidewalks on both sides of the street along all streets within 800m of the station.
- Increase the number of pedestrian crossings to support improved connectivity.
- Consider opportunities to improve pedestrian crossings around the stations by restricting dedicated turning lanes, utilizing minimum turning radii, and providing clearly marked crossing points.
- Improve pedestrian comfort through traffic calming measures, the provision of shade trees along all streets, and incorporation of amenities such as seating, waste receptacles and pedestrian-oriented lighting along key connections leading to and from the station.
- Incorporate wayfinding signage at the station and around key destinations within walking distance from the station to help orient passengers exiting the stations and support access to the station.

➤ 2.4.8. Establish a network of cycling routes leading to and from each station

Not all transit riders will have the opportunity to live or work within a short walk of the station. For people who need to travel greater distances but not far enough to justify taking the local bus services, cycling can be a good way to bridge the first and last mile of the journey. This is particularly relevant in the Waterloo context where many of the surrounding residential neighbourhoods are slightly too far to walk but only short bike ride from the transit corridor.

Cycling usage is expected to double by 2031. While Waterloo is currently building an active transportation network, additional infrastructure and programs will be needed to facilitate this growth and better serve ION stations.

➤ 2.4.9. Employ Transportation Demand Management strategies to reduce the need for parking and support a shift to other modes of transport

The transition from an automobile-oriented corridor to a more transit-supportive environment will not happen overnight. Transportation Demand Management (TDM) strategies will be needed to support parking while encouraging a shift toward other modes over time. Opportunities to maximize utilization of existing parking infrastructure (public or private) should be pursued alongside pricing policies which can greatly influence a person's decision to drive.

Car-share and bikeshare programs should be actively promoted and managed as a viable alternative to private automobiles. The emergence of private transportation options, such as real-time ride-share and ride-match services, could potentially play a role in the overall transportation system and shape the delivery of mobility in different ways.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a network of on and off-street cycling corridors connecting each of the stations with their surroundings.
- Cycling routes leading to and from the stations should be signed and organized to be as direct as possible to encourage use.
- Support cyclists at stations through the provision of bike racks and wayfinding signage.
- Pilot more secure bike storage options such as lockers or sheltered, monitored bike parking areas at stations in larger employment districts to enable employees to park their bike at the station overnight.
- Consider introducing a bikeshare program with bicycle stations located at each of the stations and throughout the station areas.
- Enhance off-street cycling routes through improved maintenance and lighting.

RECOMMENDED GUIDELINES AND STRATEGIES

- Work with staff from TravelWise, and collaborate with post-secondary institutions and the business community, to promote the use of sustainable travel options.
- Prioritize other modes by reducing parking standards for new development, and consider introducing maximum parking standards.
- Parking adjacent to or near an ION station should prioritize parking for carpools, vanpools, car-share services and cycling over general vehicle parking.
- Facilitate shared-use of existing parking facilities as well as car-share programs as alternatives to driving alone.
- Incentivize the adoption of shared-use public transit, bicycles, cars and parking by introducing pricing policies and financial incentives to manage demand.
- Encourage vehicle parking to be priced at a rate that is higher than LRT fare costs.
- Encourage the provision of TDM facilities in new and existing buildings, and require bicycle parking for new developments within 800m of the stations.

➤ 2.4.10. Design and organize parking where it will not detract from the public realm

While the goal should be to promote a shift away from the private automobile towards greater levels of walking, cycling and transit use, cars will remain an important part of the mobility mix for the foreseeable future. The key will be to ensure that the design of parking does not detract from the creation of a pedestrian-friendly environment or inhibit connectivity to and from the station.



Figure 2-8. Shared on-street parking at South Lake Union in Seattle supports visitors to a number of area visitors eliminating the need for individual visitor parking areas.

RECOMMENDED GUIDELINES AND STRATEGIES

- Restrict surface parking between the front of the building and the street.
- Prohibit new surface parking lots within 100m of the station in order to ensure that the station is actively supported with new development.
- Conceal parking from the adjacent street(s) through the use of trees and landscaping and/or through the design of the building.
- Organize large areas of surface parking into a pattern of streets and blocks with sidewalks and streetscape elements to support pedestrian access in the short term and facilitate intensification over time.
- Encourage parking for residential uses to be provided below grade or concealed within the building envelope. A limited amount of visitor surface parking may be permitted at the rear of the building, where it should be concealed from adjacent streets and open spaces through the design of the building, use of street trees and plantings.
- Locate structured parking where it will not preclude from future development capable of contributing to the animation of the station or key routes leading to and from the station over time.
- Organize parking to allow for shared parking between adjacent parcels and consideration of shared parking structures.
- Investigate opportunities for on-street parking to create shared parking resources and support a comfortable pedestrian experience.

➤ 2.4.11. Green the station areas to support sustainable development and placemaking

The City is committed to protecting the environment, addressing climate change and making sustainable choices. There is an opportunity to leverage the LRT in conjunction with the City's high-tech research and manufacturing base to respond to the emerging green economy. The introduction of green infrastructure solutions throughout the station areas can help to drive economic growth by showcasing local technologies and distinguishing the station areas as places of innovation and sustainability.



Figure 2-9. The employment campus at Chiswick Park (London, UK) distinguishes itself from other competing employment districts through its incorporation of green infrastructure and building design. The result not only helps to reduce energy but attract tenants to the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Enhance existing parks and natural spaces, while encouraging the development of new open spaces, including privately-owned, publicly accessible spaces (POPS).
- Undertake tree planting and landscaping initiatives, and consider developing tree canopy targets to support placemaking around the stations.
- As part of new development, encourage the provision of electric charging stations, carpool spaces, carshare spaces, and low-emitting vehicle (LEV) spaces.
- Work with TravelWise and local businesses to expand transportation demand management strategies and encourage higher levels of walking, cycling and transit.
- Investigate opportunities to introduce district energy in priority stations as part of future development.
- Work with property owners and developers to encourage sustainable building design, which could include high-performance exterior glazing, stormwater retention and reuse, green roofs, or the installation of solar panels or geothermal systems.
- Collaborate with Sustainable Waterloo and local businesses and institutions to reduce greenhouse gas emissions and advance sustainability programming across the Region.

➤ 2.4.12. Rebalance streets in favour of pedestrians and cyclists

The City has developed a series of standard road allowances to guide right-of-way improvements. The introduction of LRT and desire to develop more transit-supportive places creates an impetus to explore how these standards could be rebalanced to better support pedestrians and cyclists while still maintaining vehicular functions.

The following three street typologies consider the established typical street sections within the City of Waterloo's Development Engineering Manual (2013). The typologies identify recommendations for how space within the standard cross sections could be reallocated to achieve an appropriate balance between various users, including pedestrians, cyclists and automobile users. These conceptual street typologies are not intended to replace the City's street hierarchy, but rather to emphasize the types of street enhancements that are needed to help achieve the visions for the station areas.

In addition to the typologies, there are a number of Special Streets that are distinct and play a special role within the station areas. These Special Streets will have a distinct design and character that responds to the specific conditions of each station area. Considerations for the design of Special Streets are addressed within the individual Station Area Plans.

The following pages include illustrative cross sections for the three typical street typologies, including:

- Neighbourhood Streets
- Cycling Streets
- Avenues

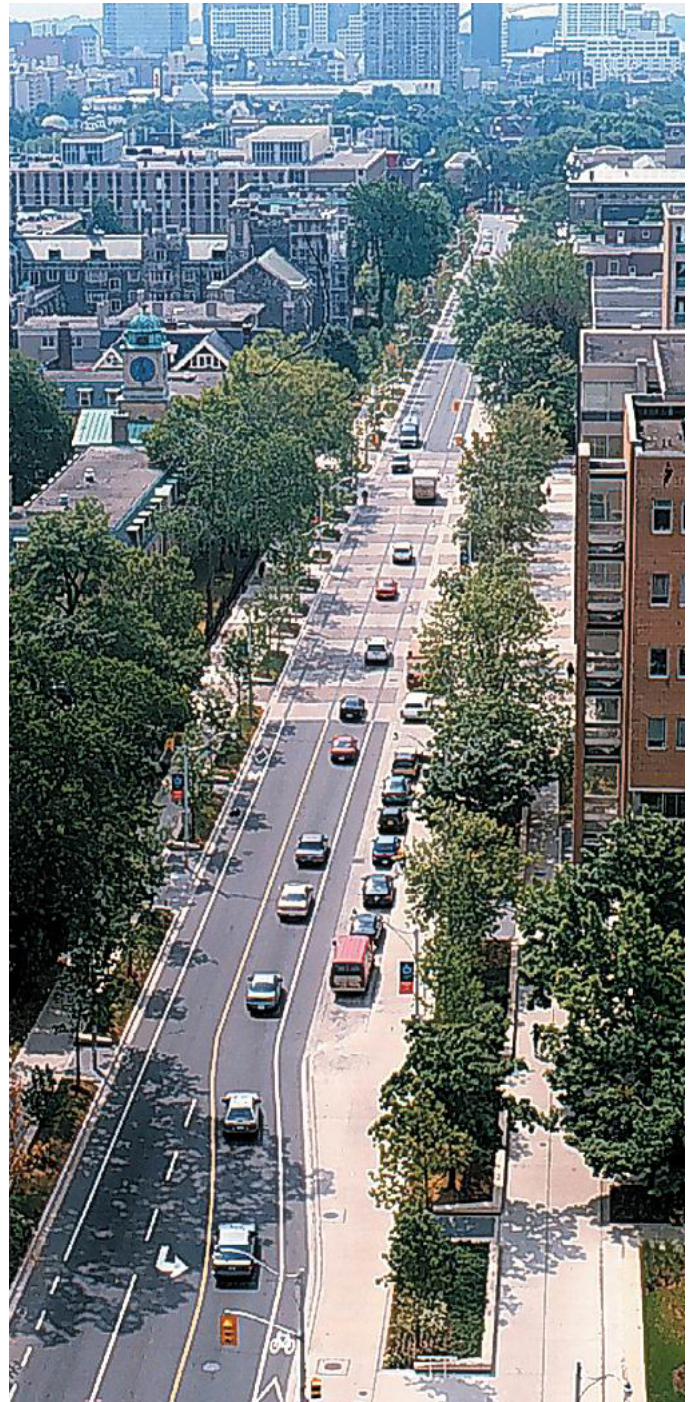


Figure 2-10. St. George street in Toronto is an example of an existing street where space was reallocated in favour of pedestrians and cyclists.

Neighbourhood Streets

Neighbourhood Streets include typical neighbourhood streets and other secondary connections that are not typically used for through traffic. They generally consist of two traffic lanes, boulevards on either side of the street and sidewalks. Total right-of-way widths will generally range from 16 to 18 metres. Strategies for Neighbourhood Streets include:

- Limiting lane widths to 3.5m or less to reduce the width of the street and create more space for tree plantings and sidewalks
- Establishing a minimum boulevard width of 2m to support the growth of mature trees
- Establishing a minimum sidewalk width of 1.8m to support pedestrians

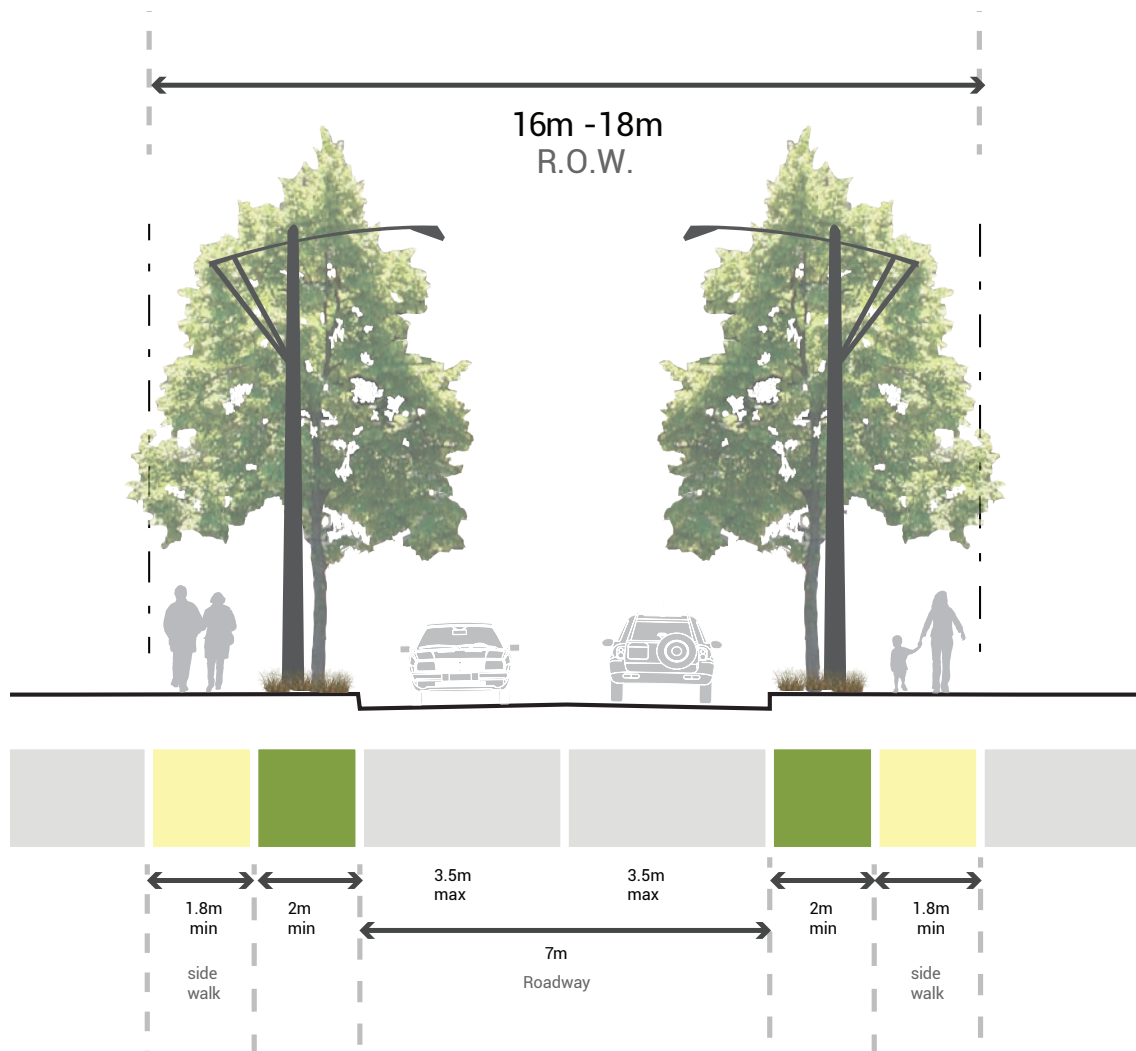


Figure 2-11. Illustration of the typical Neighbourhood Street cross section highlighting the proposed maximum and minimum standards to rebalance the street in favour of pedestrians

- Limiting lane widths to 3.5m or less to reduce the width of the street and create more space for tree plantings and sidewalks
- Where there are higher levels of traffic, establishing bike lanes on either side of the street which are a minimum 1.5m with a minimum 0.5m painted buffer

- Providing bike lanes with a minimum width of 1.8m in instances where the provision of a painted buffer is not feasible
- Establishing a minimum boulevard width of 1.8m to support the growth of mature trees
- Establishing a minimum sidewalk width of 1.8m to support pedestrians

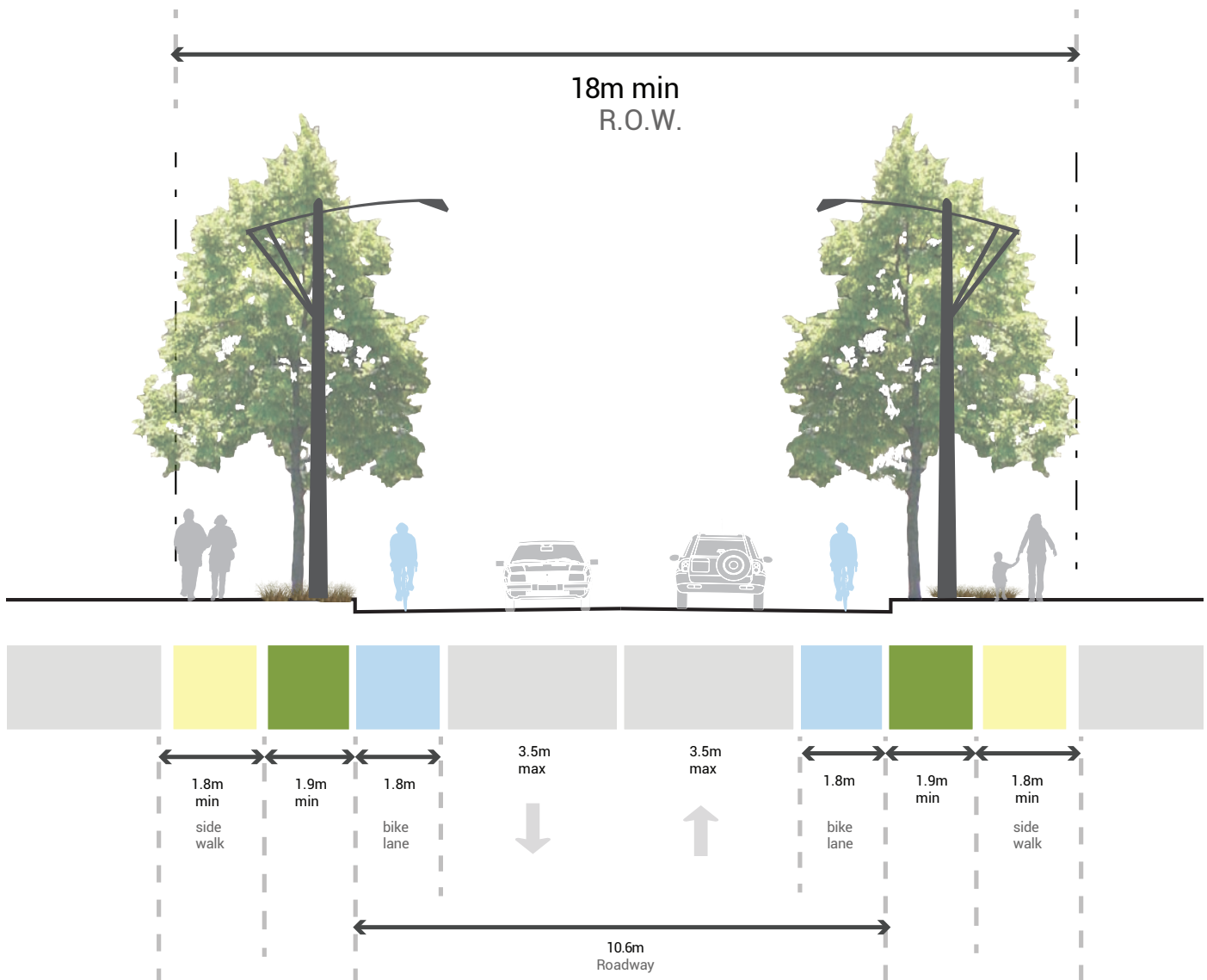


Figure 2-12. Illustration of the typical Cycling Street cross section for smaller ROWs capable of accommodating up to 2 lanes of traffic

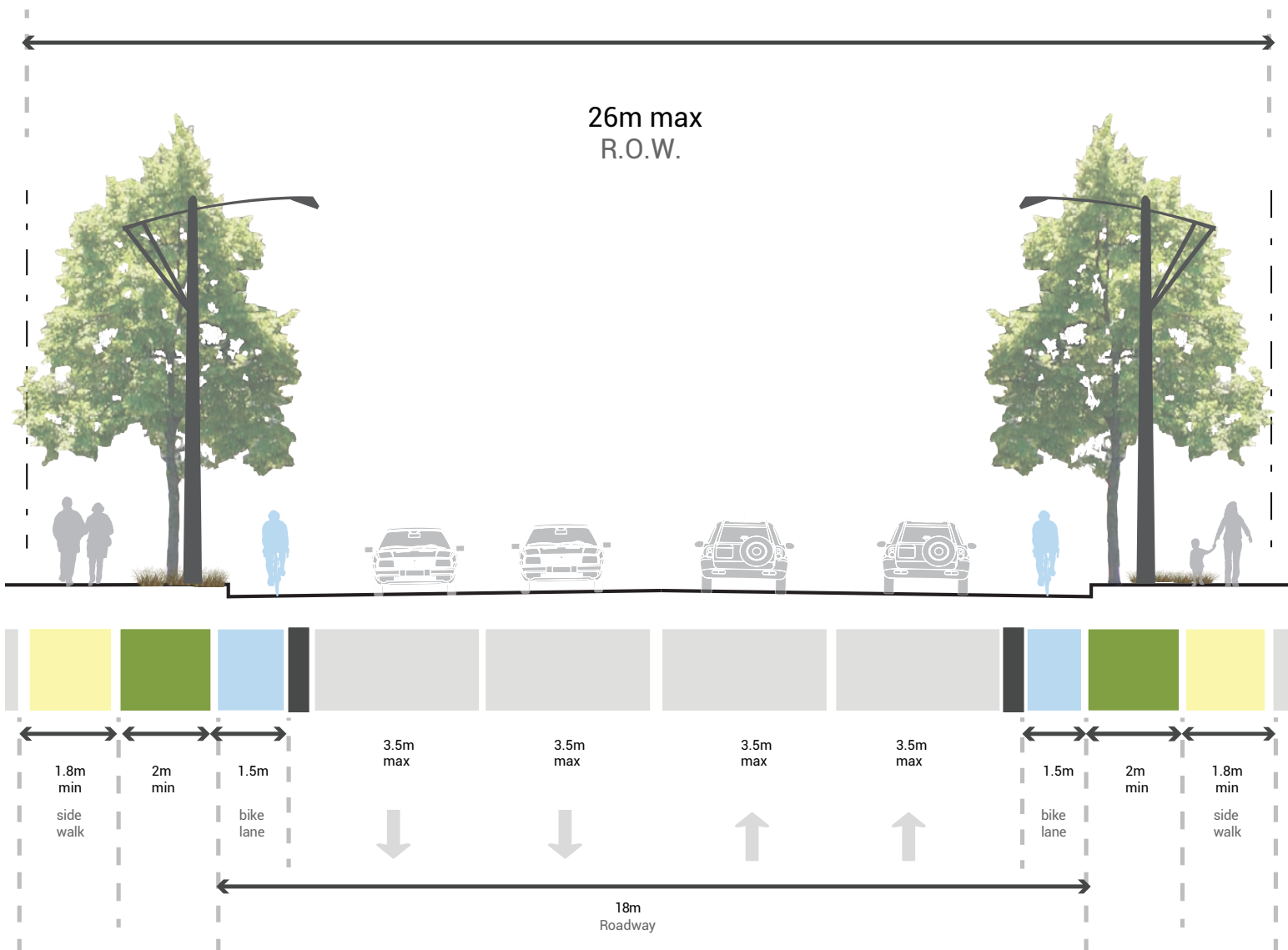


Figure 2-13. Illustration of the typical Cycling Street cross section for larger ROWs capable of accommodating up to 4 lanes of traffic

Avenues

Avenues are existing primary streets that serve as important vehicle traffic and transit corridors. Avenue right-of-way widths will be variable, ranging from 28 to 35 metres, and may include two to four lanes to accommodate generally high traffic volumes and speeds. Strategies for Avenues include:

- Limiting lane widths to 3.5m or less to reduce the width of the street and create more space for tree plantings and sidewalks
- Establishing bike lanes on either side of the street which are a minimum 1.5m with a 0.5m painted buffer

- Establishing a minimum boulevard width of 2m to support the growth of mature trees
- Establishing a minimum sidewalk width of 3m to support pedestrians

In areas where there is limited space within the right-of-way, wide sidewalks and generous boulevard should take precedent over the establishment of a central median.

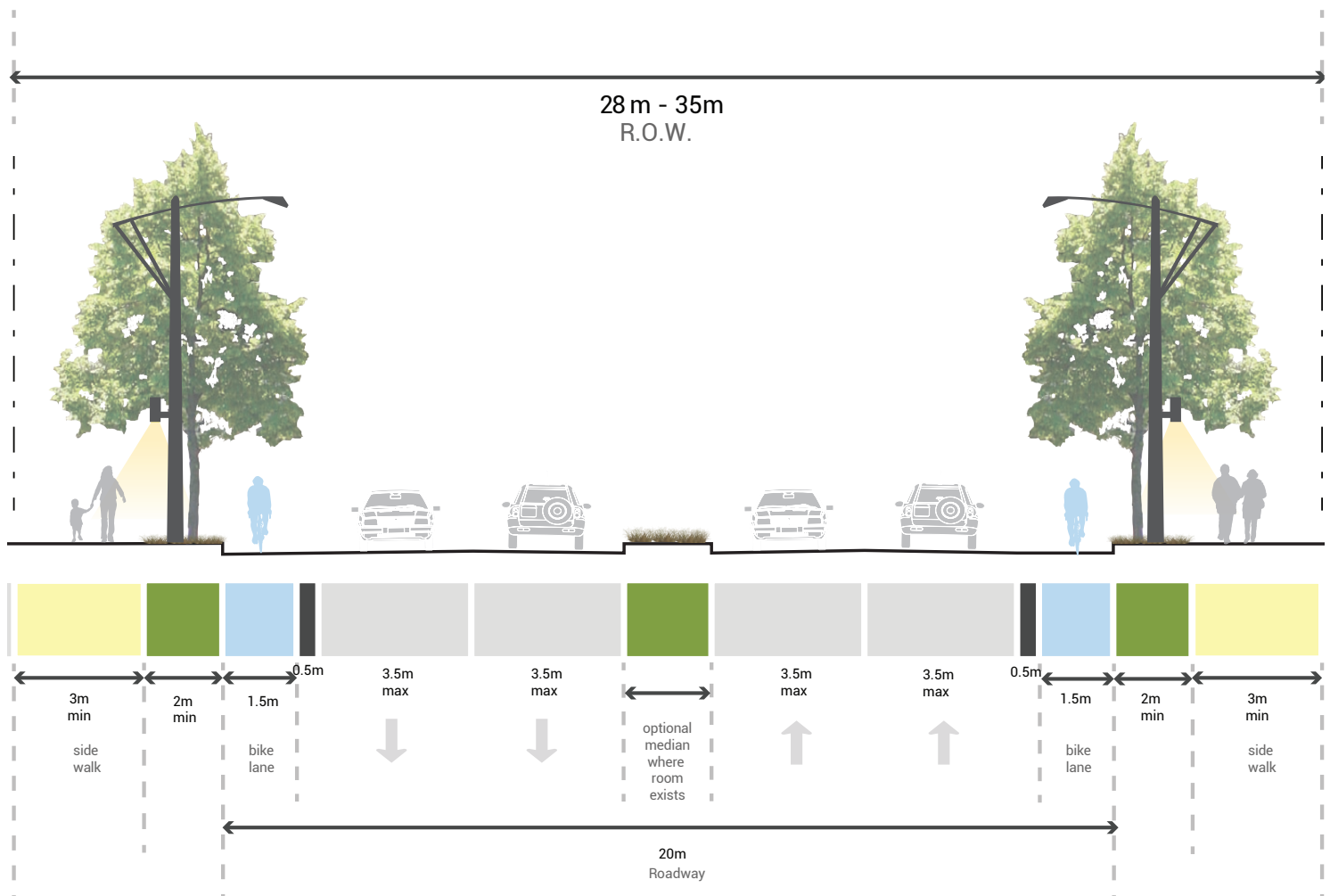


Figure 2-14. Illustration of the typical Avenues cross section for larger arterials with greater traffic volumes highlighting the proposed maximum and minimum standards to rebalance the street in favour of pedestrians and cyclists.



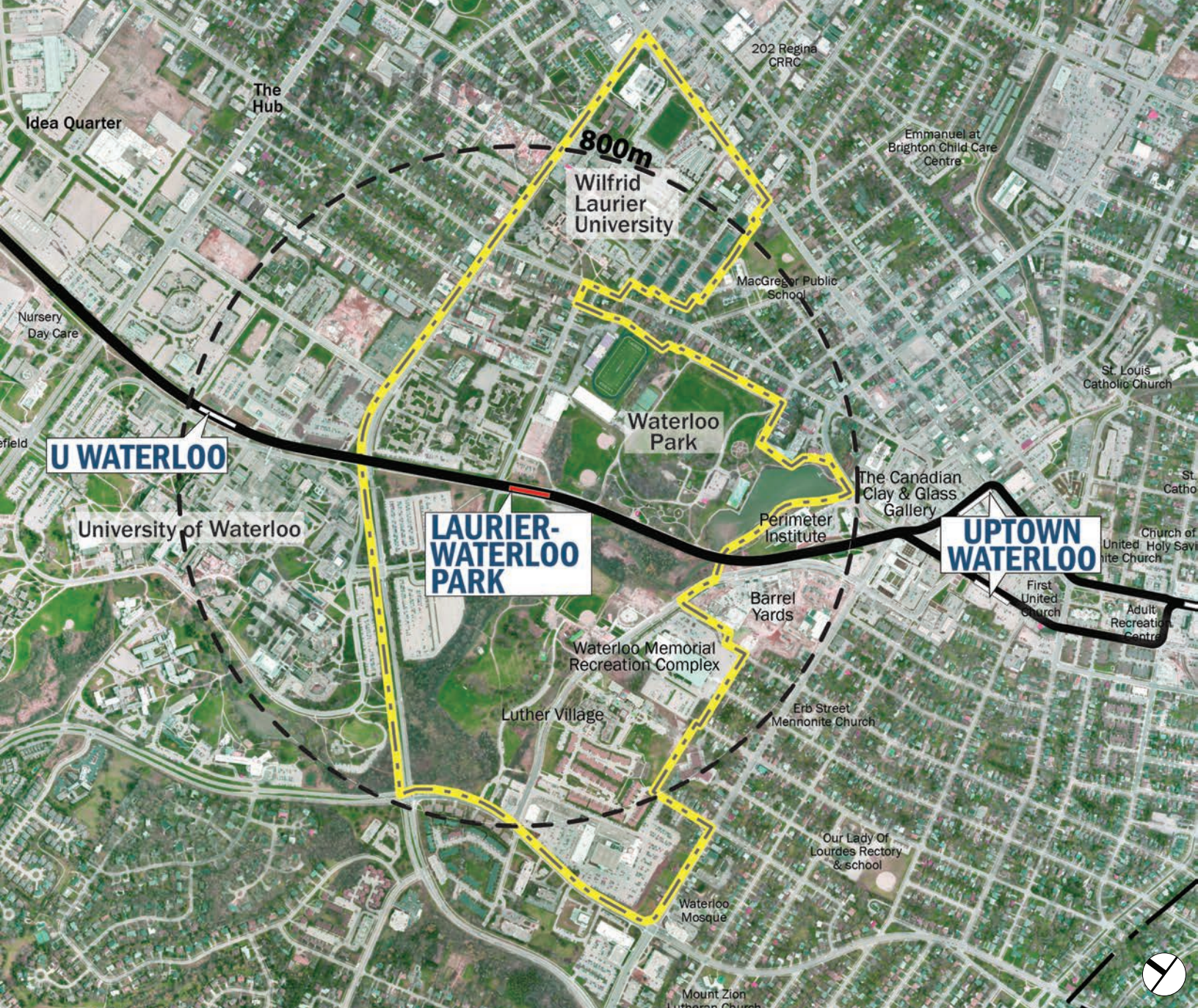
3

STATION
AREA PLAN:
LAURIER-WATERLOO PARK

JUNE 2017

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3.1 The Station Area Today

The Laurier-Waterloo Park station area includes Waterloo Park, the "Jewel of the City", a major public destination that offers over 110 acres of green space for active and passive recreational activities. The rail corridor runs directly through Waterloo Park. Currently, there is a single formalized crossing planned at the north end of the park to coincide with the station. The Waterloo Park Master Plan, which was approved by City Council in 2009, proposes two pedestrian/cyclist crossings of the corridor, the planned crossing at the north end of the park next to the future ION station, and another at the south end near the existing pedestrian bridge over the Laurel Creek.

Size of Station Area: 75 hectares*

No. of Residents: 7,300 residents (98 people/ha)

No. of Jobs: 2,900 jobs (38 jobs/ha)

Population/Jobs per Hectare: 136 people & jobs/ha

* Excludes Waterloo Park

The Laurel Trail is a key feature of this station area. The trail runs from the R&T Park south to Uptown Waterloo where it connects with both the Iron Horse Trail leading south to Kitchener and the Spur Trail. The Laurel Trail is a heavily used pedestrian and cycling connection, with approximately 30,000 crossings per month along the Laurel Creek pedestrian bridge at the south edge of the park. The Laurel Trail also connects directly to the self-guided Uptown LOOP discovery routes.



Figure 3-1. The station is located in Waterloo Park, a regional destination



Figure 3-2. The Laurel Trail connects the station north to the University of Waterloo and South to Uptown Waterloo and beyond



Figure 3-3. Seagram Drive is an important connection linking the station with Wilfrid Laurier University and the University of Waterloo



Figure 3-4. The station will be the primary point of access for Wilfrid Laurier University

The station is distinct along the RT Corridor in that it will serve two university campuses: the University of Waterloo and Wilfrid Laurier University. The station will be the primary point of access for Wilfrid Laurier University, which draws over 16,000 students and hundreds of faculty and staff to its Waterloo campus. The Laurier University Stadium and Laurier Place residences are located off of Seagram Drive, while the campus core is located east of Albert Street. The station area also encompasses the southern edge of the University of Waterloo Campus, including a cluster of low-rise and high-rise student residence buildings at University of Waterloo Place.

A unique cluster of institutional, cultural and recreational destinations can be found within this station area. At the southern edge of the station area along Father David Bauer Drive are a number of important destinations, including the Waterloo Memorial Recreation Complex, Luther Village, the Perimeter Institute, and the Canadian Clay and Glass Gallery. The planned central open space at the Barrel Yards site also has potential to attract a number of visitors. In addition, the Waterloo Public Library is located just outside the station area to the east of Silver Lake.

There are several surface parking lots and underutilized sites in the area that present opportunities to change over time. At the southeast corner of Seagram Drive and the rail corridor, immediately east of the future ION station, are two surface parking lots, one of which provides parking for the Kitchener-Waterloo Granite Club ice rink facility. There are also two large surface lots located to the northwest of the station, which are owned by the University of Waterloo. The University's Campus Master Plan identifies the west parking lot as a future location for a structured parking facility, with the east surface lot accommodating a 3 to 4 storey mixed-use academic building.

East of the rail corridor between Seagram Drive and University Avenue are a series of institutional buildings and student residences, some of which are aging and lower-rise buildings that are undergoing redevelopment. The increased access which the LRT offers is likely to encourage change and redevelopment of these and other properties around the station.

Market Conditions

Given that Waterloo Park occupies a substantial portion of the station area, development activity will be limited to the edges of the station area, around the park. The ongoing Barrel Yards project will create approximately 1,036 new residential units, consisting of a mix of condominiums, rental apartments, townhouses, a hotel, and one block of potential office space.

The large student population in the area continues to support demand for student-oriented housing, although substantial growth in the supply of student housing may hinder development in the near-term. Within the Laurier-Waterloo Park station area, much of this student-focused development has taken place along King Street in close proximity to Wilfrid Laurier University.

The strong cluster of institutional and university uses in the area creates an environment that can support continued expansion of these uses, as well as related retail and service uses.



Figure 3-5. The Laurier-Waterloo Park station is located immediately south of Seagram Drive in Waterloo Park

The Planned ION Station

The Laurier-Waterloo Park Station will be located in Waterloo Park immediately south of Seagram Drive adjacent to the Laurel Trail. The station will consist of a single centre platform with access from both the north and south ends of the platform. The southern access point to the station will form part of a proposed Perimeter Walkway network connecting the station to destinations throughout the park and beyond.

Current Planning and Policy Framework

There are a range of land uses within the station area. Waterloo Park is designated as an **Open Space**, while to the north and east of the park are university campus lands that are designated for **Employment** uses. Along the north side of Seagram Drive is a designated **Mixed-Use High-Density Residential** area which primarily accommodates student-oriented housing. Along the south side of Father David Bauer Drive is a mix of **Major Institutional**, **Mixed-Use Medium Density Residential** and **Commercial** uses.

The lands to the north and west of Waterloo Park are recognized as a **Major Node** or **Major Corridor**, and are planned to evolve as medium to high-density mixed-use areas. The rest of the station area including Waterloo Park and lands along Father David Bauer Drive are outside of the City's Nodes and Corridor framework and therefore not intended to accommodate significant growth or redevelopment.

The Official Plan outlines height and density permissions for lands throughout the station area. Waterloo Park is designated as a **Low Density** area and intended to remain a major open space. The MacGregor/Albert neighbourhood is another **Low Density** area that is not intended to accommodate significant development. Heights of up to 10 metres are permitted in **Low Density** areas.

Outside of Waterloo Park and the MacGregor/Albert community, medium to higher-density development is permitted. To the north of Waterloo Park, building heights of up to 81 metres are permitted, including on the University of Waterloo and Laurier campuses, as well as the lands on the north side of Seagram Drive. **High Density** development is also permitted west of the park along both sides of Westmount Road. The Luther Village site and the adjacent Waterloo Memorial Recreation Complex are primarily **Medium Density** and planned to support buildings of up to 20 metres.

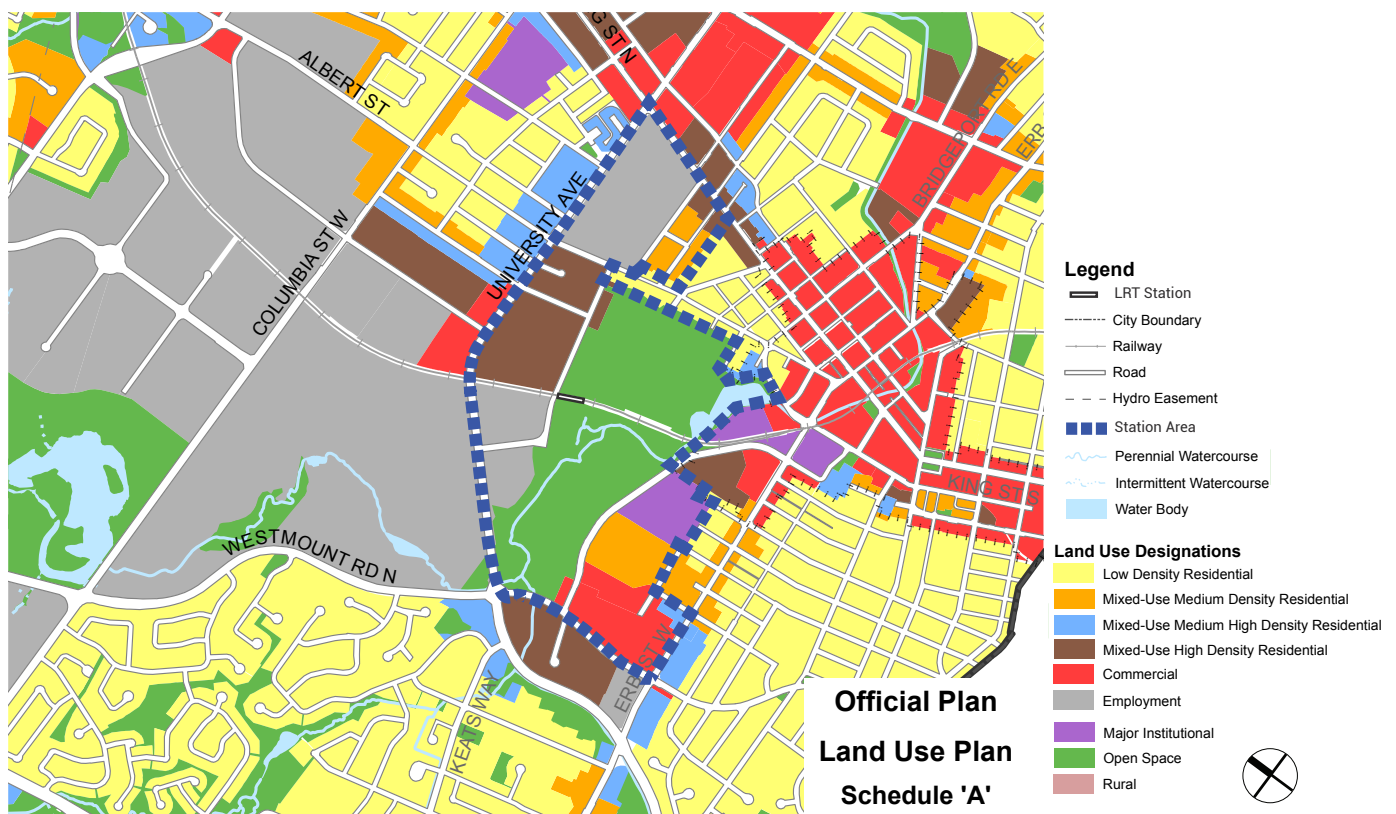


Figure 3-6. The City of Waterloo Land Use Plan

A number of **Specific Provision Areas (SPAs)** provide further Official Plan direction for particular parcels within the area. These include SPA 12 (Lutherwood Village), SPA 20 (lands around Wilfrid Laurier University), SPA 33 (MacGregor Albert Heritage Conservation District), and SPA 35 (University of Waterloo expansion lands). Future change within these areas will need to be sensitive to the detailed policy objectives outlined in the Official Plan.

The **MacGregor/Albert Heritage Conservation District** is located at the eastern edge of the station area, centered along Albert Street. This area is the City of Waterloo's first designated heritage conservation district. Official Plan policies are intended to recognize and preserve the established, low-rise character of this residential community.

Waterloo Park Master Plan was prepared in 2009 to guide long-term reinvestment and development of this substantial open green space. The Master Plan envisions a park that is visually and physically integrated in the City's urban fabric, and a place that offers a range of activities, spaces and experiences for all users. At the time of that the Master Plan was prepared, it did not anticipate that the LRT station would be located at the north end of the park. The City's Parks Department is therefore considering certain refinements to the concept plan to better respond to the revised station location.

Development on the Wilfrid Laurier University lands will be dictated by the **Laurier Campus Master Plan**. The Master Plan was approved in 2010, and it is intended to guide future growth and development on the campus lands. The Master Plan recognizes that the Waterloo campus will redevelop through intensification and reorganization of the main campus lands to create a compact, mixed-use, and pedestrian and cycling friendly campus.

The two large surface parking lots along Seagram Drive, as well as the cluster of student residences at Waterloo Place, are part of the University of Waterloo campus. The long-term redevelopment of these lands will be guided by the **University of Waterloo Campus Master Plan**.

The station contains hazardous floodplains and natural lands that need to be considered when considering the potential for change around the ION station. The lands around Silver Lake, along the Laurel Creek are recognized as a **Special Policy Area Floodway** in the Official Plan. Farther away from these waterways, certain lands within Waterloo Park and along Westmount Road and Father David Bauer Drive are also designated as a **Special Policy Area**. The Special Policy Area provisions allow for some development to occur around a floodway if appropriate flood mitigation measures are implemented.

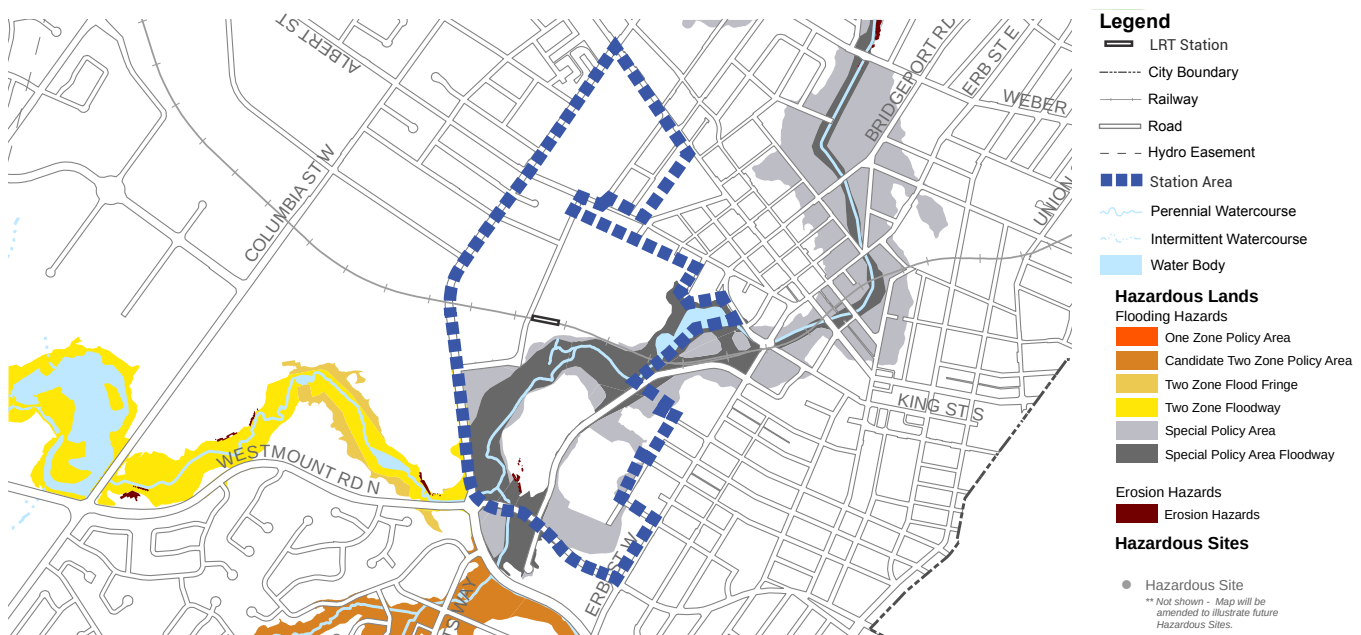


Figure 3-7. Official Plan Natural Hazards Map

3.2 Vision for the Station Area

The introduction of LRT has the potential to **significantly improve access to Waterloo Park, Wilfrid Laurier University, and surrounding institutional and recreational uses.** Waterloo Park will remain a dominant feature of the station area and the LRT will help improve access to this amenity for people throughout the Region.

The **implementation of the Waterloo Park Master Plan will transform the park** with new trails, amenities, programming, and a Festival Heart capable of accommodating significant events and performances. These improvements can help attract more visitors to the station and further animate the station area.

The active transportation network will play an increasingly critical role in supporting connections throughout the area. The planned Waterloo Park Central Promenade will support circulation throughout the park, and will link to a number of cycling routes, including along Seagram Drive, University Avenue and Father David Bauer Drive. These connections can support travel between the station area, Uptown Waterloo and the adjacent neighbourhoods of Beechwood, Westmount, Northdale and MacGregor-Albert.

In addition to Waterloo Park, **Wilfrid Laurier University will continue to act as a significant station area destination.** Future development on the University's lands can support the University's growth while enhancing the campus' relationship to the station. Streetscape improvements along Seagram Drive can help to improve the function of the street and strengthen the station's relationship to both Laurier and the University of Waterloo. These design enhancements can be complemented over time by new developments and uses that improve amenity for students, faculty, transit riders, and park users.

While the station area is likely to change and evolve in the future, **the area's unique heritage assets and cultural resources should be protected and strengthened.** These include the MacGregor-Albert Conservation District, with its numerous heritage designated properties; the park itself, whose evolution will be guided by its Master Plan; and the numerous local institutions, such as the Waterloo Memorial Recreation Complex, Luther Village, the Waterloo Public Library, and the Perimeter Institute.

VISION STATEMENT

THE PARK STATION AND PORTAL TO THE UNIVERSITIES

Laurier-Waterloo Park Station will be Waterloo's "station in the park." It will serve as a gateway to Waterloo Park, Wilfrid Laurier University, and the University of Waterloo and be connected to its surroundings by an improved Seagram Drive and a series of high-quality pedestrian and cycling connections. Waterloo Park and Laurier will continue to be the greatest draws to the area, surrounded by walkable urban communities and institutional uses.

Big Moves

1

Transform Seagram Drive into an important gateway into Waterloo Park and Laurier

Seagram Drive is a critical east-west connection that serves as a key route to Waterloo Park and Wilfrid Laurier University, as well as a secondary link to the University of Waterloo. As the only connector from the ION station to Laurier and the University of Waterloo, there is an opportunity to transform the character of the street to reflect its special role within the station area, and to improve access to and from the station for pedestrians and cyclists.

4

Enhance pedestrian and cycling access to all major destinations

The new ION station is within walking distance of a range of key destinations, including two universities, Luther Village, University Stadium, the Perimeter Institute, the Barrel Yards, Laurel Trail and Uptown Waterloo. Improving the walk/bike between the station and key destinations will support economic development and help to position the station at the heart of this dynamic district.

2

Plan for an amenity node around the station

There is limited amenity or activity immediately surrounding the future ION station. The addition of new uses and services at the station can help to increase activity levels and create a more inviting environment during off-peak hours or outside of major event days.

5

Create a strong cultural and recreational hub

The station area is characterized by a cluster of recreational and cultural destinations, including Waterloo Park, the Waterloo Memorial Recreational Complex, the Robert Langen Art Gallery, the Canadian Clay and Glass Gallery, and the MacGregor-Albert Heritage District. Future change within the station area should strive to reinforce the area as a hub of institutional, cultural and recreational activities.

3

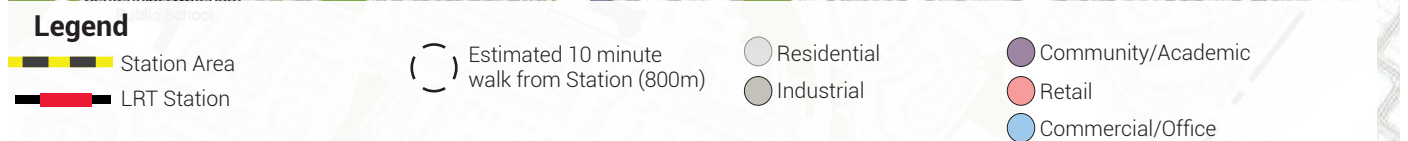
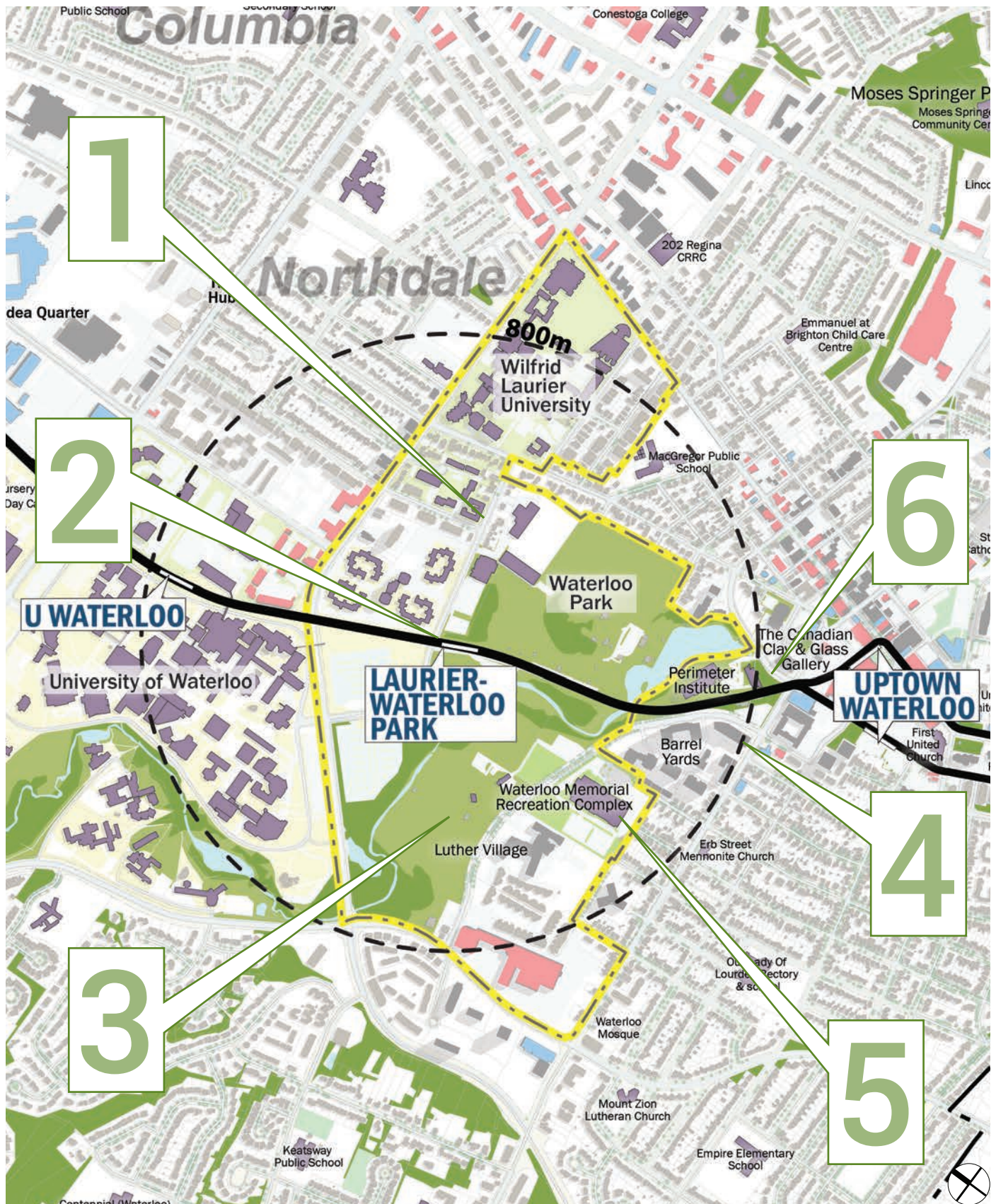
Reinforce Waterloo Park as the City's premier urban park with improved connectivity to key activity areas

Waterloo Park is a significant destination attracting visitors from across the city, region and beyond. The introduction of LRT and enhanced access it brings creates an opportunity and imperative to reinforce Waterloo Park as the City's premier urban open space with expanded programming, improved connectivity and an enhanced park setting.

6

Strengthen the relationship between Waterloo Park and Uptown Waterloo

The Laurier-Waterloo Park station area is located at the doorstep to Uptown Waterloo. While there are good connections between the two station areas, these two regional destinations would mutually benefit from improvements that would help to strengthen the relationship between them. Over time, these distinct areas should evolve as part of a much larger living, working, shopping recreational and cultural district.



3.3. Local Mobility Strategy

Mobility within the Laurier-Waterloo Park station area is optimized by a generous trail network and active transportation options, consisting of approximately 11.5 kilometres of active transportation routes. The local path network offers connections to the Laurel Trail, the Iron Horse Trail, and paths throughout Waterloo Park. The area accommodates a high number of pedestrians, including university students, park users, and visitors to the range of destinations and amenities within the area.

Despite these mobility assets there are a number of challenges that can be addressed to improve mobility in and around the station area. While there are important destinations, neighbourhoods and housing located to the south of Father David Bauer Drive, connections there are limited and challenging. Seagram Drive is the only connection between the

station and adjacent universities, and is therefore critical. However, its network of sidewalks and bike lanes are discontinuous. The street could benefit from improved pedestrian and cycling amenities to support people traveling to and from the station. The Waterloo Park Master Plan was created prior to the decision on station location so is in need of some adjustments to reflect the new station location and resulting patterns of connectivity. As well, the significant bus transfer zone at the intersection of King and University would benefit from improved passenger amenity.

The following section outlines a series of directions to enhance mobility throughout the station area.



Avenues

Indicates primary streets through the station area that are also important transit corridors. Key considerations for Avenues are identified in Section 2.2.4.



Multi-Modal Streets

Indicates streets intended to act as important cycling connections within the station area. Key considerations for Multi-Modal Streets are identified in Section 2.2.4.



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4.



Pedestrian and Cycling Connections

Indicates existing (solid) and proposed (dashed) off-street pedestrian and cycling connections within the station area.



Seagram Drive Improvements

Indicates area for targeted improvements along Seagram Drive to improve access for pedestrians and cyclists.



Intersection Improvements

Indicates areas where improvements to the existing intersection could help to enhance access and safety for pedestrian and cyclists.



New Intersections

Indicates areas where the introduction of a new intersection requiring enhanced pedestrian crossings or traffic signal are recommended.



Pedestrian Transfer Zone

Indicates areas where improvements should be targeted to support a high number of transfers between pedestrians, cyclists and the transit network.



Gateway Enhancements

Indicates important points of access to the park which should be targeted for public realm and wayfinding enhancements.



Festival Heart

Indicates the approximate location of the planned festival heart, a place for large gatherings within the park



Station Area Boundary

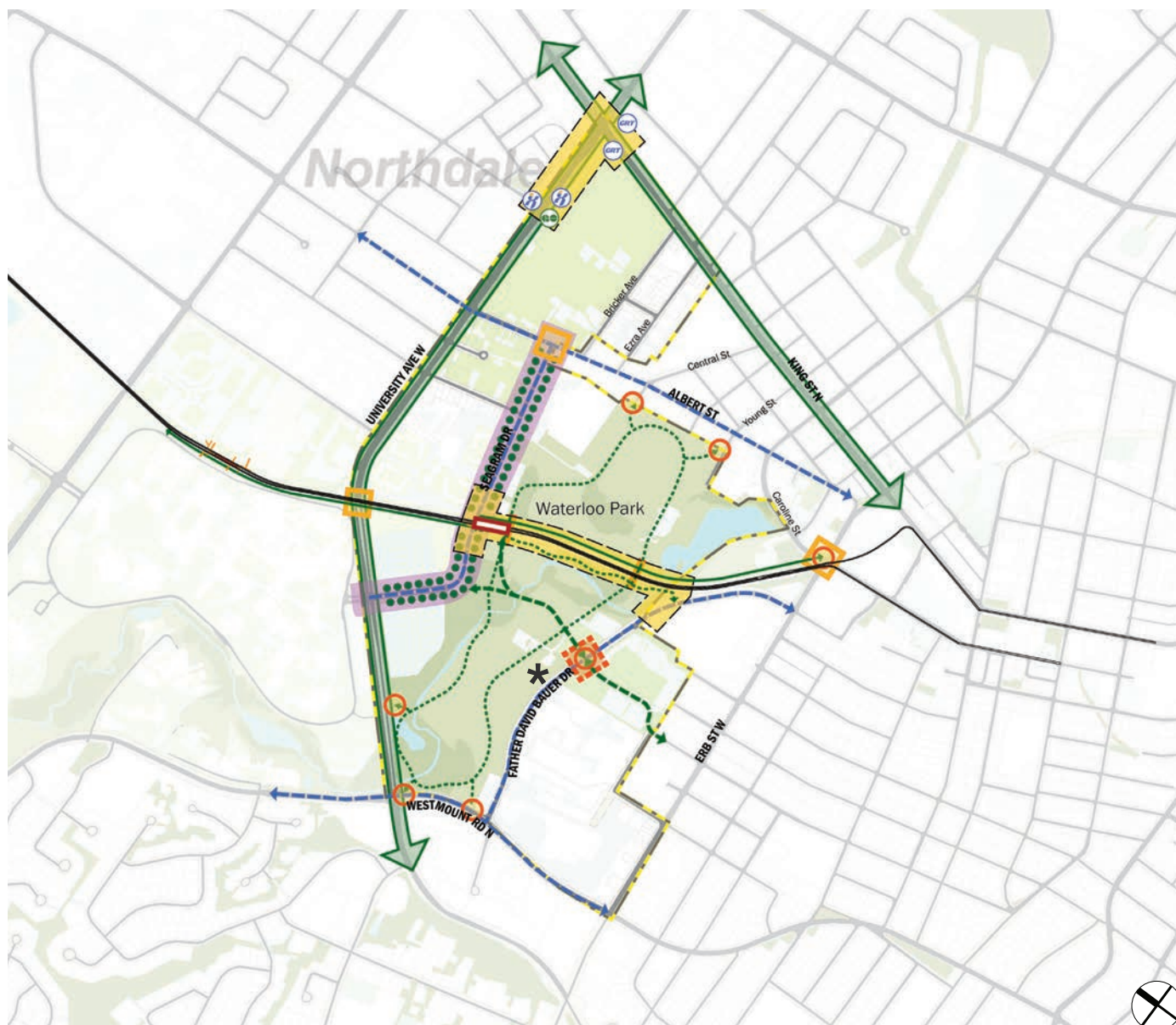


Figure 3-8. Mobility Framework

Key Directions

- 1 Implement the proposed trail network through Waterloo Park to enhance walkability and active transportation
- 2 Create a clear and direct link between the station and festival space
- 3 Enhance the Laurel Trail as a major active transportation connection by strengthening links to other park trails and active transportation routes
- 4 Improve access for pedestrians and cyclists along Seagram Drive
- 5 Establish a Pedestrian Transfer Zone along University Avenue between King and Hazel to support access to and transfers between bus services
- 6 Encourage shared parking and reduced parking rates to avoid surface parking lots, particularly within the park or near the station

3.3.1 Implement the proposed trail network through Waterloo Park to enhance walkability and active transportation



The new LRT stop in Waterloo Park will be an important anchor within the area's pedestrian and cycling network. As more and more people access the area by LRT, the planned Waterloo Park trail network will play an increasingly important role in moving transit users and park visitors between the station and nearby destinations. Enhancements to the walking/cycling connections between the LRT station and areas within the park will greatly contribute to the park's success as a regional destination and venue for special events.

A key improvement to the park's pedestrian and cycling network will be the completion of the Central Promenade and corridor crossings identified in the Waterloo Park Master Plan. The parallel paths located on either side of the LRT corridor will be the primary pedestrian and cycling link connecting the station with both the Laurel Trail and the proposed Perimeter Walkway. The parallel paths can be supported with the greatest level of pedestrian and cycling amenity, including enhanced wayfinding and lighting.

Connecting with the Central Promenade and running around the edge of the park is the proposed Perimeter Walkway. **The Perimeter Walkway will form an important secondary link to and from the station area** for park users connecting people from the Central Promenade to destinations throughout the park. **Landmarking and improving wayfinding at key access points to the walkway will help to support improved access to the park and station.**

RECOMMENDED GUIDELINES AND STRATEGIES

- Complete the planned Central Promenade and parallel trail network to connect the station with key park destinations .
- Support improved wayfinding through the inclusion of directional signage at the station, the corridor crossing points, and where the promenade meets the proposed Perimeter Walkway.
- Treat the Central Promenade as a Pedestrian Transfer Zone with a higher level of pedestrian and cycling amenity on both sides of the corridor, including pedestrian-scaled lighting, seating, waste receptacles and parking for bicycles.
- Complete the Perimeter Walkway around the edge of the park to link the station and Central Promenade with key park destinations.
- Work with the Region and Grandlinq to secure a second crossing of the LRT corridor where the southern half of the Perimeter Walkway meets the LRT corridor.
- Improve the relationship of Waterloo Park to surrounding neighbourhoods by improving wayfinding and enhancing gateways at key access points to the Perimeter Walkway. Potential improvements include consistent gateway treatments to mark entrance points, as well as directional signage.

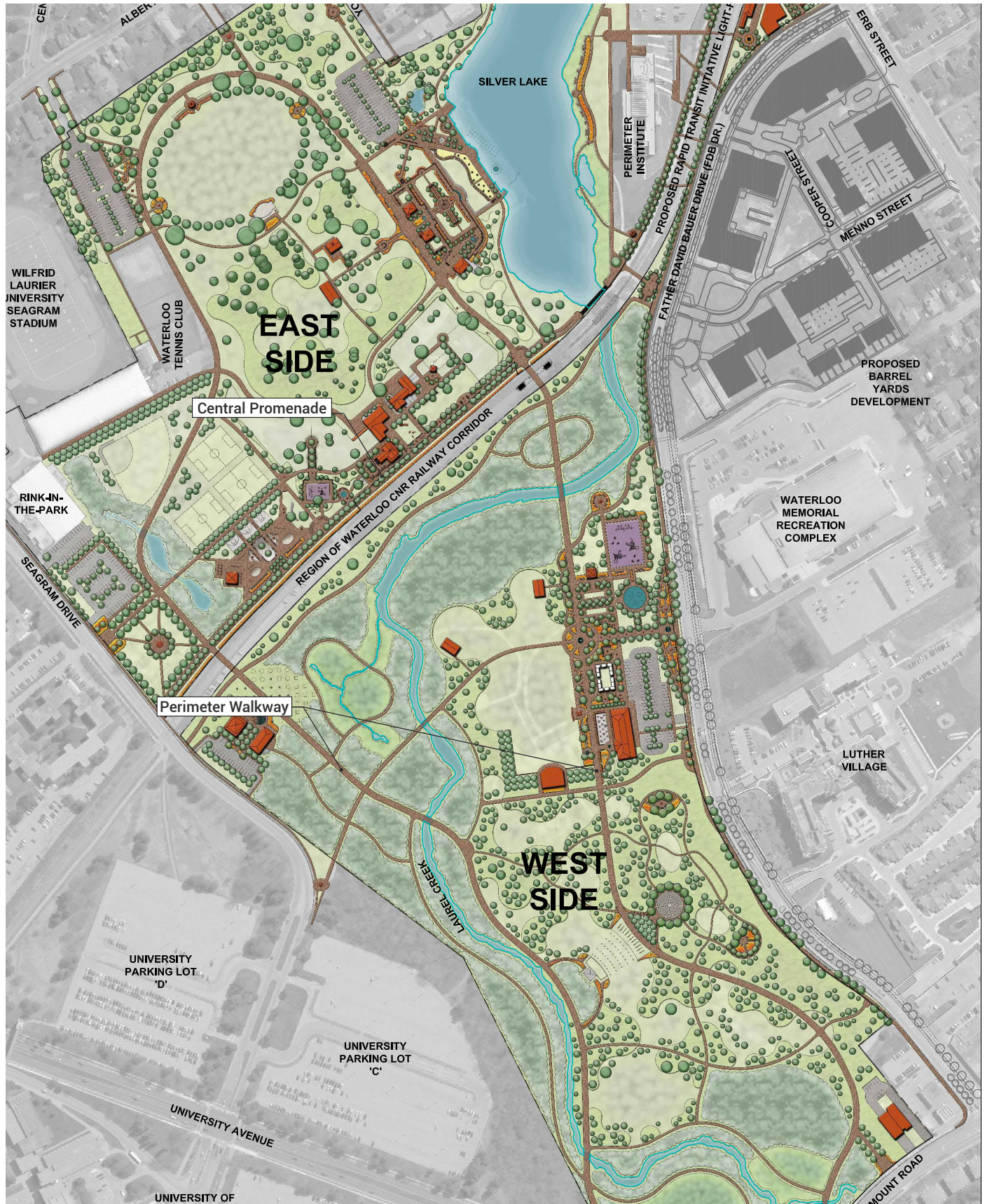


Figure 3-9. The Waterloo Park Master Plan identifies a network of trails aimed at enhancing connectivity throughout the park

3.3.2 Create a clear and direct link between the station and festival space



A key component of the regeneration of Waterloo Park will be the **Festival Heart**, a new civic space designed to accommodate outdoor performances and events. The Festival Heart will be located off of Father David Bauer Drive, where the baseball diamonds are currently situated. With a capacity of up to 10,000 people, this festival space will be a major attraction drawing users from across the Region, many of whom could arrive by the LRT.

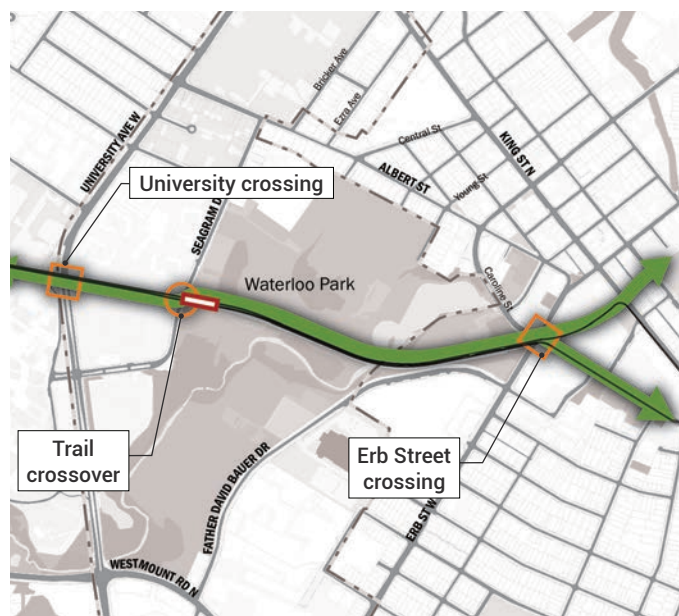
While the Waterloo Park Master Plan identifies a pedestrian and cycling loop connecting all areas of the park, the plan was created prior to the finalization of the station stop location, and as a result there is no direct link identified between the station and Festival Heart. **Establishing a direct link to and from the ION station to the Festival Heart will be needed to support access to major events**, reducing travel distances for participants arriving via LRT, and helping to manage crowds.

The connection would serve a secondary function of improving access between the north and south sides of the park for people traveling between the University of Waterloo campus and the Westmount neighbourhood to the south. There are opportunities to support this connection, including a new pedestrian-activated crossing at Father David Bauer Drive. There is also the potential to create a dedicated pathway through the Waterloo Memorial Recreation Complex property, linking Roslin Avenue or Avondale Avenue in the south to the new crossing.

RECOMMENDED GUIDELINES AND STRATEGIES

- Provide an extra-wide, 4 to 5 metre pedestrian and cycling connection between the south end of the station platform and the proposed Festival Heart.
- Ensure that the design of the pedestrian and cycling link establishes clear sight-lines through the woodlot, and incorporate pedestrian-oriented lighting to promote passive surveillance and enhanced safety.
- Support the new connection with an improved pedestrian and cycling bridge over Laurel Creek.
- Extend the new link south to the Waterloo Memorial Recreation Complex and support access through the creation of a new pedestrian-activated crossing of Father David Bauer Drive.
- Establish a new path from the Father David Bauer Drive crossing south through the recreational complex site to connect with either Roslin Avenue or Avondale Avenue. Support the connection with pedestrian-oriented lighting and trees to improve comfort for pedestrians who will be passing alongside areas of surface parking.

3.3.3 Enhance the Laurel Trail as a major active transportation connection by strengthening links to other park trails and active transportation routes



The Laurel Trail is a prominent and highly popular element of the City's active transportation system. An average of about 30,000 pedestrians and cyclists a month use the trail to cross the Laurel Creek at the southern end of Waterloo Park. The Laurel Trail connects south to Uptown Waterloo and the Iron Horse Trail, and north towards the R&T Park and the Trans Canada Trail.

The ION station's location immediately adjacent to the Laurel Trail creates an opportunity to leverage this important connection to enhance linkages and mobility throughout the area. Ensuring there are clear, convenient and well-maintained connections to the Laurel Trail from the station and within Waterloo Park will encourage active travel. **Strengthening linkages and transfer points between the trail and the City's on-street cycling network** – including at Seagram Drive, University Avenue, and the intersection of Erb and Caroline Street in Uptown – can also support connections to surrounding neighbourhoods, amenities and destinations.

Thoughtful **design solutions are particularly needed where the trail switches from the east to the west side of the corridor** at Seagram Drive to foster a safe and seamless link for cyclists and pedestrians.

RECOMMENDED GUIDELINES AND STRATEGIES

- Create a safe rail crossing point where the Laurel Trail transitions from the east to west side of the LRT corridor. Incorporate products that eliminate gaps between the rails, and establish a more generous corridor crossing designed to encourage a perpendicular crossing of the LRT tracks.
- Improve the crossing of University Avenue through the integration of the LRT and trail crossing points, pedestrian and cycling-activated signals with countdown timers, and application of zebra striping to enhance driver awareness.
- Locate wayfinding signage where the trail meets other active transportation corridors, including at University Avenue, Seagram Drive and Caroline Street.
- Improve the crossing of the Laurel Trail and Erb Street through the elimination of dedicated turning lanes and the incorporation of products that eliminate flange grooves between the rails.
- Consider piloting the development of a protected intersection to support cyclists transferring between the Laurel and Iron Horse trails.

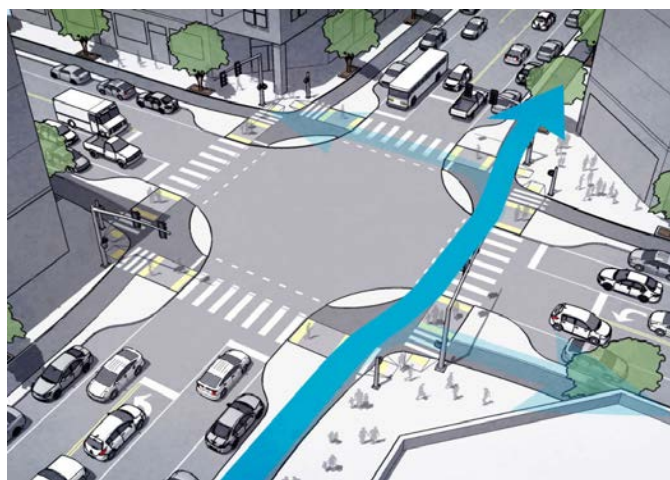
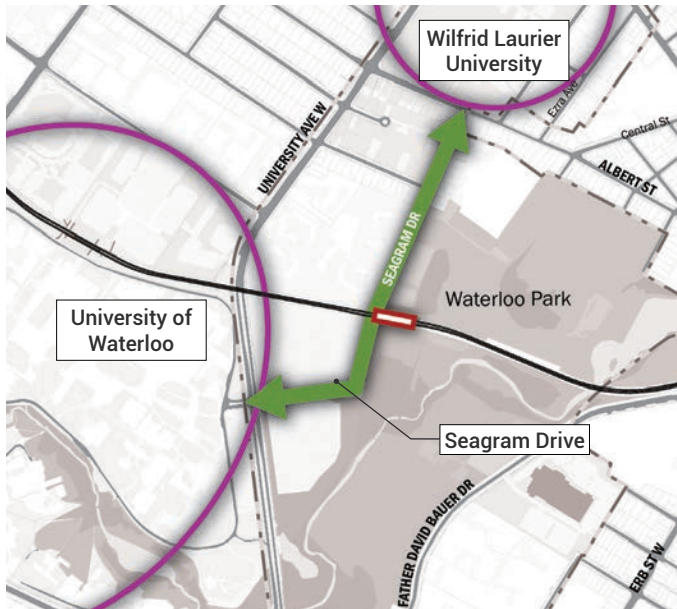


Figure 3-10. Protected intersections, such as this example above use design strategies to improve safety for cyclists at intersections.

3.3.4 Improve access for pedestrians and cyclists along Seagram Drive



Seagram Drive is the primary pedestrian link between the rapid transit corridor and Wilfrid Laurier University, and a secondary point of access between the station and the University of Waterloo. The street will also be an important cycling connection between the universities and the Laurel Trail, supporting active transportation connections south to Kitchener and north past the R&T Park.

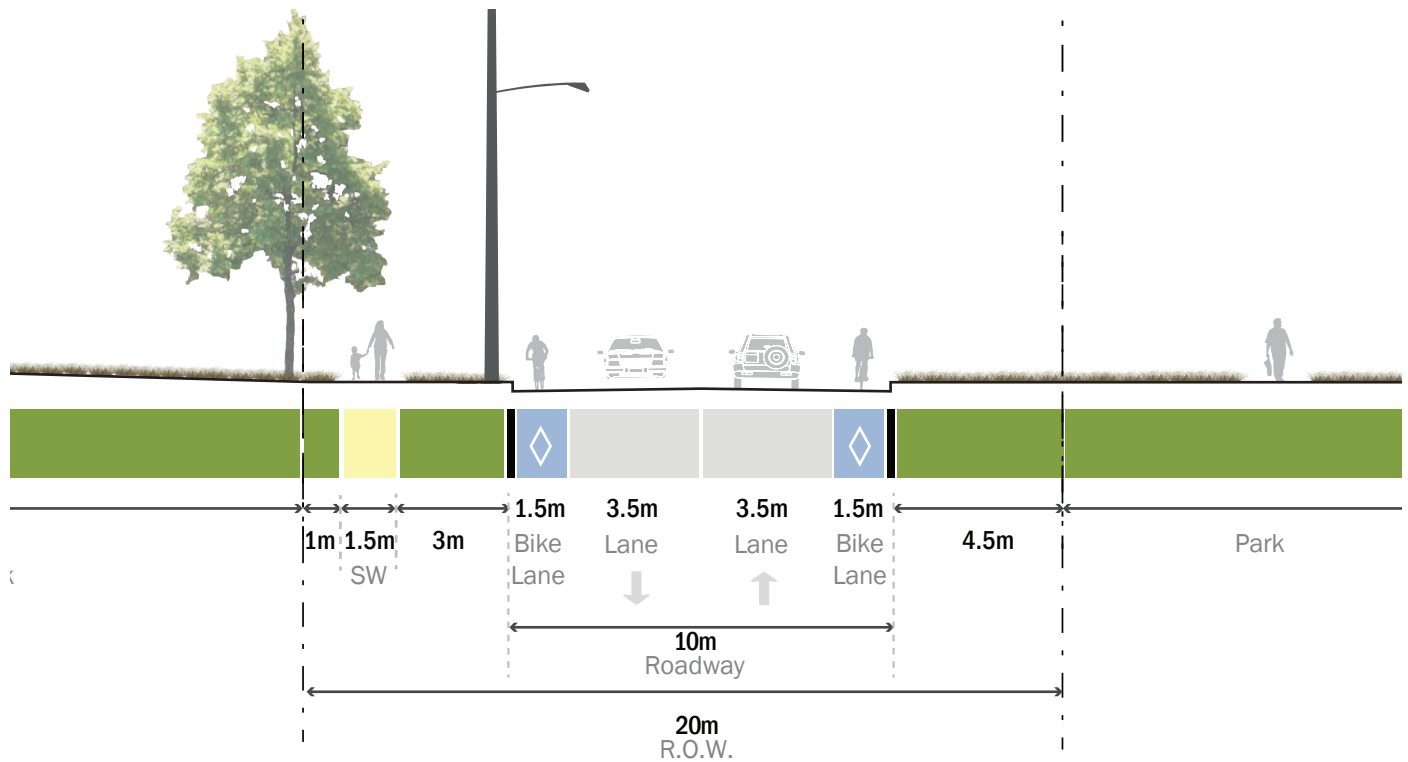
To ensure that Seagram Drive is capable of supporting these connections, enhanced pedestrian and cycling amenities are needed. The provision of sidewalks on both sides of the street, with a more generous sidewalk along the south side, could help to support students walking to the universities. The southern walkway could be supported with amenities and design elements, such as pedestrian-oriented lighting, waste receptacles, signage and wayfinding. There is also the opportunity to locate a bike share station at the station and on both university campuses to support cyclists commuting to and from University.

During rare LRT service suspensions, Seagram Drive may be used for bus bridging operations. Enhancements to the streets will need to consider the potential to accommodate occasional bus services along Seagram Drive.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish sidewalks on both sides of Seagram Drive from University Avenue in the west to Albert Street in the east. Provide a more generous, 3 metre wide sidewalk along the south side of the street to enhance this primary connection to and from the station.
- Complete the cycling connection east to Wilfrid Laurier University through the removal of the dedicated turning lane at Albert Street, as well as the extension of bicycles lanes or the use of sharrows.
- Improve safety for users traveling to and from the station at night through the addition of pedestrian-oriented lighting along the length of the street.
- Improve the intersection at Albert Street and Seagram Drive through the introduction of a new accessible, marked crossing point from the south side of Seagram Drive to the far side of Albert Street, and incorporation of zebra striping to enhance driver awareness.
- Ensure that street enhancements take into consideration the possibility that Seagram Drive may need to accommodate occasional GRT bus services.

EXISTING SEAGRAM DRIVE CROSS SECTION



TYPICAL SEAGRAM DRIVE CROSS SECTION



Figure 3-11. Pedestrian, cycling and landscape improvements along Seagram Drive can help to reinforce the street as an important connector between the station and two universities.

3.3.5 Establish a Pedestrian Transfer Zone along University Avenue between King and Hazel to support access to and transfers between bus services



University Avenue, between King Street and Hazel Street, is an important point of access and transfer within the City and Region's bus network. This node is a significant transfer point for a number of buses, including an iXpress route, several local bus services, and a GO Transit bus route. In addition, the area is the primary point of bus access for Laurier students traveling to and from the University by bus. Despite the importance of this area as a place of access and transfer, there are a number of issues that detract from the user experience. A lack of landscaping and mature street trees at the intersection of King and University creates an uncomfortable environment for passengers during hot summer months and exposed waiting areas during the colder winter season.

There are opportunities to enhance wayfinding and support transfers between different routes and transit systems. Potential opportunities to improve amenity and the overall mobility experience for pedestrians and transit users include: new planting and trees to improve comfort during hot summer and cold winter months; incorporation of real-time next vehicle information at all stops; wayfinding to support transfers between

services/systems; and pedestrian-oriented lighting to assist users during the evening or darker winter days. Over time, an opportunity exists to integrate waiting areas within new buildings and uses to create a more comfortable environment during all seasons.

To further enhance the travel experience for students and visitors in this area, there is the potential to **introduce streetscape elements or public art that distinguish the intersection as a gateway** into the Laurier campus and more generally the University precinct from the east.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a Pedestrian Transfer Zone along University Avenue between King Street and Hazel Street with higher levels of pedestrian amenity, including pedestrian-oriented lighting and wayfinding signage.
- Incorporate real-time bus information signage to support passengers accessing the system or transferring between routes.
- Plant trees and incorporate low-lying evergreen shrubs and planting to provide shade during hot summer months and shelter from wind during the winter. Where space does not exist within the ROW, ensure new developments provide small setbacks to support new trees and landscaping.
- Encourage new buildings adjacent to bus stops to incorporate features such as internal waiting areas or overhangs to support waiting passengers.
- Explore opportunities to celebrate the University by integrating public art or other streetscape elements into the design of the intersection.

3.3.6 Encourage shared parking and reduced parking rates to avoid surface parking lots, particularly within the park or near the station

The station area contains approximately 16.8 hectares of surface parking, or about 5,600 parking spaces.

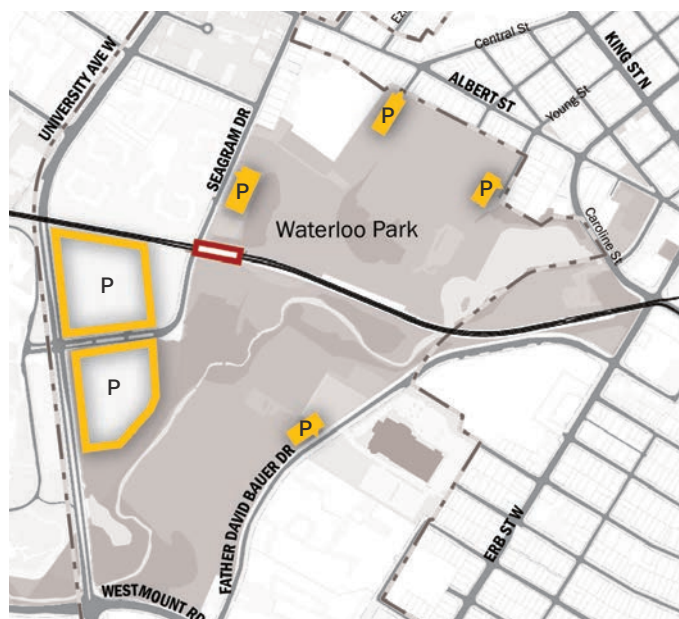
There are large areas of surface parking immediately around the ION station, including the two large University of Waterloo parking lots, parking areas associated with UW Place, and a Waterloo Park lot immediately west of the station. Other areas of surface parking can be found on the Wilfrid Laurier University campus, around the Waterloo Memorial Recreation Complex, and at the Westmount Place commercial complex.

The introduction of LRT creates an opportunity to reconsider the approach to parking within the station area. The LRT, along with future improvements to the pedestrian and cycling network, will make it easier for people to get to Waterloo Park, Wilfrid Laurier University, and other nearby destinations. **Improved accessibility and enhanced mobility choice can reduce the need for large surface parking lots around the station.**

Reductions in parking rates for new development should be considered as the area transforms into a more transit-oriented place over the time. There is also an opportunity for new residential, commercial or institutional development surrounding the park to introduce below grade or structured parking to free up land for new uses that can help to activate the station area.

Parking within Waterloo Park is a special consideration within this area. The Waterloo Park Master Plan emphasizes the desire to prioritize the pedestrian experience. There is currently a significant amount of parking located within the park and along Seagram Drive. This not only reduces the amount of usable park space, but also creates an inhospitable image of the park along its most prominent frontage.

There is an opportunity to revisit the amount of parking that should be provided within Waterloo Park, and to explore opportunities to better manage the supply and demand for parking. Reducing parking creates the potential to re-purpose surplus parking areas for more transit-supportive uses that can contribute to the viability of the LRT and complement the future vision for Waterloo Park. **Opportunities may also exist to share parking** with the adjacent universities to make use of underutilized parking during evenings and weekends when park use is at its highest.



RECOMMENDED GUIDELINES AND STRATEGIES

- Consider reductions in parking rates for new development, and encourage a shift to below grade or structured parking.
- Pursue shared parking arrangements between Waterloo Park and the University of Waterloo during evenings and weekends to reduce the amount of parking required in the park.
- Pursue a strategy of smaller dispersed lots accessed directly from the perimeter of the park to remove vehicular traffic from the centre of the park.
- Design parking lots to enhance the park setting through the use of permeable surfaces such as gravel or permeable paving stones, and by planting trees between aisles of parking.
- Convert surplus surface parking areas within the park into other uses that are complementary to the park (e.g. green space, park facilities, retail amenities for visitors).
- Work with the universities and other institutions to develop Transportation Demand Management strategies that reduce the need for parking.

3.4. Built Form and Land Use

The station area is characterized by a diversity of building types, including stand-alone pavilions and structures in Waterloo Park, as well as a range of buildings and uses around the edge of the park, such as the Perimeter Institute, University Stadium, the historic MacGregor-Albert neighbourhood, community facilities, high-density housing and medium-density apartment buildings. The area is defined by its relationship with Waterloo Park, an important community asset that will continue to function as an organizing element for future development.

Despite proximity to the park, many buildings relate poorly to this important feature. Future redevelopment presents the opportunity to orient new buildings towards the park so that they help define and reinforce the park setting, while also supporting pedestrian movement between the park and surrounding areas. Residential infill and development can optimize the use

of underutilized sites, such as large surface parking lots or strip commercial developments, while also helping to diversify the housing mix. Finally, the lack of amenities and services in the area can be redressed through future mixed-use redevelopment.

The proposed planning framework, as seen on Figure 3-12, is generally consistent with existing land use permissions, which already allow for a mix of uses and higher densities. Change and redevelopment within Waterloo Park and on the university campus lands will also be dictated by their respective master plans. The proposed planning framework is therefore focused on ensuring compatible infill and redevelopment that enhances the character of the area and improves amenity for pedestrians, cyclists and transit users.

The following section outlines a series of directions for buildings and land use within the station area.

Office Mixed-Use

Indicates areas that will be predominantly office employment in nature where a mix of supportive uses within buildings, such as retail or restaurant will be encouraged to support area employees.

Commercial Mixed-Use

Indicates areas that will be predominantly commercial in nature where a mix of uses within buildings or on the block will be encouraged, including office and upper level residential uses to support activity throughout the day and into the evening.

Residential Mixed-Use

Indicates medium-high to high-density residential areas where some street-related retail or active at-grade uses are permitted at the base of a building to improve amenity for local residents.

Residential

Indicates areas of low to medium-density residential development.

Civic Facilities

Indicates existing community facilities such as schools, community centres or recreational facilities.

Existing Open Space

Indicates existing parks or open spaces. Buildings or uses may be permitted within existing open spaces so long as they are contributing to the functional and/or programmatic requirements of the park and are designed to sensitively integrate within the open space.

Academic

Indicates University-related lands. These lands are appropriate for a range of University-related uses including new class or lab space or student residences. Street-related retail integrated into the base of buildings will be permitted to improve amenity for students and employees.

Active Frontage

Indicates areas where the ground floor is required to accommodate non-residential uses, including commercial, retail and community/institutional uses at grade that are designed in a manner that animates and activates the street.

Convertible Frontage

Indicates areas which are planned and designed to accommodate mixed commercial, retail, and community/institutional uses at grade, at such time as these uses may be supported.

Station Area Boundary

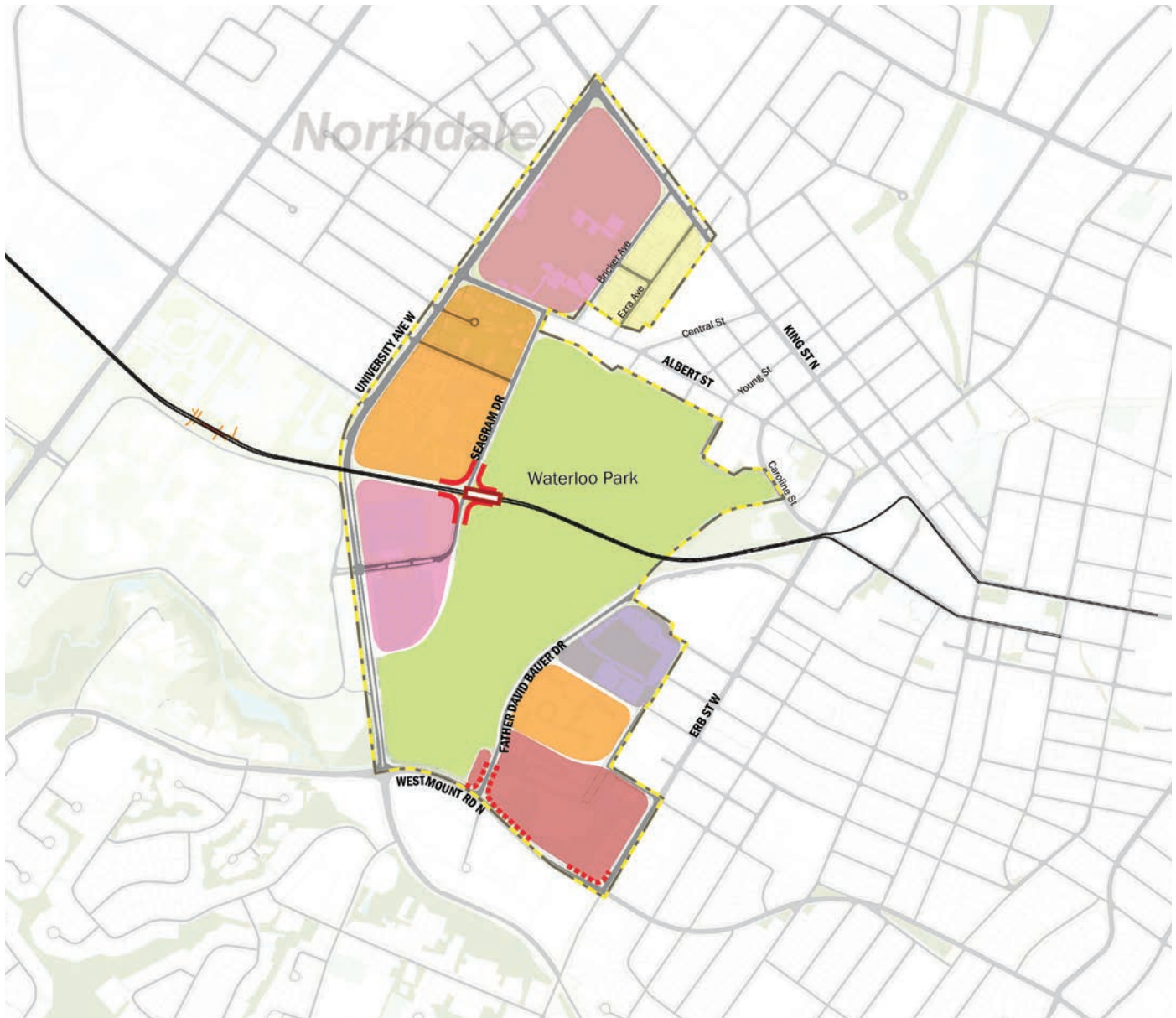


Figure 3-12. Land Use Framework



Key Directions

- 1 Ensure that new development helps enhance the setting of and improve connectivity to the park
- 2 Ensure that the redevelopment of existing recreational facilities and new park-related structures contribute to the setting of the park
- 3 Support the implementation of the Laurier Master Plan
- 4 Plan for a range of housing, including options for families and seniors
- 5 Improve the relationship of UW Place to its surroundings and explore opportunities for new commercial, retail and service uses

3.4.1 Ensure that new development helps enhance the setting of and improve connectivity to the park



Waterloo Park is the City's premier civic open space, and it should be protected as a place of recreation and enjoyment for the public. New development will instead take place around the park and along key streets within the station area. Buildings on streets such as Seagram Drive, Father David Bauer Drive and Westmount Road can be designed and oriented to help frame and define the park with sufficient setbacks to support the establishment of a boulevard, sidewalk and street trees. **Ground floors should be designed to contribute to street life and animation of spaces around the park.**

In select places, such as across from the station or at the intersection of Father David Bauer Drive and Westmount Road, **there are opportunities for active uses that can help provide amenity for students, residents and employees** of the area and increase activity levels into the evening and on weekends. In several places, large blocks adjacent to the park have the potential for significant new development. Development/redevelopment of these parcels can be designed to improve and support access to the park by extending connections from surrounding streets to and from the park.

RECOMMENDED GUIDELINES AND STRATEGIES

- Design buildings identified as having active frontage (See Figure 3-12) to support active street level uses.
- Design buildings identified as having convertible frontage (See Figure 3-12) to support active street level uses over time.
- Establish a minimum podium height of 4 commercial storeys or 6 residential storeys for buildings adjacent to the park along Seagram Drive, Father David Bauer Drive and Westmount Road so that they can help to frame the space.
- Incorporate setbacks in buildings over 7 storeys in height to reduce the perceived scale of the structure.
- Set towers over 10 storeys in height back from the podium to reduce their perceived scale along the street and ensure that they are spaced to minimize their shadow impact.
- Establish a maximum building length of 70 metres to preserve connectivity and views to and from the park.
- Articulate frontages longer than 35 metres in to break up the building massing so that the structure reads as a series of linked pavilions.



Figure 3-13. Establishing a minimum podium height for buildings adjacent to the park can help to increase densities around the station and help to frame the space



Figure 3-14. Building lengths of approximately 70m and active frontages that are articulated every 35m helps to ensure that this new development in contributes to permeability and the establishment of more walkable streets within Uptown

3.4.2 Ensure that the redevelopment of existing recreational facilities and new park-related structures contribute to the setting of the park



Figure 3-15. The pavilion in St James Park, London has been designed to fit seamlessly into the park and displays a simple design that can stand the test of time.

At the northeast corner of Waterloo Park are a number of recreational facilities, including University Stadium, the Rink in the Park, and the Waterloo Tennis Centre.

Redevelopment of these buildings and structures over time could help to improve their relationship to the park by improving views and connectivity into the park, incorporating green technologies and landscaping that helps to blend the buildings into their surroundings, and by orienting uses where they can help to activate their surroundings.

In addition to these existing uses, **the Waterloo Park Master Plan identifies a number of new uses that would be appropriate to add to the park over time.** These uses will be accommodated in smaller pavilion-type structures located throughout the park. Consideration should be given to how the design of these structures can contribute to the character of the park and create interest from all sides of the structure. In addition, groups of smaller structures can be organized to create intimate spaces that contrast with the openness of the park.

RECOMMENDED GUIDELINES AND STRATEGIES

- Design buildings to address both Seagram Drive and Waterloo Park.
- Design buildings to maximize views from the structure into Waterloo Park.
- Promote attractive views and skyline surrounding Waterloo Park.
- Façades shall contribute to the life of Seagram Drive and Waterloo Park through the use of elements such as generously proportioned windows and doors.
- Reduce the visual scale and massing of large recreational facilities through techniques such as variation in massing, material, colour and/or texture.
- Construct buildings of high-quality materials capable of "standing the test of time."
- Integrate servicing elements such as garbage and utilities within the building design. Avoid locating mechanical equipment adjacent to Seagram Drive or Waterloo Park.
- Restrict outdoor storage areas.
- Organize clusters of smaller buildings to establish more intimate spaces within the park that can act as spill-out spaces for those buildings.

3.4.3 Support the implementation of the Laurier Master Plan



Figure 3-16. The new campus at UOIT is developing around a series of quads that contribute to the establishment of a distinct campus identity

The Laurier Campus Master Plan sets out a long-term vision and plan to guide future growth and campus development. The Master Plan recognizes the need to transition through redevelopment of its existing land holdings, as well as expansion to the east and west of the central campus. Much of the existing campus was developed during the 1960s and was based on a utilitarian street and building design aesthetic that has resulted in limited architectural variety, few formal pedestrian connections, and ample surface parking. Implementation of the Master Plan can help to create a compact, inviting and pedestrian-oriented campus.

Several campus buildings and surface parking lots are appropriate locations for mixed-use redevelopment, including the cluster of low-rise residences at the centre of the campus and Laurier Place Residences along Sunview Street. Potential improvements to Seagram Drive and enhanced trail connections through Waterloo Park can be aligned with Laurier's redevelopment plans, and can help connect students and staff to the station.



Figure 3-17. Wilfrid Laurier University could benefit from new development organized to reinforce an identity for the campus

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a structure of quads and connecting pathways that reinforce a recognizable identity for the campus through the redevelopment of existing buildings or addition of new buildings.
- Develop a landscape and public realm strategy that can help to reinforce a distinct identity for the campus and enhance its image for users.
- Develop a consistent wayfinding and branding strategy for the campus and target key gateway areas for early investments, including the eastern end of Seagram Drive and the intersections of University Avenue and Albert Street, Hazel Street and King Street.

3.4.4 Plan for a range of housing, including options for families and seniors



Figure 3-18. A mix of low-rise, mid-rise and high-rise development can help to create a range of housing options and cater to a greater diversity of people

Many new development projects have been targeted to students providing rental apartments designed to meet the needs of the substantial university population within the area. With strong demand for student housing accommodations, there is an opportunity and need to ensure a balanced range of housing is provided. Opportunities should be explored to facilitate a broader range and diversity of housing options.

There is therefore a desire to introduce a greater diversity of housing choice capable of accommodating families, seniors and working professionals who may be drawn to local amenities and the area's proximity to Uptown Waterloo. To support a more complete community that offers housing, retail, services, and recreational options for all residents, the development of townhouses, mid-rise condominiums, seniors' rental apartments, and other housing products are encouraged.

RECOMMENDED GUIDELINES AND STRATEGIES

- Support a range of housing types and tenure options, including new grade-related housing such as townhouses, mid-rise buildings and higher density apartments.
- Encourage a variety of unit types and sizes including 1, 2 and 3 bedroom units.
- Incorporate new housing as part of mixed-use redevelopment opportunities.

3.4.5 Improve the relationship of UW Place to its surroundings and explore opportunities for new commercial, retail and service uses



Figure 3-19. The extension of streets and the provision of a mix of new commercial, retail and service uses can provide amenity for area residents and improve connectivity to surrounding neighbourhoods

University of Waterloo Place is a cluster of six university residence buildings that currently accommodate approximately 1,650 students. The buildings were constructed during the 1960s and are characteristic of the single-use communities that were built during this time. It is characterized by buildings set back from the street behind large areas of surface parking with limited pedestrian amenity.

UW Place is a prime candidate for intensification and the addition of a greater mix of uses. Consideration should be given to how redevelopment of the site can improve the relationship of the area to its surroundings, and introduce a mix of uses to improve amenity for area residents, visitors and employees.

RECOMMENDED GUIDELINES AND STRATEGIES

- Intensification or redevelopment of UW Place could consider extending adjacent streets and establishing a street and block pattern that helps structure new development and support access through the site.
- Design buildings identified as having priority for active frontage to support active street level uses.
- Encourage the inclusion of new commercial uses (grocery stores, restaurants, or student-oriented services) to the area as part of future redevelopment.

3.5. Public Realm Framework

Waterloo Park as an important civic asset and a defining element of the public realm within the station area. Beyond the range of active and passive recreational spaces available within the park, the area features an extensive trail network, including the Laurel Trail, which links directly to Uptown Waterloo. The area contains a range of public art installations, many which are located along Father David Bauer Drive, which helps to reinforce the area as a cultural and recreational hub within the City.

There are opportunities to further enhance the public spaces within the area to support a more comfortable experience for pedestrians, cyclists, and transit users. The new ION station will help to significantly improve access to the park and surrounding destinations, but there is a need for a landscape and public realm strategy to help integrate the corridor through the

park and improve connectivity to and from the station. As well, while the area features an extensive path network, the lack of lighting and pedestrian amenity along these trails raises concerns about pedestrian comfort at night. The Waterloo Park Master Plan envisions a range of park and trail improvements, however some minor updates to the plans are needed to reflect the current station location. Lastly, Seagram Drive is recognized as a major connector to and from the station, but the street has a disjointed landscape characteristic, with some sections lacking street trees and a continuous sidewalk network. Improvements to this street will be needed to respond to its changing role within the area.

The following section outlines a series of directions to improve the public realm throughout the station area.



Avenues

Indicates primary streets through the station area that are also important transit corridors. Key considerations for Avenues are identified in Section 2.2.4



Multi-Modal Streets

Indicates streets intended to also act as important cycling connections within the station area. Key considerations for Multi-Modal Streets are identified in Section 2.2.4



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4



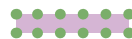
Pedestrian and Cycling Connections

Indicates existing off street pedestrian and cycling connections within the station area.



Priority Path Network

Indicates the network of pathways that should be prioritized for enhancements and higher levels of maintenance aimed at improving safety and comfort of pedestrians and cyclists



Seagram Drive Improvements

Indicates area for targeted improvements along Seagram Drive to enhance the setting of the street as an important gateway to the universities.



Central Promenade

Indicates the central promenade, an area where landscape improvements should create visual interest all times of the year and help to integrate the LRT corridor. This area should also be the focus of new public art.



Focus of Park Programming

Indicates an area adjacent to the station where a greater level of activity in the form of new park-related uses and programming should be encouraged. This area should also be the focus of new public art.



Festival Heart

Indicates the approximate location of the planned festival heart, a place for large gatherings within the park



Station Area Boundary

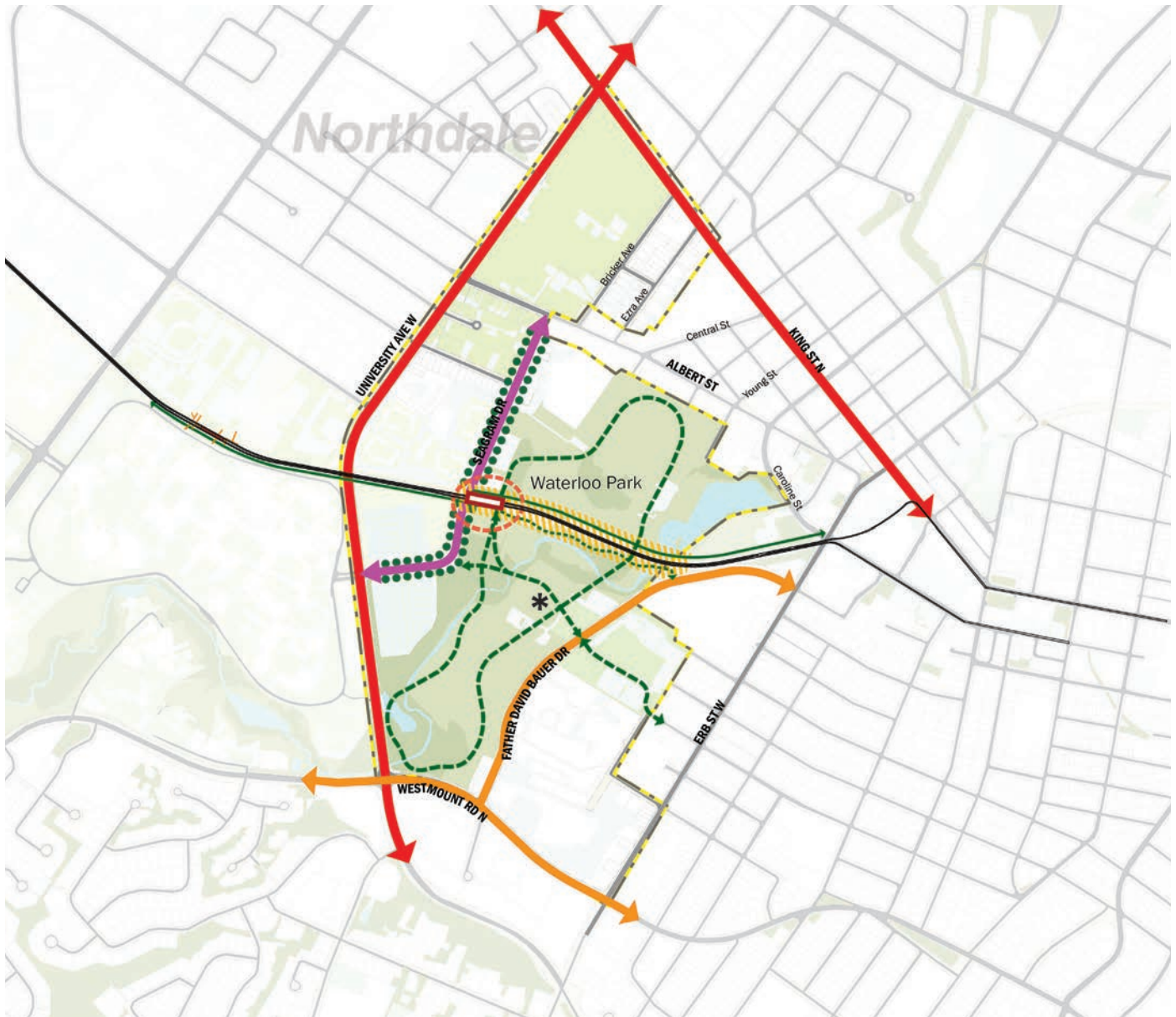


Figure 3-20. Public Realm Framework



Key Directions

- 1 Transform Seagram Drive as an important gateway to Laurier and the University of Waterloo
- 2 Introduce public art near the station to celebrate the distinct community and enhance the sense of place
- 3 Improve pedestrian comfort in Waterloo Park, ensuring priority paths are well-lit and maintained
- 4 Support greater levels of activity at the station through new park programming or by shifting some proposed facilities adjacent to the station
- 5 Develop a detailed landscape and public realm improvement strategy for the Central Promenade on both sides of the LRT corridor

3.5.1 Transform Seagram Drive as an important gateway to Laurier and the University of Waterloo

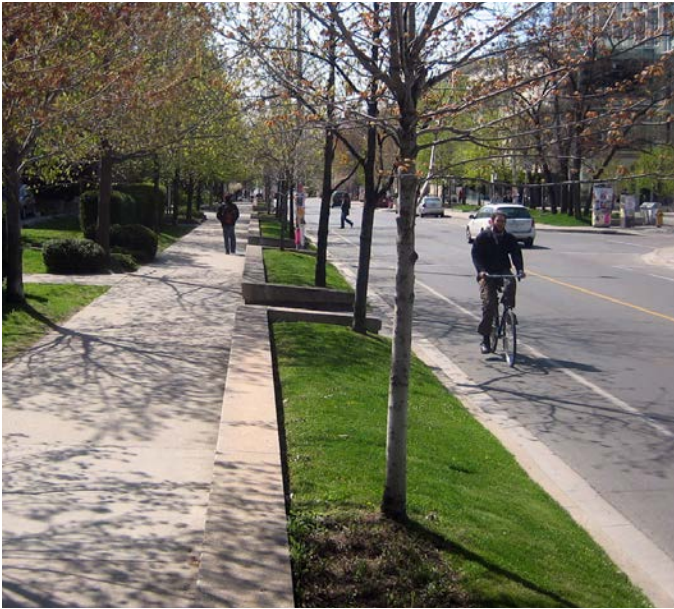


Figure 3-21. Enhanced public realm along St George Street at the University of Toronto help to support pedestrians and cyclists and reinforce the street as a gateway into the university

Seagram Drive will serve an important role within the station area, acting as a key linkage between the ION station, Waterloo Park and the two university campuses. There are opportunities to **undertake public realm improvements along Seagram Drive to better support travel for pedestrians, cyclists and transit riders** getting off at the station. Streetscape enhancements, including the provision of sidewalks on both sides of the street, and pedestrian-scaled lighting and furnishings, would help to improve the walk to and from the station. To **reinforce the street as a gateway to the universities and Waterloo Park**, improved signage, wayfinding, street banners or public art could be incorporated into the design of the street. The wayfinding strategy could also integrate Laurier or University of Waterloo branding, signage and campus colours to strengthen the universities' presence within the station area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Enhance landscaping along Seagram Drive by providing a row of regularly spaced trees on either side of the widened 3 metre sidewalk along the south side of the street.
- Improve amenity for pedestrians traveling to and from the station through the inclusion of a higher level of street furnishings along the south side of Seagram Drive, such as benches and waste receptacles.
- Consider the installation of street banners along the length of the street. The banners could be used as part of a wayfinding strategy for the area and represent Wilfrid Laurier University and Waterloo Park to the east of the station and the University of Waterloo and Waterloo Park to the west of the station.
- Avoid clutter by combining street lights, pedestrian-oriented lighting and banners on the same pole.
- Improve amenity for pedestrians and cyclists during hotter summer months through the planting of shade trees along the length of the street. This will involve working with adjacent property owners to fill in some of the gaps that exist at the eastern end of the street.

3.5.2 Introduce public art near the station to celebrate the distinct community and enhance the sense of place



Figure 3-22. More permanent artwork can help to celebrate the rich history of the park and encourage visitors to explore its assets

A variety of public art installations are located adjacent to Waterloo Park and within the station area.

An opportunity exists to celebrate the cluster of institutional and cultural destinations through the integration of public art at the station and along the length of the Central Promenade. The introduction of a significant art work or commemorative installations could speak to the rich history of the park, the rail corridor, the St. Jacob's Railway, or the MacGregor-Albert Heritage District. These works could also celebrate the role of mobility within the city and around the station, and highlight the convergence of recreational trails, the former rail line, and the new transit corridor.

An opportunity exists to also explore art that is temporary in nature, which could add continuing interest for users traveling along the Central Promenade. Temporary works could reflect a variety of themes and could provide a range of opportunities for community engagement.



Figure 3-23. The recent "yarn bombing" urban knitting initiative is an example of community-based public art in Waterloo.

RECOMMENDED GUIDELINES AND STRATEGIES

- Explore the potential to integrate a significant public art feature at the station.
- Design the Central Promenade to be capable of supporting temporary art installations along its length by providing periodic spaces for installation supported by electrical outlets and lighting.
- Explore opportunities for enhanced lighting along the main park trails to guide visitors from the station, through the park and to Father David Bauer Drive.

3.5.3 Improve pedestrian comfort in Waterloo Park, ensuring priority paths are well-lit and maintained



Figure 3-24. Clear sight-lines and lighting can help to enhance the sense of safety in the early morning hours or at night

Active recreation and mobility is a distinctive feature of the station area. The Waterloo Park Master Plan envisions a significant expansion to the park's circulation network, including a Central Promenade loop through the park, as well as secondary paths to key park activities and spaces. **Many park visitors make use of the trail network early in the morning, at night, and during the winter months.** Pedestrian comfort within and surrounding Waterloo Park has therefore emerged as an important planning and design consideration.

Incorporating appropriate lighting, furniture, visibility, and other design measures into the park can ensure that pedestrians feel comfortable at all hours.

Ongoing maintenance of landscaping and vegetation is needed to ensure pathways are clear of obstructions and highly visible, while snow clearance is necessary along primary routes during the winter months.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Provide emergency call boxes at the station and at regular intervals along key routes through the park, including the Central Promenade and along the connection to the Festival Heart.
- b. Incorporate pedestrian-oriented lighting along the primary paths, including the Central promenade, Perimeter Walkway and a new Festival Heart connection extending south to Father David Bauer Drive.
- c. Focus plowing/maintenance on the Central Promenade and Festival Heart connection during winter months.
- d. Design pathways through the park's woodlots to maximize visibility and prevent the creation of blind corners.
- e. Determine a minimum clearance standard between the edge of pathways and obstructive vegetation and conduct regular audits of the path network to identify if and where maintenance is needed.

3.5.4 Support greater levels of activity at the station through new park programming or by shifting some proposed facilities adjacent to the station



Figure 3-25. Small eating establishments can help to increase activity at the station throughout the day.

The Waterloo Park Master Plan was completed in 2009, and at the time anticipated a different location for the ION station. Based on the final location of the station at the northern end of the park, there is an opportunity to consider minor refinements to the Master Plan to better align with the ION station.

By locating new uses or shifting some planned uses, such as the farmstead with its proposed farmhouse, patio and staff facilities closer to Seagram Drive, **there is the potential to increase activity at the station while improving access for area visitors and park employees.** More active programming and facilities near the station can be complemented by other active uses and activities, including temporary uses such as pop-up cafés and restaurants, which can also test the appetite for more permanent facilities around the station.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Test the potential for a small eating establishment or café at the station entrance through an initial pilot project utilizing food trucks or other temporary facilities.
- b. If a temporary eating establishment is successful, consider the development of a more permanent restaurant and visitor centre at the station.
- c. Consider shifting the proposed farmstead or other facilities closer to Seagram Drive where they can become a more significant destination that helps generate activity at the station. This would be supported by incorporating complimentary uses such as a small café with indoor and outdoor seating.

3.5.5 Develop a detailed landscape and public realm improvement strategy for the Central Promenade on both sides of the LRT corridor



RECOMMENDED GUIDELINES AND STRATEGIES

- Develop a functional design for the Central Promenade and parallel path on the eastern side of the corridor that reflects the principles and objectives outlined in the Waterloo Park Master Plan.
- Ensure the design for the promenade incorporates landscaping that will provide visual interest at all times of the year.
- Incorporate landscaping and soft plantings along the corridor and the promenade to help soften the aesthetic impacts of any fencing that may be installed along the rail corridor.

Circulation through Waterloo Park and to the ION station will be facilitated by two trails on either side of the corridor, including the Laurel Trail on the east side and a proposed multi-use path on the west side. These routes will serve as key station access points for a substantial number of pedestrians and cyclists, and it is important to ensure that their design supports a comfortable travel experience. **The design of the promenades should focus on creating visual interest along the corridor at all times of the year** through landscaping, signage, benches, flower beds and other furniture, or temporary art installations. Other landscaping treatments can also be used to help integrate the corridor into the park setting, ensuring that travel along the promenades becomes part of the park experience rather than simply a commute to and from the station.



3.6. Economic Development

Connecting Waterloo Park to the ION rapid transit corridor creates an opportunity to catalyze a range of city-building and economic development benefits, including the reinforcement of the area as an institutional and cultural hub, the strengthening of Waterloo Park as a key regional destination, and the opportunity to support redevelopment of underutilized lands surrounding the park. In addition, the LRT has the potential to strengthen the relationship between Waterloo Park and Uptown Waterloo, creating a marketable asset which can help attract residents, employees and visitors to the heart of the City.

1 Leverage Waterloo Park as a regional destination and showcase its capacity to support major festivals and events

A centerpiece of the Waterloo Park Master Plan is the development of a major festival space on the west side of the park along Father David Bauer Drive. The Festival Heart is anticipated to accommodate small and large outdoor performances and events, with a capacity between 5,000 and 10,000 visitors.

This new venue can be promoted as a regional attraction that is easily accessible via the LRT and a ten minute walk from Uptown Waterloo. The Festival Heart has the potential to attract a range of compatible cultural, artistic and recreational events, including larger festivals and outdoor concerts which can help support additional investments and programming in the park. This important festival space can attract students and visitors to the park, and help draw visitors to the restaurants, retailers and other businesses in Uptown. Providing clear wayfinding to direct visitors to the future event space will be critical.

In an environment where cities are increasingly competing for the best and brightest, improving the City of Waterloo's arts and cultural offering such as envisioned by the Waterloo Park festival space can be an important contributor to talent attraction and retention.

2 Foster a strong relationship between the station and both universities

One of Waterloo's strongest economic assets are its universities. They help to attract the best and brightest students and researchers, support innovation and create jobs. The Laurier-Waterloo Park station will serve as an important point of access to Wilfrid Laurier University and secondary access point to the University of Waterloo. Improving connections between the station and the universities will be key to strengthening their strategic position within the broader city and Region. Public realm enhancements along Seagram Drive are of highest priority to bridge the gap between the station and universities. Supporting improved transit access to the universities will be an important strategy towards reducing the need for large areas of surface parking and help to facilitate the ability for the campuses to intensify over time.

3 Strengthen the station area's relationship with Uptown Waterloo

The station area is uniquely located adjacent to Uptown Waterloo, the City's thriving commercial core, which has experienced a recent influx of mixed-use residential development. Leveraging Waterloo Park as an attractive nearby amenity can help attract businesses, workers and residents to Uptown. At the same time, the park and surrounding destinations can benefit from additional visitors from Uptown. To support these synergies, enhanced path and trail connections are needed to help move people between these areas. Enhancements to the Laurel Trail and implementation of the proposed Waterloo Park trail network will promote park access and create a cultural and open space connection between the universities and Uptown. As well, promoting Father David Bauer Drive as an important community link can support access from Waterloo Park to the Barrel Yards and into Uptown.

5 Promote employment growth in and around the station area to support a broad range of housing

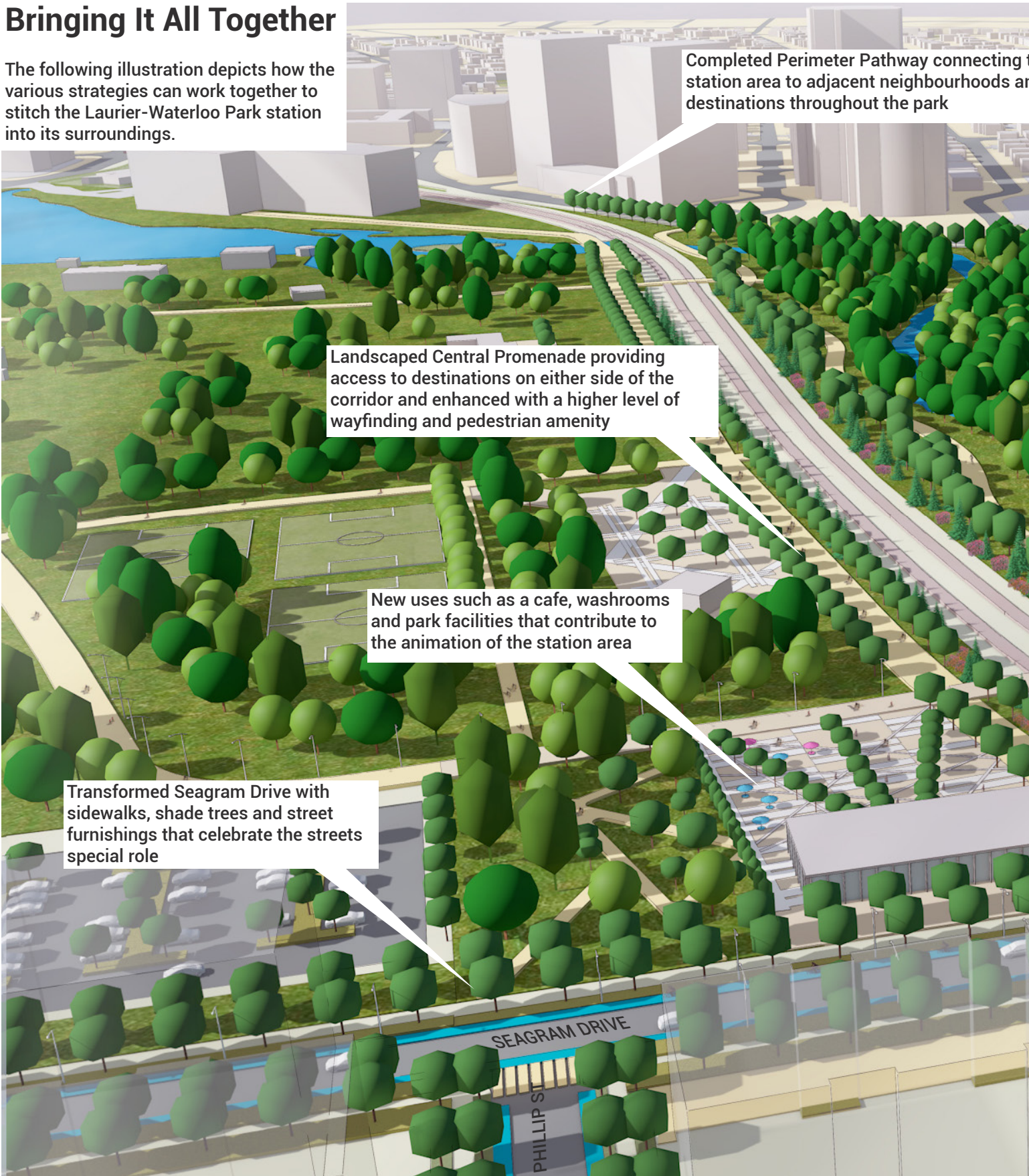
Employment is a key driver of the City's housing market. At the same time, residential growth can encourage new businesses to locate in areas that are close to talented employees. This synergy between the employment and housing markets can be leveraged by encouraging employment growth in Uptown, around the universities, and within the station area. Business expansion can in turn support the development of new housing - including a range of unit types that cater to professionals and families - as well as the development of complimentary retail, services and amenities.

4 Celebrate and leverage heritage and cultural assets

The station area contains a distinct cluster of cultural and heritage assets, including the Canadian Clay and Glass Gallery, the Perimeter Institute, the Waterloo Public Library, public art installations and historical installations in Waterloo Park and numerous heritage properties in the MacGregor-Albert Heritage Conservation District. These assets represent a tremendous tourism opportunity and should be further promoted to help draw more people to the area and enhance the City's profile as a cultural destination. In addition to more targeted marketing efforts, improved wayfinding and pedestrian/cycling connections from the ION station to area destinations and Uptown will be important to help support visitors and highlight the range of cultural experiences which the station area offers. There is also the opportunity to introduce additional programming to increase awareness of local heritage, possibly through historical walking tours or other educational exhibits.

Bringing It All Together

The following illustration depicts how the various strategies can work together to stitch the Laurier-Waterloo Park station area into its surroundings.

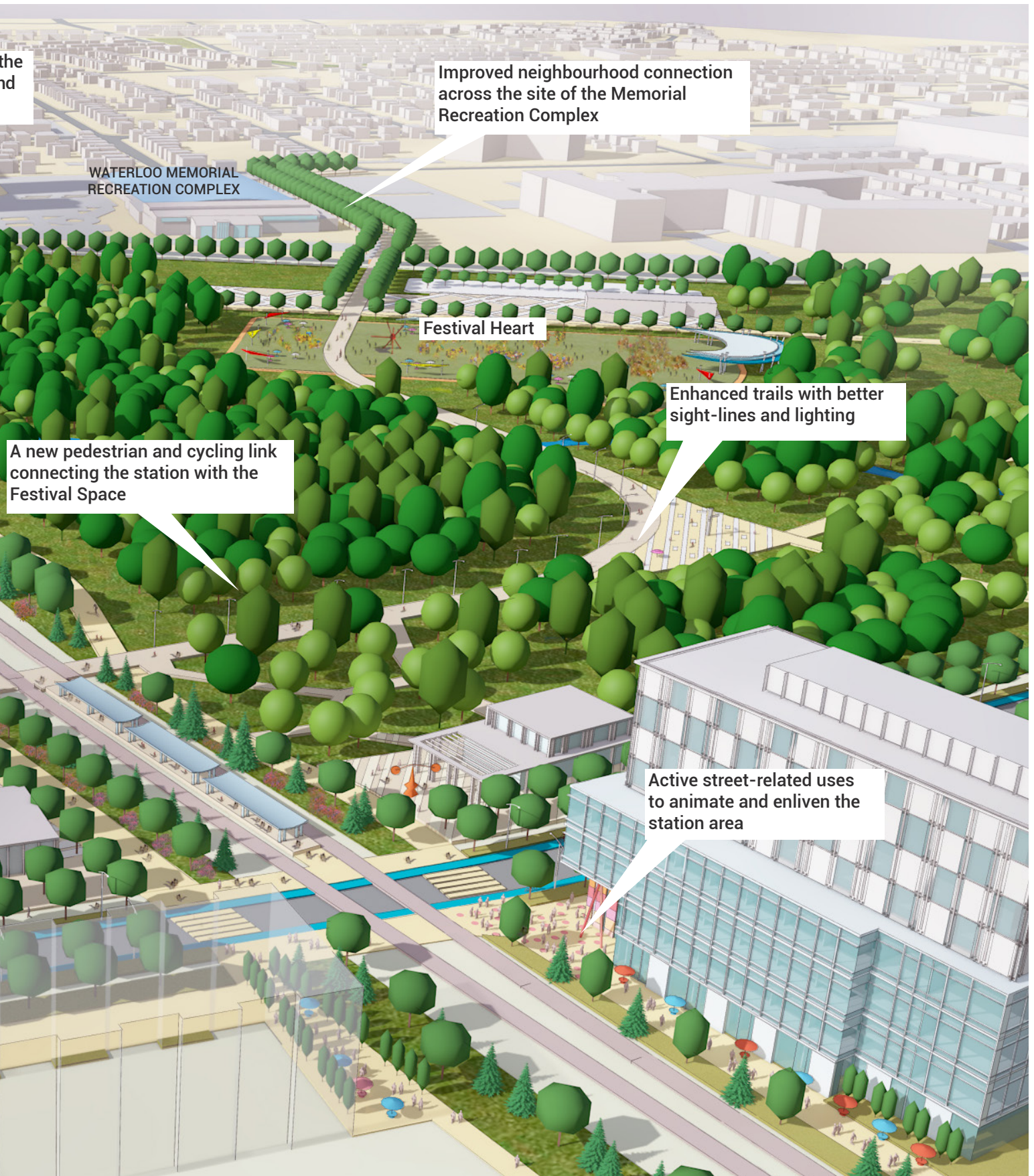


Completed Perimeter Pathway connecting the station area to adjacent neighbourhoods and destinations throughout the park

Landscaped Central Promenade providing access to destinations on either side of the corridor and enhanced with a higher level of wayfinding and pedestrian amenity

New uses such as a cafe, washrooms and park facilities that contribute to the animation of the station area

Transformed Seagram Drive with sidewalks, shade trees and street furnishings that celebrate the street's special role



3.7. Implementation and Phasing

The long-term transformation of the Laurier-Waterloo Park station area will require a strategic phasing plan that establishes a framework for improvements and helps optimize use of the new ION station. The following section provides a recommended phasing strategy for each of the Key Directions, and identifies key stakeholders that will need to be

engaged to implement these Station Area Planning objectives. In addition, this section the key intersection improvements that are needed to enhance connectivity and pedestrian access throughout the station area. Opportunities to secure new funding and investment are also identified to help implement the vision for the Laurier-Waterloo Park station area.

SHORT-TERM DIRECTIONS (0-5 Years)

	Lead(s)	Partner(s)
Transform Seagram Drive as an important gateway to Laurier and the University of Waterloo (Direction 3.5.1)	City of Waterloo (IPPW)	Wilfrid Laurier University University of Waterloo
Enhance the Laurel Trail as a major active transportation connection by strengthening links to other trails and active transportation routes (Direction 3.3.3)	City of Waterloo (IPPW)	Region (Transportation Services)
Create a clear and direct link between the station and festival space (Direction 3.3.2)	City of Waterloo (Parks)	WPAC Friends of Waterloo Park
Establish a Pedestrian Transfer Zone along University Avenue between King and Hazel to support access to and transfers between bus services (Direction 3.3.5)	City of Waterloo (IPPW)	Grand River Transit Region (RT)
Improve access for pedestrians and cyclists along Seagram Drive (Direction 3.3.4)	City of Waterloo (IPPW)	Wilfrid Laurier University University of Waterloo
Introduce public art near the station to celebrate the distinct community and enhance the sense of place (Direction 3.5.2)	City of Waterloo (Arts & Culture)	City of Waterloo (Economic Development)

MEDIUM-TERM DIRECTIONS (5-15 Years)

	Lead(s)	Partner(s)
Implement the proposed trail network through Waterloo Park to enhance walkability and active transportation (Direction 3.3.1)	City of Waterloo (Parks)	WPAC Friends of Waterloo Park
Support greater levels of activity at the station through new park programming or by shifting some proposed facilities adjacent to the station (Direction 3.5.4)	City of Waterloo (Parks)	WPAC Friends of Waterloo Park
Celebrate and leverage heritage and cultural assets (Direction 3.6.4)	City of Waterloo (Arts & Culture)	Local Institutions MacGregor-Albert Community Association

MEDIUM-TERM DIRECTIONS (5-15 Years)

	Lead(s)	Partner(s)
Leverage Waterloo Park as a regional destination and showcase its capacity to support major festivals and events (Direction 3.6.1)	City of Waterloo (Economic Development)	City of Waterloo (Parks) WPAC Friends of Waterloo Park
Ensure that the redevelopment of existing recreational facilities and new park-related structures contribute to the setting of the park (Direction 3.3.6)	City of Waterloo (Parks)	WPAC Friends of Waterloo Park
Improve pedestrian comfort in Waterloo Park, ensuring priority paths are well-lit and maintained (Direction 3.5.3)	City of Waterloo (Parks)	WPAC Friends of Waterloo Park
Develop a detailed landscape and public realm improvement strategy for the Central Promenade on both sides of the LRT corridor (Direction 3.5.5)	City of Waterloo (Parks)	WPAC Friends of Waterloo Park
Encourage shared parking and reduced parking standards to avoid surface parking lots, particularly within the park or near the station (Direction 3.3.6)	City of Waterloo (IPPW)	Private Developers Local Landowners
Strengthen the station area's relationship with Uptown Waterloo (Direction 3.6.3)	City of Waterloo (IPPW)	City of Waterloo (Economic Development)
Foster a strong relationship between the station and both universities (Direction 3.6.2)	City of Waterloo (IPPW)	Wilfrid Laurier University University of Waterloo
Plan for a range of housing, including options for families and seniors (Direction 3.4.4)	City of Waterloo (IPPW)	Private Developers

LONG-TERM DIRECTIONS (15-25 Years)

	Lead(s)	Partner(s)
Ensure that new development helps enhance the setting of and improve connectivity to the park (Direction 3.4.2)	City of Waterloo (Parks)	Private Developers WPAC Friends of Waterloo Park
Support the implementation of the Laurier Master Plan (Direction 3.4.3)	Wilfrid Laurier University	City of Waterloo (IPPW)
Improve the relationship of UW Place to its surroundings and explore opportunities for new commercial, retail and service uses (Direction 3.4.5)	University of Waterloo	City of Waterloo (IPPW)

RECOMMENDED INTERSECTION ENHANCEMENTS

Intersection	Recommended Improvements	Timing	Reference
Seagram Drive / Albert Street	- Establish sidewalks on both sides of Seagram Drive from University Avenue to Albert Street - Provide a wider 3 metre sidewalk along the south side of Seagram Drive - Introduce a new, accessible, marked crossing point along the south side of Seagram Drive across Albert Street - Considering incorporate zebra stripes to enhance driver awareness - Improve wayfinding and directional signage to guide students and visitors	Short Term	Direction 3.5.1
University Avenue / Rail Corridor	- Establish a generous, integrated LRT and Laurel Trail crossing point - Considering introducing pedestrian and cycling-activated signals with countdown timer - Consider installing zebra striping to enhance driver awareness - Enhance wayfinding signage to help direct students, pedestrians, visitors and Laurel Trail users - Design the intersection to support linkages to the on-street cycling network	Short Term	Direction 3.3.3
Erb Street / Rail Corridor	- Consider installing pedestrian signals with countdown timers at all corners - Provide wayfinding and signage to guide pedestrians and support linkages to the Laurel Trail and the Iron Horse Trail - Consider installing zebra striping to enhance driver awareness - Consider eliminating the dedicated turning lanes to improve the comfort of pedestrian crossings - Incorporate products that eliminate flange grooves between the rails	Medium Term	Direction 3.3.3
Father David Bauer Drive / New Pathway	- Establish a new path from the Father David Bauer Drive crossing south through the recreational complex site to support access to and from the Westmount neighbourhood - Connect the path with either Roslin Avenue or Avondale Avenue - Consider installing a pedestrian-activated crossing of Father David Bauer Drive - Support the connection with pedestrian-oriented lighting and trees to improve comfort for pedestrians	Long Term	Direction 3.3.2

Funding/Investment

City of Waterloo

The City of Waterloo is committed to implementing the Waterloo Park Master Plan. In May 2015, City Council approved \$311,000 in capital funding to begin implementation of two priority projects: the Festival Heart and Central Promenade. In addition, Council approved the reallocation of \$204,000 to support strategic upgrades to existing ball diamonds across the city, including the relocation of two ball diamonds to the west side of Waterloo Park in order to accommodate the future Festival Heart. Continued funding from the City's capital budget will remain a key source of park funding.

Regional, Provincial and Federal Support

Given the cultural and economic value of Waterloo Park and the range of institutional and research facilities around the park, there may be opportunities to partner with other levels of government to help fund investments in the area. The City could explore the potential to apply for and secure funding from various regional, provincial or federal infrastructure programs, research grants, tourism funds, and other capital resources.

Waterloo Park Event Fees

With the creation of the new Festival Heart, there is an opportunity to attract major events and festivals that can serve as a source of additional funding to support park investments. The City could rely on event permit fees and other revenue generating tools to help fund future park improvements. There is also the potential to secure compatible park sponsorships or donations that can help act as an alternative source of revenue, while still ensuring that the park remains a public asset.

New Development

Infill and redevelopment around the station can be leveraged to support investments within the station area. The City already collects development charges and parkland funding as part of the development approvals process. The City may want to consider whether a greater share of these funds could be reallocated to help support local streetscape improvements, park enhancements, and trail investments. Use of Section 37 funds could also be used to help implement key strategic improvements within the area.

Uptown Waterloo BIA

Partnerships with the local Business Improvement Area can be an opportunity to leverage the BIA's marketing and business development expertise. The BIA brings together a number of local businesses in and around Uptown Waterloo, including some that may have an interest in supporting enhancements to Waterloo Park or other public assets near Uptown. Engagement of the BIA may also present opportunities to secure support from private sector businesses and donors.

Friends of Waterloo Park

The Friends of Waterloo Park play an important fundraising role that helps support the implementation of the park Master Plan. The City's continued support of these fundraising efforts can help draw additional resources, foster community engagement, and raise the profile of the park within the broader region.



4

STATION AREA PLAN: UNIVERSITY OF WATERLOO

JUNE 2017

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4.1 The Station Area Today

The University of Waterloo station is located on the eastern edge of the University's main South Campus. The station area consists of the properties between Columbia Street and University Avenue, and is generally bounded by King Street to the east and the Laurel Creek to the west. The station sits at the convergence of the University of Waterloo, the evolving Phillip Street employment corridor, and the rapidly intensifying Northdale neighbourhood.

The University of Waterloo campus is a defining feature of the station area. Its campus is primarily concentrated within the Ring Road west of the station.

Size of Station Area: 145 hectares

No. of Residents: 15,000 residents (104 people/ha)

No. of Jobs: 6,200 jobs (43 jobs/ha)

Population/Jobs per Hectare: 147 people & jobs/ha

Immediately east of the LRT corridor is the University Shops Plaza, as well as the University's Engineering 5 building, the first building located within the East Campus. While University of Waterloo students, faculty, and visitors will likely be the primary users of the station, it will also be used as a secondary access point to the Wilfrid Laurier University campus, surrounding neighbourhoods and Phillip Street businesses. The



Figure 4-1. The Laurel Trail connects the station north to the Research & Technology Park and south to Waterloo Park and Uptown



Figure 4-2. Many of the University's building are oriented away from the station just east of the Ring Road



Figure 4-3. The Ring Road is crossed by thousands of students and staff each day traveling between the University and Northdale



Figure 4-4. Northdale is evolving into a high-density neighbourhood

University's Ring Road also serves as one of the largest bus transfer nodes in the City.

When the Ring Road was developed, it was conceived as the outer edge of a pedestrian-oriented campus. The result is that many of the older buildings along the Ring Road are inward looking and oriented away from the station. The eastern segment of the Ring Road is crossed by thousands of students, staff and University employees each day traveling to and from the campus and to the Northdale neighbourhood. It is also an important place of access into the Region's transit network and contains stops for local, iXpress and regional GO bus services. The high volume of crossings and substantial level of bus service has created pedestrian safety concerns along the Ring Road and around the station area.

The University completed a Campus Master Plan in 2009 that identified the lands to the east of the LRT corridor as an area for campus expansion. The University has since acquired additional lands east of the rail corridor, and now controls the majority of the lands between Phillip Street and the LRT corridor.

Northeast of the station is the Phillip Street business corridor, as well as the proposed "Idea Quarter", a mixed-use office and innovation district conceived for north of Columbia Street. While Phillip Street retains the auto-oriented character of a former industrial area, there are opportunities to enhance the street and strengthen the relationship between academic and R&D activities, while supporting new uses and amenities for students and workers.

Further east within the station area is the evolving Northdale neighbourhood. It serves primarily as a location for rental housing for university students. The Northdale Land Use and Community Improvement Plan was completed in 2012 and is guiding ongoing change in the neighbourhood, including connectivity and public realm improvements. Residents of the Northdale community will rely on the station to access destinations across the Region. Residents of the surrounding Beechwood and Columbia neighbourhoods are also expected to rely on the station as a major point of transfer.

The station area benefits from its relationship and connectivity to the Laurel Trail. The trail runs alongside the rail corridor and provides an important north-south active transportation connection. While the Laurel Trail establishes strong north-south connectivity, there is a lack of east-west linkages connecting the campus and Northdale neighbourhood. As a key point of transfer for students and workers, there are opportunities to provide new connections to the station and to better integrate the LRT station with pedestrians, cyclists, buses and vehicles.

The station area also contains a number of arts and cultural assets, including the University of Waterloo Art Gallery, the Earth Sciences Museum, the Artery Gallery, theatres, and public art at the Veterans' Green.

Market Conditions

The station area is defined by the significant academic and institutional activities associated with the University of Waterloo, as well as a strong cluster of residential uses in the Northdale community. The University of Waterloo and Wilfrid Laurier University will act as key drivers of institutional and research office growth, as well as student-oriented apartment housing within the area.

Significant residential development in Northdale has taken place over the past several years and continues today. Much of the new housing in the station area is geared towards the student rental market. Several developers are undertaking large, multi-phased projects, including Sage Condominiums, which is currently marketing its sixth phase of development, and Icon Residences at 330 Phillip Street and 145 Columbia Street which consists of approximately 500 units in the first phase. As of January 2015, there were approximately 2,775 units consisting of 4,574 bedrooms planned or under development in Northdale.

It is expected that demand for student rental housing will continue to drive residential apartment development in the area. However, the rapid pace of redevelopment has raised some concerns of potential oversupply of student-oriented housing in the area.

Additional retail uses are likely to develop in response to the area's growing population, proximity to the University and improved accessibility. The University of Waterloo will continue to play a vital role in the regional economy, supporting demand for institutional, research and office space. The University's recent acquisition of the former Blackberry buildings at Columbia Street and Phillip Street demonstrates the ongoing demand for new development of institutional and office uses.

The Planned ION Station

The station will consist of one centre platform located adjacent to the University of Waterloo's Davis Centre building. The station's location between University Avenue and Columbia Street, which both feature iXpress services, means that it will function as an important transit hub connecting the LRT to Grand River Transit services. The major rail crossing points are expected to be aligned with improvements to the Ring Road, and will be closely linked to the Laurel Trail.

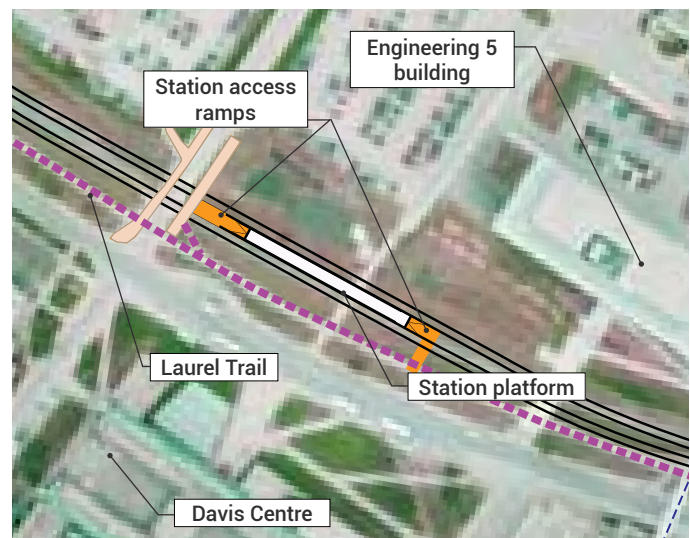


Figure 4-5. The University of Waterloo station is located adjacent to the University of Waterloo's Davis Centre building.

Current Planning and Policy Framework

The City's Official Plan Land Use Plan identifies most of the western half of the station area as a **Major Node**, including the University of Waterloo campus and properties east of Phillip Street. The designation is intended to support a mix of uses at medium to high densities. Certain lands to the east of the LRT corridor, particularly along Lester Street, the north side of University Avenue and the south side of Columbia Street, are designated **Minor Corridor** to accommodate medium-density residential uses.

There are a range of land use designations in the area: the University campus is designated primarily as **Employment - Academic**, and the lands east of the corridor allow for a variety of commercial and low to high-density uses. The lands immediately east of the station, encompassing the Engineering 5 building and the University of Waterloo Art Gallery, are identified as an **Industrial Transitional Area**. Another Industrial Transitional Area is located at the southeast corner of Phillip and Columbia Streets. These two sites represent areas that were historically zoned for industrial uses,

but are now intended to transition toward mixed-use development, including potentially sensitive uses such as residential.

The Official Plan provides building height permissions for much of the lands in the station area. The University of Waterloo lands west of the rail corridor and immediately east of the station are identified as **High Density Employment** lands with a maximum permitted building height of 81 metres (20 storeys). The University Shops Plaza site and lands along the east side of Phillip Street are identified as **High Density**, also with a maximum height of 81 metres (25 storeys). The lands between the rail corridor and Phillip Street immediately south of Columbia Street are categorized as **Medium High Density Employment** with a maximum height of 40 metres (10 storeys). Within Northdale along Lester Street and along University Avenue, **Medium** and **Medium High Density** development is permitted, to a maximum height of 8 storeys and 12 storeys, respectively.

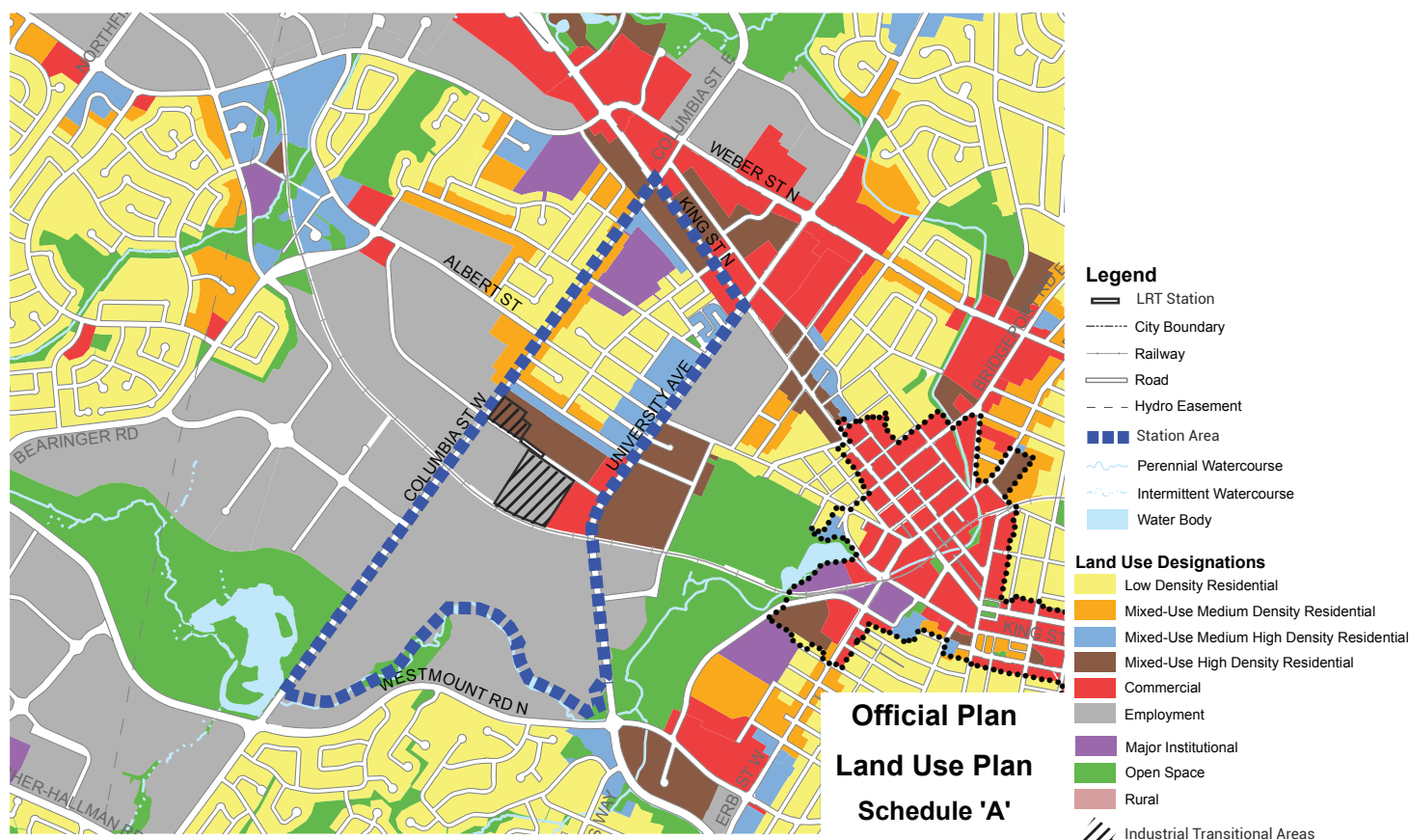


Figure 4-6. The City of Waterloo Land Use Plan

Development on the University of Waterloo's land holdings will be guided by the University's **Campus Master Plan**. The Master Plan outlines a long-term strategy for growth, and focuses core academic functions in the South Campus. New development and facility expansion is expected around the outer edges of the Ring Road, where the redevelopment of larger, underutilized parcels can help integrate the campus with the surrounding community. The Plan also envisions a greener, well-connected, and pedestrian-oriented campus.

The Northdale community has been subject a number of planning and urban design studies, with corresponding Official Plan and Zoning By-Law Amendments and a new Community Improvement Plan brought into effect in 2013. The plans and policy provisions for the Northdale neighbourhood are intended to support re-urbanization of the area. The neighbourhood is planned to accommodate a range of uses, including higher-density residential uses, with building heights ranging from 6 to 25 storeys.

The vision for Northdale also identifies a range of streetscape enhancements, and improvements to achieve strong pedestrian, cycling and transit connections.

A number of **Specific Provision Areas** (SPAs) provide further Official Plan direction for specific parcels within the station area. Key SPAs within the station area include SPA 20 (Laurier lands); SPA 45c (the block on the east side of Phillip Street between Columbia Street to University Avenue); SPA 34 (University expansion area east of the rail corridor where the former Blackberry buildings are located); and SPA 50 and 51 (redevelopment sites along the east side of Phillip Street).

Running along the western edge of Ring Road is a **floodway** associated with the Laurel Creek, placing some restrictions on development around this waterway. Otherwise, there are no other natural hazards immediately around the station that could impact development.



Figure 4-7. The University of Waterloo Campus Master Plan (2009) identifies the opportunity for campus expansion outside of the Ring Road as a means to help better integrate the campus within its surroundings.

4.2 Vision for the Station Area

The LRT will change the way that many students access the University, creating an important new front door to the campus. Over time, development in the University of Waterloo station area will respond by becoming increasingly oriented toward the station and integrated with surrounding neighbourhoods and business districts. This transition will be facilitated by improvements to the mobility network that support access to the station and help to connect it to destinations across the station area.

The station will become a catalyst for strengthening the relationship between the University of Waterloo campus, businesses along Phillip Street and the Northdale community. These three key drivers will be leveraged and integrated through the creation of a **“Convergence Hub” characterised by an urban campus with buildings connected via attractive public spaces** where workers, students, and residents will come together.

Phillip Street will be transformed into a vibrant, urban and pedestrian-oriented street. It will be strengthened as a business corridor connecting the University to the range of employment uses to the north. Phillip Street will act as a key access point to the station for the Northdale community and be framed by active uses, improved streetscaping and high-quality architecture.

Finally, the University of Waterloo station will be a regional transit hub where local bus routes, regional iXpress routes, and GO Transit services connect to the LRT. Pedestrian and cycling access to the transit hub will be critical. New east-west pedestrian and cycling routes will connect to places away from the station, and improvements to the existing mobility network will help facilitate **safe, attractive and inviting pedestrian and cycling connections.**

VISION STATEMENT

GATEWAY TO THE UNIVERSITY OF WATERLOO AND NORTHDALÉ

University of Waterloo station will serve as a gateway to the University, the Northdale community and the Phillip Street corridor. It will be a major transit hub with local, regional (iXpress), and inter-regional (GO bus) transit connections. New buildings and uses defined by attractive architecture, organized around a high-quality street, block and public realm network with public art and a range of services, will transform the station area into a complete community. Development around the station will support the creation of an innovative, mixed-use node – a Convergence Hub – that helps bridge the gap between the Northdale neighbourhood, area businesses and the University campus.

Big Moves

1

Strengthen the relationship between the campus core and the station

The new ION station will be situated within the University of Waterloo campus, at the edge of the Ring Road. Development on the campus has historically faced inward away from the Ring Road. The new station should help advance the development of the University's East Campus Gateway and encourage the reorientation of existing buildings toward the station over time to create a vibrant, transit-oriented place.

2

Leverage the transitional lands west of Phillip Street to create a Convergence Hub and dynamic activity node

The lands between the rail corridor and Phillip Street should become a place of convergence for students, researchers, University faculty, area employees and residents of Northdale. The University's recent acquisition of additional lands east of the rail corridor creates an opportunity to reposition this strategic area as an innovative hub that supports research activities, job growth, economic development and placemaking around the station.

3

Improve connectivity and enhance pedestrian safety throughout the station area

The station area is currently a key cut-through for students accessing the University from Northdale. It will also be an important point of access for people accessing the University on bike or transit. The design of the station area over time should help to support connectivity between Northdale and the campus, improve safety for staff, students and faculty crossing the corridor and Ring Road, and support access from the ION station to destinations around the campus.

4

Transform Phillip Street into an urban mixed-use street that supports a range of users

The Phillip Street corridor is the seam that ties the University of Waterloo campus to the Northdale neighbourhood and businesses north of the campus. An opportunity exists to transform the street into a more urban pedestrian and cycling-friendly environment with a mix of uses that supports activity in and around the station area, and new streetscaping that helps to enhance the character of the street.

5

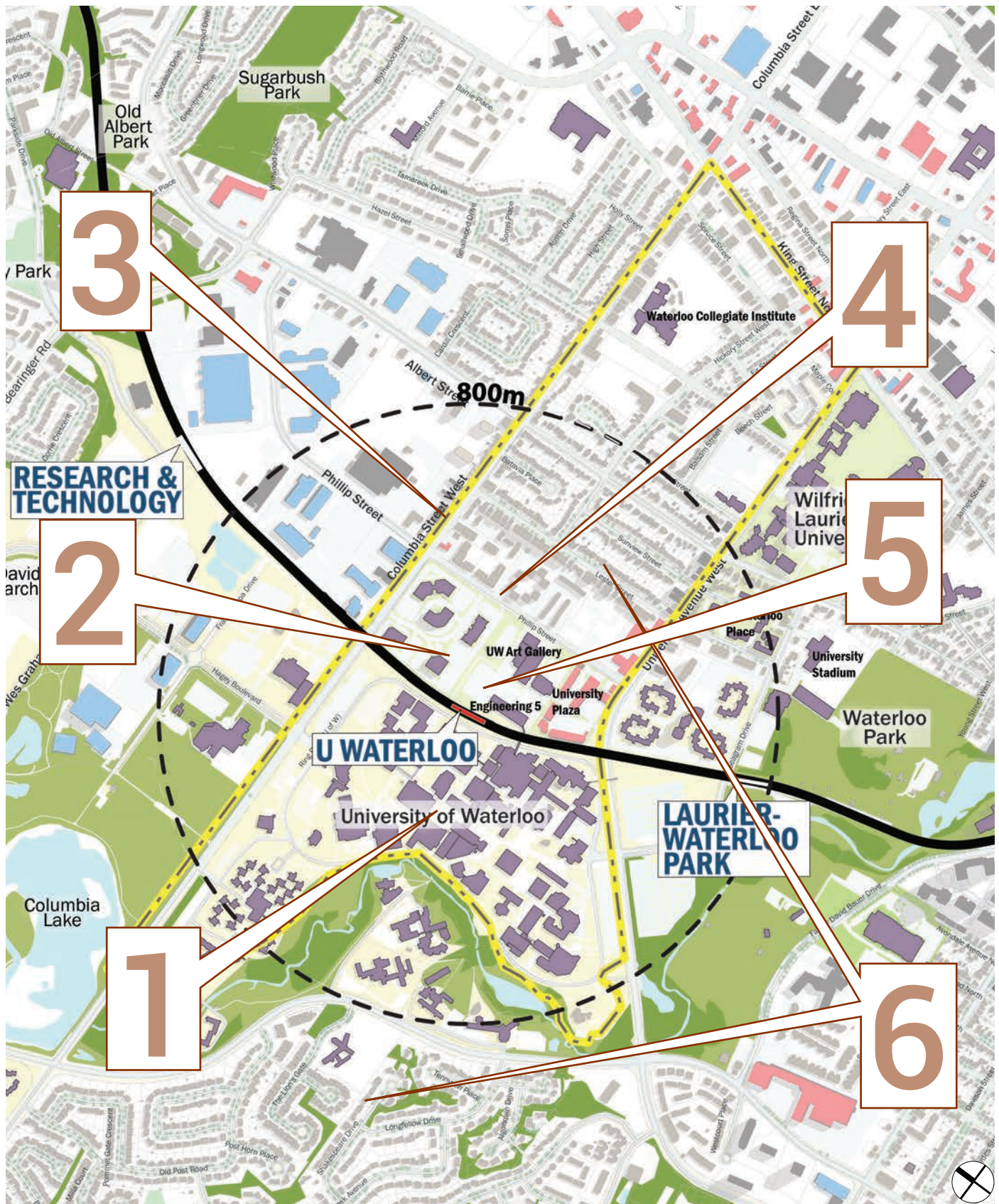
Create a multi-modal hub around the station

The LRT stop creates an opportunity to integrate the numerous transit routes which already serve the station area. A collaborative approach to identifying and developing a multi-modal transit hub at the station is needed to provide a seamless link between LRT, iXpress routes, GO Transit, and local bus services.

6

Link surrounding neighbourhoods to the station

The station will serve not only the University of Waterloo but also a number of neighbourhoods in and around the University. An opportunity exists to improve the relationship between the surrounding neighbourhoods and the station through new and improved connections that can help to improve the walk or bike ride to the station.



Legend

- Station Area
- LRT Station

() Estimated 10 minute walk from Station (800m)

- Residential
- Industrial

- Community/Academic
- Retail
- Commercial/Office

4.3. Local Mobility Strategy

Mobility within the University of Waterloo station area is characterized by significant numbers of pedestrians, including students from the University of Waterloo and Wilfrid Laurier University. The station area features a robust network of active transportation routes, with the Laurel Trail acting as an important seam through the area and a key link to Uptown Waterloo and the R&T Park. The station area is also well-served by a number of local and regional transit services, with the Ring Road acting as a major transfer point for hundreds of buses each day. The high numbers of students, recent graduates and young professionals in the area supports a strong pedestrian, cycling and transit-oriented culture.

Despite these distinct mobility assets and qualities, there are a number of opportunities to enhance mobility throughout the area in response to the LRT.



Avenues

Indicates primary streets through the station area that are important transit corridors. Key considerations for Avenues are identified in Section 2.2.4.



Multi-Modal Streets

Indicates streets intended to act as important cycling connections within the station area. Key considerations for Multi-Modal Streets are identified in Section 2.2.4.



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4.



University Service Street

Indicates a potential service street with transit linking the Ring Road to Phillip Street to support the development of an intermodal transit hub around the station.



Pedestrian and Cycling Connections

Indicates existing (solid) and proposed (dashed) off-street pedestrian and cycling connections within the station area.



Mid-block Connections

Indicates mid-block connections achieved through new development that help to support access to and from the Northdale community.

Given the high levels of bus and pedestrians using the Ring Road, there is a desire to enhance the safety of students and prioritize travel for pedestrians and cyclists. The development of a new ION station along the eastern edge of the Ring Road creates an opportunity to establish a new multi-modal transit hub connecting the LRT to local and regional bus services. Facilitation of east-west travel through the station area will also be critical to support connections between the central campus, the ION station, the emerging East Campus Gateway, and the Northdale community. To further improve the pedestrian, cycling and transit experience, streetscape and wayfinding enhancements can be pursued.

The following section outlines a series of directions to enhance mobility throughout the station area.



Intersection Improvements

Indicates areas where improvements to the existing intersection could help to enhance access and safety for pedestrian and cyclists.



New Intersections

Indicates areas where the introduction of a new intersection requiring enhanced pedestrian crossings or traffic signal are recommended.



Pedestrian-Activated Crossings

Indicates areas where the introduction of a new pedestrian-activated signalized crossing point could support connectivity between the station area and surrounding neighbourhoods and destinations.



Pedestrian Transfer Zone

Indicates areas where improvements should be targeted to support a high number of transfers between pedestrians, cyclists and the transit network.



Station Area Boundary

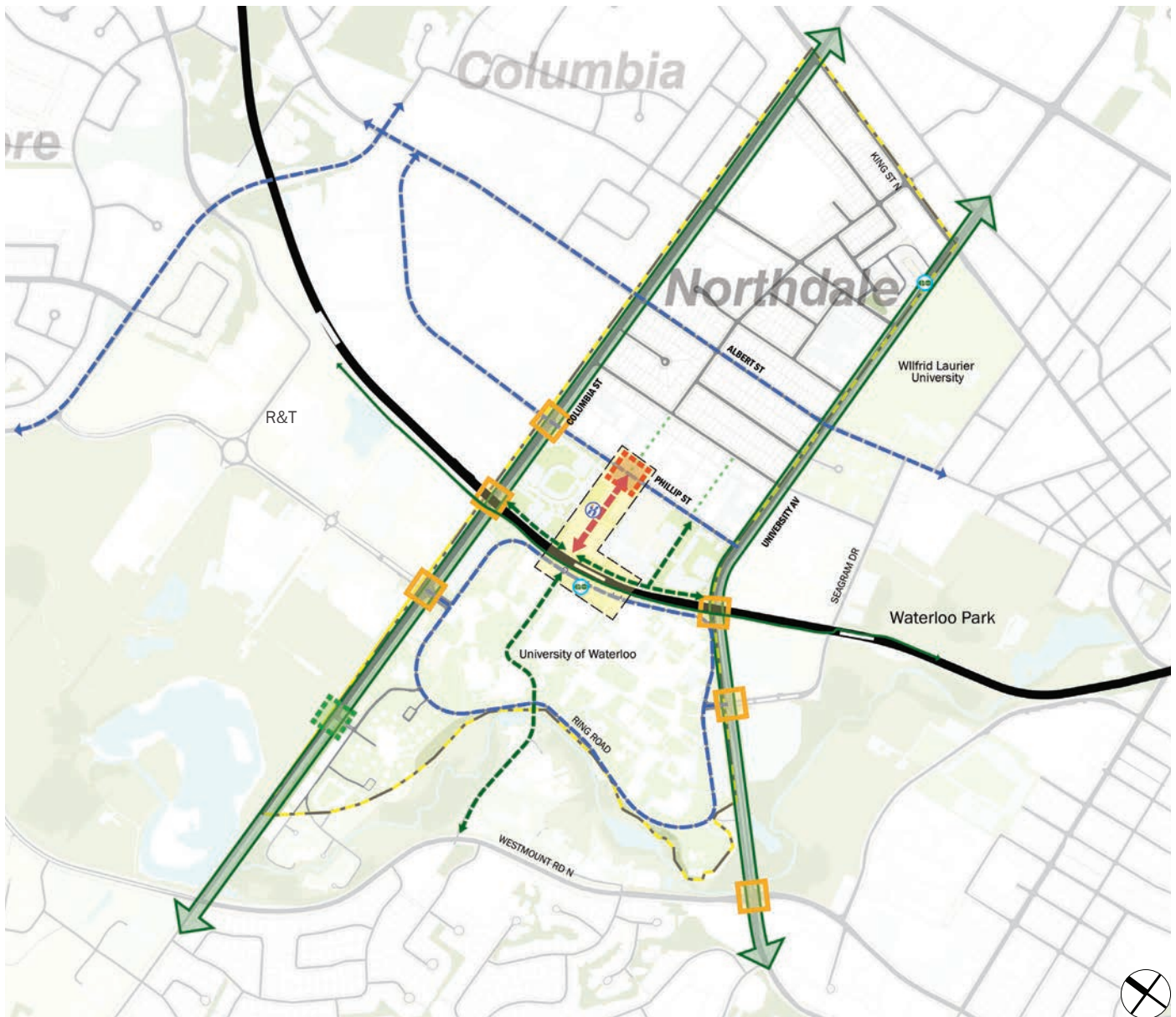


Figure 4-8. Mobility Framework

Key Directions

- 1 Promote a shift away from the automobile so that surface parking can be developed with new research and employment uses
- 2 Enhance the Laurel Trail as a continuous active transportation route through the station area
- 3 Explore the potential for a bikeshare program to connect the University and neighbourhoods such as Northdale the station
- 4 Continue to implement and enhance the safety of pedestrian crossings of the Ring Road
- 5 Create an intermodal transit hub around the station
- 6 Establish a Pedestrian Transfer Zone to support transfers between the various transit services and modes of travel
- 7 Improve connectivity between the campus and areas to the north of Columbia Street

4.3.1 Promote a shift away from the automobile so that surface parking can be developed with new research and employment uses

The station area contains approximately 14.6ha of surface parking or approximately 4,900 spaces.

The majority of these spaces are located within a five minute walk of the station between the Ring Road and Phillip Street corridor. They include areas of surface parking on the University lands south of Columbia Street; parking areas around the Engineering 5 building and University of Waterloo Art Gallery; and surface parking at the University Shops Plaza.

The current characteristics of the station area, including high residential and employment densities, a strong walking and cycling culture, and a growing concentration of students in Northdale, create the conditions needed to facilitate a shift away from the private automobile. This is supported by the introduction of LRT, the convergence of transit services, cycling connections, trails and pedestrian paths, which create a number of convenient mobility options.

A reduction in parking rates for future developments is appropriate. Reduced parking rates and the introduction of maximum rates can help limit the amount of space required for parking facilities.

An opportunity also exists to support a shift away from the automobile to free up areas of surface parking. Encouraging more urban infill and redevelopment of surface parking lots can help create a more compact, mixed-use and pedestrian-oriented research and employment hub around the station.

While vehicular parking will continue to be required, **parking can be provided below grade or in parking decks** to support infill and greater levels of activity around the station. Redevelopment of retail uses in the area can adopt a more urban format aimed at catering more to pedestrians and cyclists.

Other opportunities to support a shift away from private vehicle use include **greater use of shared parking**, promotion of carpooling, and the development of a TDM program for students, which could be operated by the University.

RECOMMENDED GUIDELINES AND STRATEGIES

- Reduce parking rates and introduce maximums for new development to avoid oversupplying parking around the station.
- Provide parking for new development below grade or in structures where it will support intensification not detract from the public realm.
- Where it is unfeasible to provide parking in decks or below grade, locate surface parking to the rear of buildings or internal to the block.
- Explore opportunities for shared parking on the University campus and between private properties to optimize use of the available parking supply.
- Encourage the University of Waterloo to develop a TDM program to serve students, and continue its partnership with the TravelWise program.
- Expand the use of carshare to serve local residents, employees and students.

Details of TDM strategies and proposed parking rates for the University of Waterloo Station are outlined in Chapter 8.



Figure 4-9. Carsharing programs can help to reduce the need for parking by enabling people to conveniently rent vehicles when needed

4.3.2 Enhance the Laurel Trail as a continuous transportation link through the station area



The ION station will be located next to the Laurel Trail, an important public asset that links the University to key employment areas and research districts, including the R&T Park and Uptown Waterloo. The growing population of students and young professionals on the campus and in Northdale will likely lead to increased use of the Laurel Trail for commuting and recreational travel.

To improve access to the station and to support continued use of the trail as a key pedestrian and cycling connection, **a seamless link between the station and the Laurel Trail is required.** There is also the potential to integrate the University's circulation network, planned Northdale pedestrian/cycling routes, and a future open space at the East Campus Gateway (see Direction 4.5.3) with the Laurel Trail to support east-west links through the area. North-south travel along the Laurel Trail can be supported through improvements to major crossings such as at Columbia Street and University Avenue. Cycling infrastructure improvements, such as **short and long term bicycle parking at the station and improved signage along the Laurel Trail and at key decision points**, can also improve the cycling experience.

RECOMMENDED GUIDELINES AND STRATEGIES

- Integrate the Laurel Trail with the ION station, planned pedestrian/cycling routes, and future open spaces to strengthen the trail as a major link and public amenity through the area.
- Incorporate a mix of sheltered and secured bicycle parking facilities at the station to support cyclists traveling to and from the University along the Laurel Trail and via transit.
- Conduct yearly usage audits of the bicycle facilities to determine whether additional facilities are required, or if relocation of facilities is needed.
- Support cyclists through the placement of a bicycle repair stand and pump at the station.
- Incorporate wayfinding and bicycle signage at the two ends of the station platform and where the trail meets the station to support decision-making.
- Improve Laurel Trail crossings at Columbia Street and University Avenue by enhancing pavement markings, adding a crosswalk, and providing clear signage to notify motorists of the Laurel Trail crossing.
- Facilitate safe crossings of the Laurel Trail through the establishment of dedicated crossing points with markings to alert cyclists and pedestrians. These crossing points should be aligned with the primary access points to the station.

4.3.3 Explore the potential for a bikeshare program to connect the University and neighbourhoods such as Northdale to the station



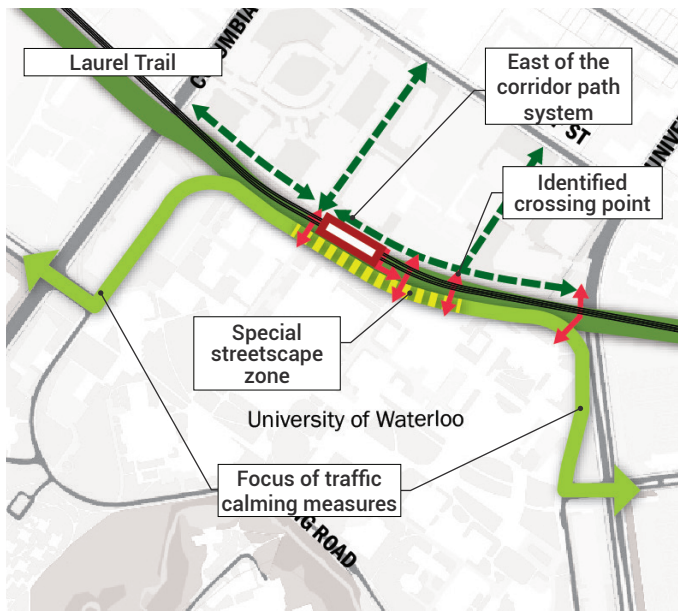
Figure 4-10. Bike share programs such as the Bixi in Montreal can help to bridge the first and last mile between the station and area destinations

RECOMMENDED GUIDELINES AND STRATEGIES

- In collaboration with the University, consider establishing a bikeshare program organized around bicycle stands at the station, at key destinations across the University campus, and within Northdale.
- Locate bicycle stations along major travel routes for students and at key anchor points within the station area, such as the colleges east of Westmount Road, the residences along Columbia and large student housing projects along King Street.
- Extend the program outward over time to link with the R&T Park and Waterloo Park over time.

The station area is expected to be a hub of cycling activity, particularly given the cycling culture which already exists among students and staff at the University and its connection to the Laurel Trail. Consideration should be given to leveraging the existing cycling culture within the station area through the creation of a bikeshare program. **A bikeshare stand at the ION station and at key destinations around the campus and Northdale neighbourhood** would help to support access to areas away from the station, including the residences at the western edges of the campus and the eastern end of Northdale. Over time, the program could be further expanded to link with employment areas, research districts and Waterloo Park to the north and south of the station area.

4.3.4 Continue to implement and enhance the safety of pedestrian crossings of the Ring Road



The area is characterized by high levels of pedestrian activity, most notably students walking between the campus and Northdale. The eastern stretch of the Ring Road sees upwards of 17,500 pedestrian crossings each day while accommodating 170 northbound and 260 southbound buses. This has led to conflict and safety concerns for the large number of pedestrians crossing the street. To address this issue, the University has undertaken a crossings study which identified four crossing locations of the Ring Road and safer crossing designs.

The existing informal rail corridor crossings, which have led to numerous conflict points, are planned to be consolidated into two formalized crossings on either side of the platform, two multi-use path crossings leading from Engineering #5 Building, and the street crossing at University Avenue. While this will help to limit crossing points to some degree, **ensuring pedestrian safety along the Ring Road and at the planned corridor crossings will be critical.**

The area immediately adjacent to the station including the crossings leading from Engineering #5 Building has the potential to see the greatest number of crossings as people arrive on bike, from different transit services, and from the Northdale neighbourhood.

An opportunity exists to distinguish the Ring Road within this area through special streetscape treatments that help to highlight the area as a pedestrian priority zone. The treatment could also be used to celebrate the area as a University gateway.

To the east of the corridor there is the **need for a pedestrian path network that can collect people traveling from the east** and direct them to where it will be safe to cross the corridor and Ring Road.

RECOMMENDED GUIDELINES AND STRATEGIES

- Consider the application of a special streetscape treatment along the Ring Road to coincide with three proposed northern crossings and delineate the area as an important pedestrian zone.
- Design the crossing to optimize pedestrian and cycling safety by incorporating clear signage, decorative pavement, enhanced lighting and elevated crossing tables.
- Investigate the provision of signalized traffic controls to give pedestrians the right-of-way.
- Develop a landscaped feeder path along the east side of the rail corridor to direct people towards the safe crossing points of the corridor.
- Consider implementing traffic calming measures along the length of the Ring Road, such as minimum lane widths, increased tree planting and elevated crossing points to reduce vehicular speeds.



Figure 4-11. Streetscape treatments can help to distinguish the Ring Road as a place of pedestrian priority (University of Toronto)

4.3.5 Create an intermodal transit hub around the station



The University of Waterloo station area is one of the most important points of transfer within the regional transit network. While the Ring Road has been acting as an informal transit hub for years connecting local bus, iXpress and GO transit services, the introduction of the ION station creates the imperative for the **establishment of a more formal intermodal transit hub**. Given the high volume of pedestrian crossings and number of buses using the Ring Road today, a location to the east of the station would relieve congestion and create a safer pedestrian environment.

A transit hub integrated into the street and block network can help to improve convenience for transferring passengers, and minimize conflicts between modes converging on the area. Identifying an appropriate location for a new transit hub **will require discussions between Grand River Transit, the University of Waterloo, the City and the Region.**

RECOMMENDED GUIDELINES AND STRATEGIES

- Continue to explore opportunities for the development of an integrated transit hub at or in close proximity to the station.
- Design the multi-modal hub to facilitate seamless transfers between the ION station and iXpress, local bus and GO Transit services, with a focus on reducing transfer distances and facilitating a convenient and comfortable connection between the different transit services.
- Provide a high level of amenity for transit users at or around the station, including weather-protected shelters, spacious queuing areas, clear signage, and screens showing real-time next vehicle information.
- Design the transit hub as an integrated component of the Convergence Hub (see Direction 4.4.1) so that it can contribute to the setting and area activity levels.
- Integrate the design of the transit hub with station area cycling facilities to improve transfers between the transit and cycling network.
- As part of the detailed design of the transit hub, ensure that Phillip Street is designed to accommodate the anticipated number of buses that will use this street once the transit hub is completed.

4.3.6 Establish a Pedestrian Transfer Zone to support transfers between the various transit services and modes of travel



The ION station should act as an impetus for the creation of an integrated transit hub and activity node around the station. The station will be located at the edge of the campus and the Northdale neighbourhood, in an area that lacks a defined street grid and can be difficult to access. The lack of a direct connection to Phillip Street is a significant infrastructure gap that needs to be addressed in order to link Northdale residents to the station and to the formalized crossing at the Ring Road. There is also a need to focus mobility and infrastructure improvements around the station, where the highest level of transit amenity and connections are required.

An opportunity exists to target public realm and mobility enhancements around the station to support transfers between the various transit services, improve connectivity to the active transportation network, and support access to the station from both the University and Northdale.

Opportunities include the implementation of a consistent pallet of streetscape improvements that help to tie the various area pathways to the station and bus stops; incorporation of wayfinding signage to support transfers between the various systems and modes of movement; real-time next vehicle

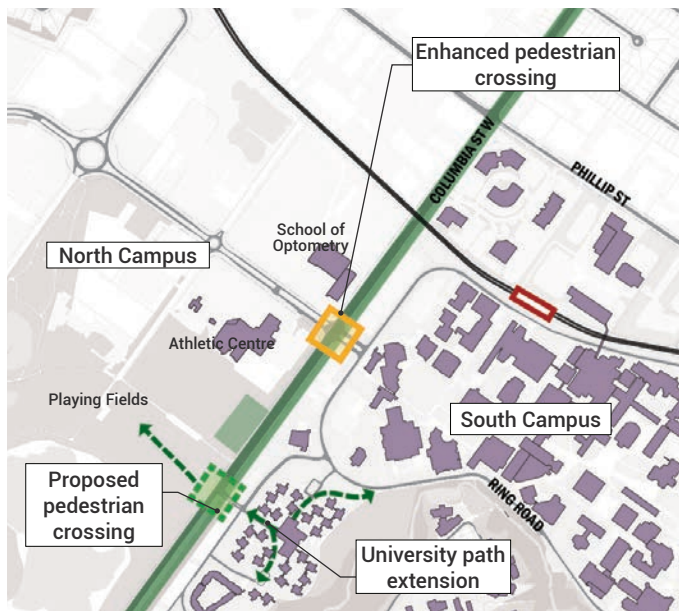
information; pedestrian-oriented lighting to improve safety, and new plantings, trees and street furnishings such as benches and waste receptacle to improve amenity and user comfort.

An opportunity also exists for the **incorporation of public art that can help to celebrate the station** as the gateway to the University and Northdale neighbourhood.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a Pedestrian Transfer Zone around the station between the University and Phillip Street to capture the Ring Road crossings, ION station, Laurel Trail and area bus stops.
- Implement a consistent streetscape pallet throughout the zone to tie together the various path networks with the ION station and bus facilities and create a shared space for pedestrians, cyclists and transit services.
- Incorporate a higher level of pedestrian amenity through the Pedestrian Transfer Zone including pedestrian-oriented lighting, wayfinding and street furnishings.
- Plant trees and incorporate low-lying evergreen shrubs between the Ring Road and Phillip Street to improve comfort during hot summer or cold winter months.
- Encourage the development of enclosed breezeways in new buildings along either side of the Pedestrian Transfer Zone to provide internal waiting areas and support travel between transit services during cold winter months.
- Incorporate real-time bus information signage to support passengers accessing the systems or transferring between transit services.
- Explore opportunities to celebrate the gateway to the University of Waterloo and Northdale neighbourhood by integrating public art into the design of the Pedestrian Transfer Zone.

4.3.7 Improve connectivity between the campus and areas to the north of Columbia Street



A number of University destinations are located north of Columbia Street. These include athletic facilities, such as the ice rink, playing fields and outdoor stadium, which is planned to be expanded into a 5,000 seat facility, in addition to campus buildings such as the School of Optometry, the greenhouses, and the Columbia Lake Village student residences. While there are a number of destinations in the North Campus, Columbia Street can be difficult to cross. There are four lanes of vehicular traffic and only a single crossing point along the entire 1.3km length of the South Campus.

To strengthen the connections between the South Campus, the North Campus and the R&T Park, **pedestrian and cyclist crossings of Columbia Street can be made safer and more convenient.** The Hagey Boulevard intersection is the most direct link from the Ring Road to the north side of Columbia Street. This intersection can be enhanced through clearer crosswalk pavement markings, the addition of pedestrian signals on the north side of the street, and more spacious pedestrian waiting areas on the south side of the street. Additional lighting at this intersection and along the North Campus Road can create a more welcoming and safe environment during the evening.

Improvements to the Laurel Trail crossing are also warranted to support travel north of Columbia Street.

There is an opportunity to create a new pedestrian and cycling crossing that extends north from Villages Road towards the playing fields and the Laurel Trail. This new crossings would help to link the University's path network to the western branch of the Laurel Trail near Columbia Lake, and improve access to the University's athletic facilities.

RECOMMENDED GUIDELINES AND STRATEGIES

- Undertake intersection improvement at Hagey Boulevard, including the addition of crosswalk pavement markings or zebra stripes, pedestrian signals on the north side of the street, and improved lighting.
- Enhance the Laurel Trail crossing by undertaking similar improvements as the recently reconstructed University Avenue Laurel Trail Crossing, with a zebra pavement crosswalk and new pedestrian signals
- Create more spacious waiting areas for pedestrians waiting to cross the street on the south side of Columbia Street, similar to the more generous sidewalks that have been provided on the north side of the street.
- Introduce a new pedestrian/cyclist crossing extending from Villages Road, across Columbia Street to link the University's trail network to the Laurel Trail at Columbia Lake.
- Extend the University's path network to connect with the new Columbia Street crossing.



Figure 4-12. Example of pedestrian and cycling crossing, where a call button is required to trigger the signal

4.4. Built Form and Land Use

The station area is defined by a variety of academic, research and university-related facilities on the University of Waterloo campus, with an emerging cluster of higher-density residential uses to the east of Phillip Street in the Northdale neighbourhood. There are also other important destinations within the area, including Wilfrid Laurier University's Global Innovation Exchange building, the University Shops Plaza, and Waterloo Collegiate Institute.

Northdale has been subject to extensive land use and urban design studies, and a new planning framework was implemented in 2013. As such, no changes to the Northdale land use or zoning framework are proposed.

The University of Waterloo Campus Master Plan was completed in 2009, prior to the finalization of the station location. The placement of the station between the Campus Core and the East Campus Gateway, in addition to the University's recent land expansion,

creates an opportunity to reconsider how the area between Phillip Street and the Ring Road could evolve.

The current land use framework, as shown in Figure 4-13, designates the University campus lands to the east of the corridor as an Academic area and Business Employment area. There is the potential to create an integrated employment and academic district around the station that can provide a range of university-related uses, employment activities and supportive amenities. The lands should be encouraged to evolve into a flexible, mixed-use district organized around a network of public streets, pedestrian connections and open spaces that supports a mix of employment and research activities. Built form and urban design policies should help to encourage high-quality architecture, with buildings that define streets and open spaces, support informal interaction, and reinforce a distinct sense of place.

Academic

Indicates university-related lands that are appropriate for a range of university-related uses, including new class or lab space or student residences. Street-related retail integrated into the base of buildings will be permitted to improve amenity for students and employees.

Commercial Mixed-Use

Indicates areas that will be predominantly commercial in nature but where a mix of uses within buildings or on the block will be encouraged, including office and upper level residential uses to support activity throughout the day and into the evening.

Residential Mixed-Use

Indicates medium-high to high-density residential areas where some street-related retail or active at-grade uses are permitted at the base of a building to improve amenity for local residents.

Residential

Indicates areas of low to medium-density residential development.

Civic/Institutional

Indicates existing community facilities such as schools, community centres or recreational facilities.

Employment Campus / Convergence Hub

Indicates University lands that are encouraged to develop with a mix of academic-related uses and complementary employment activities, including corporate campuses, private offices, research spaces and supportive amenities at-grade.

Active Frontage

Indicates areas where the ground floor is required to accommodate non-residential uses, including commercial, retail and community/institutional uses at grade that are designed in a manner that animates and activates the street.

Station Area Boundary

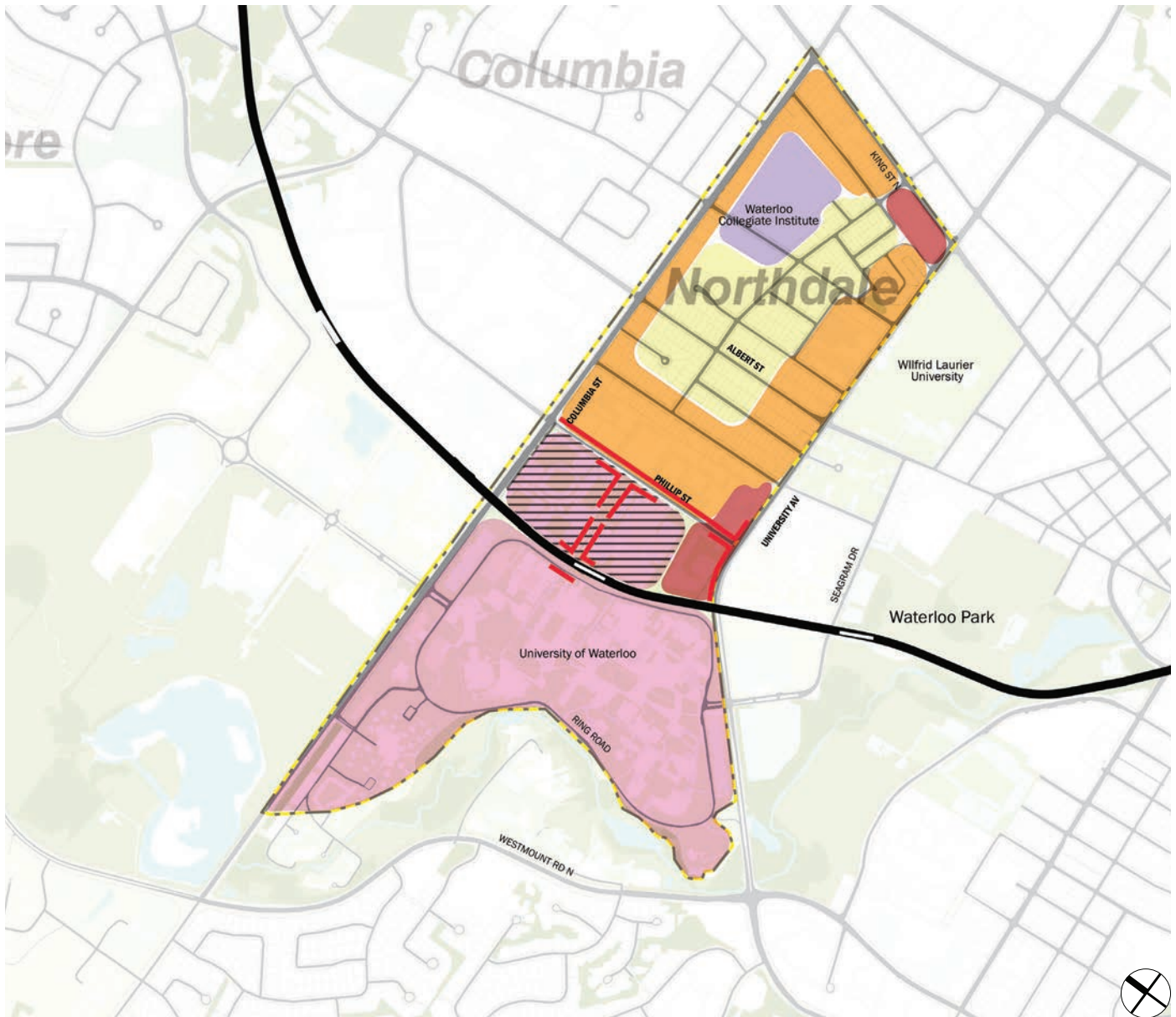
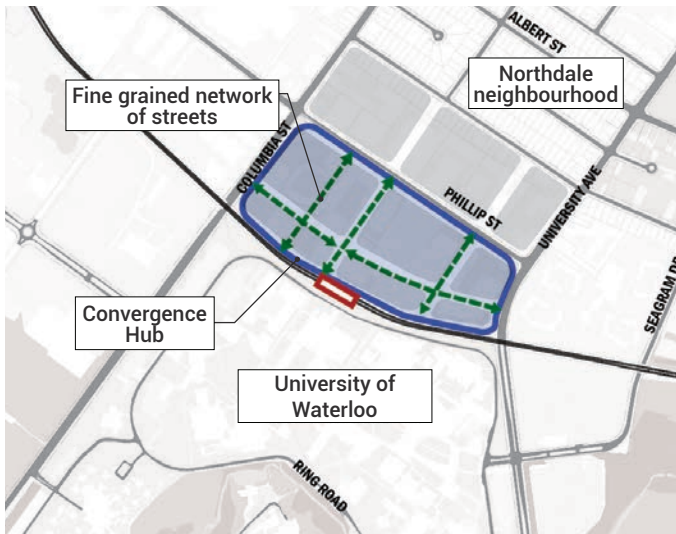


Figure 4-13. Land Use Framework

Key Directions

- 1 Plan for a Convergence Hub and support placemaking around the station
- 2 Support the transformation of the University Shops Plaza into a mixed-use and transit-oriented destination
- 3 Plan for more amenities and a greater range of uses along the Phillip Street corridor in proximity to the station
- 4 Ensure the design of taller buildings contributes to the pedestrian experience
- 5 Ensure new developments preserve opportunities for improved connectivity through the station area
- 6 Orient new buildings and continue to retrofit existing buildings over time so that they animate streets and public spaces

4.4.1 Plan for a Convergence Hub and support placemaking around the station



The new ION station will be located amid a convergence of uses, including academic facilities, research spaces, office buildings, new open spaces, the Northdale community and a regionally significant transit hub. The University of Waterloo's significant landholdings mean that the University is able to guide much of the change and development around the station. Building on the University's Campus Master Plan, which recognizes the station area as the eastern gateway into the campus, there is an opportunity to strengthen the interplay of various activities through the development of a dynamic Convergence Hub.

The development of an integrated Convergence Hub has the potential to create a vibrant destination around the station that offers spaces for learning, working, studying, socializing and the sharing of new ideas. Placemaking efforts around this hub should aim to enhance the pedestrian and transit experience by creating a connected street and block pattern, locating active uses at grade, and integrating architectural excellence into all buildings. **New buildings should be designed and oriented to define a fine grained network** of pedestrian and cycling connections through the area and planned to support synergies between various activities. The design of new buildings should aim to provide **flexible spaces capable of responding to changing academic, research and business needs.**

RECOMMENDED GUIDELINES AND STRATEGIES

- Orient new buildings and uses to support the creation of a fine grained network of street, blocks and pedestrian connections.
- Plan for active at-grade uses, such as cafes, gathering spaces, and active teaching areas, to create a more vibrant and animated setting.
- Require a high quality of architectural excellence that creates an attractive place while also strengthening the University's image as a world-class institution.
- Encourage building design concepts that promote flexibility of use and building adaptation, such as open floor plans and higher floor-to-floor heights, to enable the hub to evolve and respond to changing needs over time.
- Encourage privately owned public spaces (POPS) as part of new development to create gathering spaces for students, faculty, employees and residents of the area.



Figure 4-14. Seattle's South Lake Union district, developed around the Amazon campus, establishes a network of pedestrian connections that improve connectivity and have been designed to provide amenity for area employees.



Figure 4-15. The Kendall Square Research and Innovation district at MIT in Cambridge, MA has been designed and is evolving around a street and block network, with active uses at street level and new public spaces that promote informal interactions and collaboration.

4.4.2 Support the transformation of the University Shops Plaza into a mixed-use and transit-oriented destination



Figure 4-16. Bird's eye view of the University Shops Plaza, consisting of single-storey retail pads and surface parking areas

The University Shops Plaza is located along University Avenue between Phillip Street and the LRT corridor. The plaza features a number of restaurants, retail stores and services that provide amenity to nearby university students and residents. The site was developed as **a series of single-storey retail pads that are oriented away from the street** and surrounded by large areas of surface parking. The arrival of LRT offers the potential to transform this site into a more vibrant, mixed-use and transit-oriented place.

There is an opportunity to encourage the redevelopment of this important site to achieve a range of city-building objectives. The introduction of **a greater range of uses, higher densities and a more pedestrian-oriented built form** has significant potential to contribute to an active village-like campus setting. A redesigned site should help to enhance the character of University Avenue and Phillip Street, with **new active uses** helping to frame these streets. The sites layout should help to improve the areas relationship to the University of Waterloo, Northdale and the ION station, while **providing new pedestrian connections** through the site to improve the walk between Northdale and the University.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Permit a range of commercial, office, residential and institutional uses, while ensuring that redevelopment preserves the primary retail function of the site.
- b. Encourage higher densities and more compact building forms to create a more vibrant village-like node.
- c. Require new development to be oriented towards University Avenue and Phillip Street, with new active street-related uses that enhance amenity for pedestrians and transit users.
- d. Encourage parking to be provided below grade or in structures to allow for a higher intensity of transit-oriented development on the site.
- e. Work with the developer to ensure that new buildings are oriented to support connectivity between the Northdale neighbourhood, ION station and University of Waterloo
- f. Work with the developer to establish a new connection along the west side of the property northward towards the station.

Refer to Sections 2.4.1 and 2.4.3 for additional transit-oriented design guidelines and redevelopment strategies.



Figure 4-17. The Rise retail / residential development in Vancouver helps to contribute to a more pedestrian friendly environment by lining the street with active uses.

4.4.3 Plan for more amenities and a greater range of uses along the Phillip Street corridor in proximity to the station



Phillip Street is an important seam connecting the western edge of the Northdale neighbourhood with the eastern edge of the University of Waterloo campus. It would also act as the front door of a potential Convergence Hub around the station. Future redevelopment within Northdale and on the University lands has the potential to transform the street into a more urban and mixed-use place. Redevelopment in Northdale along the east side of the street is already underway, while the University lands and plaza site have the potential for redevelopment to accommodate the growth of the campus and new commercial, residential and retail uses that can help to enhance the amenity and liveliness of the station area.

There is a need to reinforce the changing role and character of Phillip Street by **ensuring that new development helps to contribute to the spatial definition of the street and provide street-related uses**. The development policies for Northdale already require non-residential uses on the ground floor. **Encouraging commercial, retail and service uses along the west side of the street and in proximity to the station** can help to increase activity and provide amenities for students, staff, residents and visitors to the station area. Over time, the transformation of the street should be **supported by new streetscape enhancements** that help to enhance the image of the street and improve user comfort for pedestrians and cyclists (see Direction 4.5.1).

RECOMMENDED GUIDELINES AND STRATEGIES

- Design buildings identified as having active frontage (see Figure 4-13) to support active street level uses that can help to animate the station area.
- Design buildings as having convertible frontage (see Figure 4-13) to support active street level uses over time.
- Design the ground floor of buildings to be a minimum 4.5m in height to support active street level uses over time.
- The Northdale plan establishes built form policies for the design of buildings along the east side of Phillip Street. It may be advantageous to request additional setback from the Northdale plan to support the planting of street trees between the sidewalk and building face, as trees in the boulevard will be impacted by hydro wires.
- Establish a minimum podium height of 3 commercial storeys for buildings on the west side of Phillip Street.
- Establish a maximum building length of 70m along the Phillip street frontage to preserve connectivity west to the station.
- Articulate frontages longer than 35m in length to break up the building massing so that the structure reads as a series of linked pavilions.

4.4.4 Ensure the design of taller buildings contributes to the pedestrian experience



Figure 4-18. The use of podiums and smaller towers set back from the street in Regent Park in Toronto helps to support a more pedestrian-friendly street environment.

The City's Official Plan permits medium and high-density development throughout much of the station area. The east side of Phillip Street and the University Shops Plaza property are **planned to accommodate residential building heights of up to 25 storeys**, while much of the University's landholdings west of Phillip Street are planned to support **high-density employment buildings up to 81 metres in height**.

Allowing for higher-density buildings within the area can support the development of a vibrant node around the station, creating a place for a large number of students, residents, workers and visitors. Yet, **there is a need to ensure that taller buildings contribute to the public realm and pedestrian experience**. Taller towers have the potential for greater impacts on their surroundings. It is important that these buildings integrate design strategies that can reduce their perceived mass, limit shadowing, optimize sky views and natural light, and provide for sufficient public space and amenities at street level.

RECOMMENDED GUIDELINES AND STRATEGIES

- Incorporate setbacks of between 2 and 3m in buildings over 6 storeys in height to reduce the perceived scale of the structure.
- Residential buildings over 8 storeys in height should be designed as point towers with footprints no more than 800m² in area.
- Point towers should be set back from the podium by a minimum of 3m to reduce their perceived scale from the street.
- Encourage buildings to incorporate features such as variations in materiality, colour articulation to reduce the perceived scale of the structure

Refer to Section 2.4.3 for additional building design guidelines and strategies.

4.4.5 Ensure new developments preserve opportunities for improved connectivity through the station area



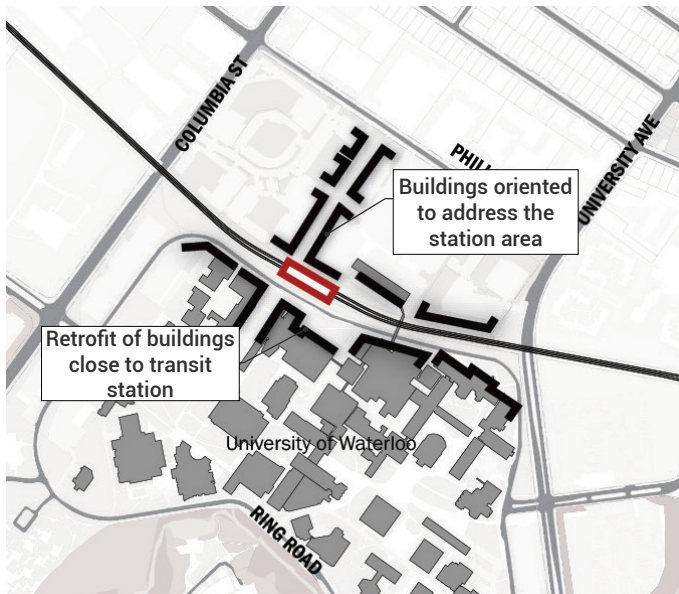
The station area consists of two distinct areas – the University of Waterloo campus to the west and the Northdale neighbourhood to the east. Historically, in the middle of these two communities were a series of **large land parcels, surface parking lots, low-density office and commercial complexes, and a freight rail corridor, all of which hindered east-west movement through the area.** The result is that people were forced to cross the Ring Road at undesignated places and travel out to either University Avenue or Columbia Street to move between the University and Northdale neighbourhood.

The introduction of LRT creates an opportunity to **reconsider the orientation, placement and design of new buildings so that pedestrians, cyclists and transit users can more easily move between the University, the station and the Northdale community.** Future developments should establish new east-west connections that can help people move through the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. New developments to the east of Phillip Street should support the creation of mid-block connections between Phillip Street and Lester Street over time.
- b. Development to the west of Phillip street should support the establishment of a fine grained network of streets and pedestrian connections leading to and from the station (see Direction 4.4.2).
- c. Design mid-block connections to support safe use at all times of the day through the integration of pedestrian-oriented lighting and by ensuring that they are generous and direct so that it is possible to view from one end of the connection through to the other.
- d. Where an exterior mid-block connection is not feasible, an internal, publicly accessible route may be permitted so long as it is clearly identifiable from the street and designed to facilitate a safe and direct route through the building to the other side.

4.4.6 Orient new buildings and continue to retrofit existing buildings over time so that they animate streets and public spaces



Buildings on the University of Waterloo campus have traditionally been oriented away from Ring Road, with back-of-house activities facing the Ring Road. With the introduction of an ION station on the University campus, there is an opportunity to retrofit buildings along the eastern section of Ring Road so that they are oriented towards the station.

The University is already undertaking small-scale retrofits along the east side of the Engineering 3 building. Similar retrofits or extensions may also be possible at the Davis Centre building, the General Services Complex, the Commissary building or at Engineering 5. **Retrofits to buildings can bring active uses and learning spaces closer to transit**, improve connectivity between the station and campus, and help to animate the station area.

To the east of the station **large areas of surface parking and underutilized lands create the potential for new buildings and uses** that can help to define and animate the station area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Explore opportunities for retrofitting campus buildings along Ring Road and the rail corridor to improve their relationship with the station.
- In academic buildings, encourage active uses, such as teaching spaces, communal study areas or cafes to draw more people around the station and enhance activity levels.
- In non-academic buildings, encourage ground floor uses such as restaurants, retail or service uses that can provide amenity for area employees and help to activate the station area.
- Orient new buildings to address the station and transit hub and incorporate transparent windows and doors to support the animation of the station area.
- Where feasible, introduce new entrances to improve permeability between the station area and campus.



Figure 4-19. The retrofit of existing buildings along the Ring Road such as this example can help to contribute to the animation of the station area.

4.5. Public Realm Plan

The University of Waterloo Station sits between the North Common and emerging East Gateway. The existing campus west of the Ring Road has a distinct public realm and landscape character defined by courtyards, commons and pedestrian pathways. These features help to organize and tie the various facilities together, support pedestrian circulation and create places to socialize and recreate. The station is located to the east of the Ring Road in an area that was once considered the edge of the campus. The result is that in contrast to the areas west of the Ring Road, there has been limited attention paid to the design of the public realm. Large swales that are overgrown with shrubs detract from the image of the station area while informal crossings and paths developed to respond to student cut-through create a haphazard network of pedestrian pathways.

The new ION station creates an opportunity to transform the character of the station area to create a setting that is more fitting for the future gateway to

the University. To the east of the station, large areas of underutilized land planned for the East Gateway, as well as the recently acquired University of Waterloo lands, have the potential to evolve into a more transit-oriented Convergence Hub with buildings organized around a grid of streets and pedestrian pathways. In this area, new open spaces will help to support interaction between students, researchers and employees to create a setting for the sharing of ideas. To the east of the proposed hub, the Phillip Street corridor has the potential to act as a seam between the University and emerging high-density Northdale neighbourhood. New streetscaping and a mix of uses will help to support an increase in pedestrian activity while providing amenity for the passengers of the various transit services utilizing the station area.

The following section outlines a series of directions to improve the public realm throughout the station area.



Avenues

Indicates primary streets through the station area that are also important transit corridors. Key considerations for Avenues are identified in Section 2.2.4



Multi-Modal Streets

Indicates streets intended to also act as important cycling connections within the station area. Key considerations for Multi-Modal Streets are identified in Section 2.2.4



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4



Special Street

Phillip Street is recognized as a Special Street with a distinct role as the key link between Columbia Street and University Avenue, and as the front door of a potential Convergence Hub around the station.



University Service Street

Indicates a potential service street with transit linking the Ring Road to Phillip Street to support the development of an intermodal transit hub around the station.



Convergence Hub Public Realm Zone

Indicates the Convergence Hub lands where new buildings support the creation of an interconnected network of pedestrian connections, smaller scaled streets and open spaces which will be defined by a high quality public realm stretching building face to building face.



Key Focus Areas for Wayfinding

Indicates priority areas for wayfinding signage to guide users to and from the station area.



Proposed Open Space

Indicates conceptual location of a proposed new large open space to act as a focal point for the University and allow for general community use.



Station Area Boundary

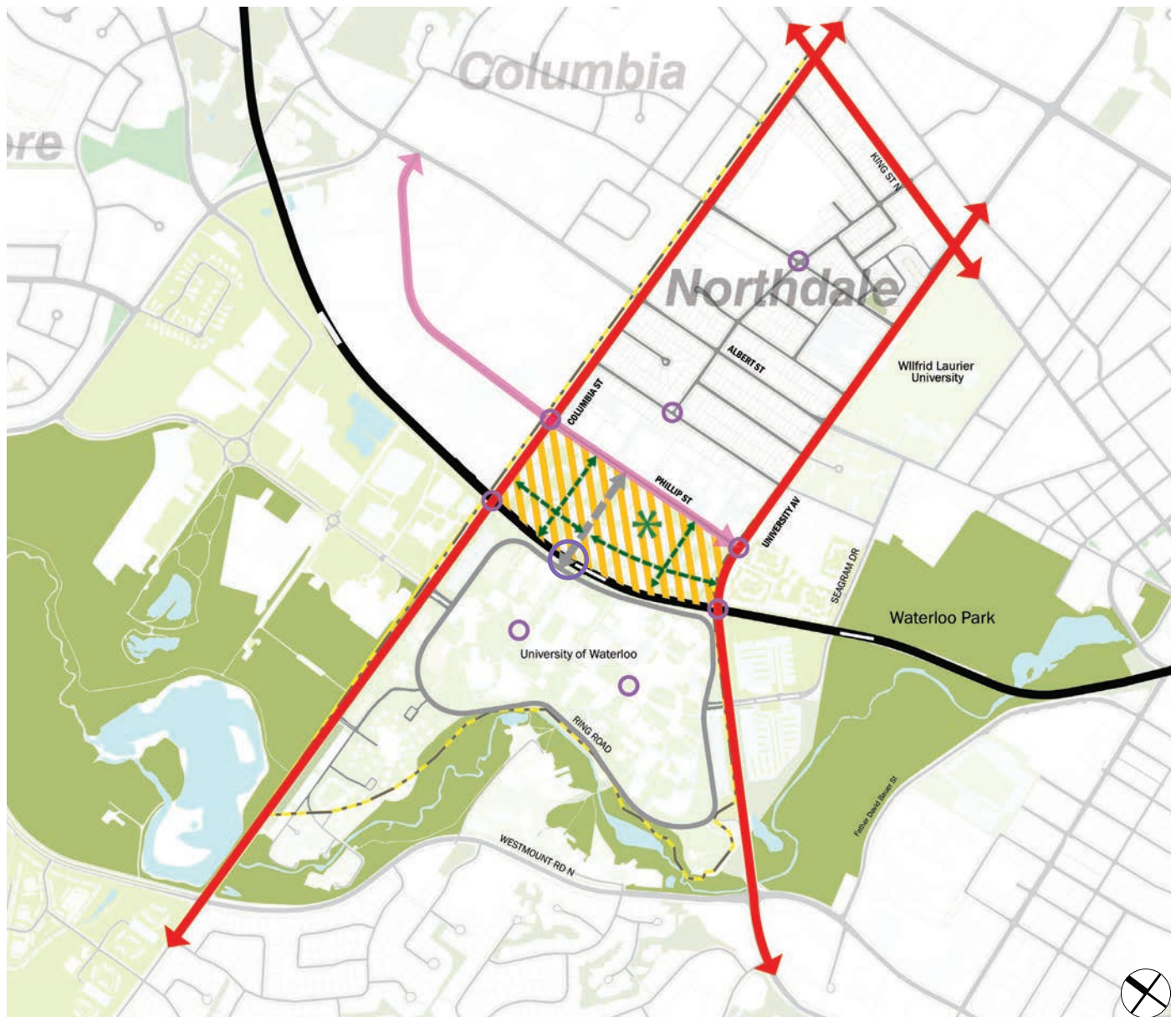
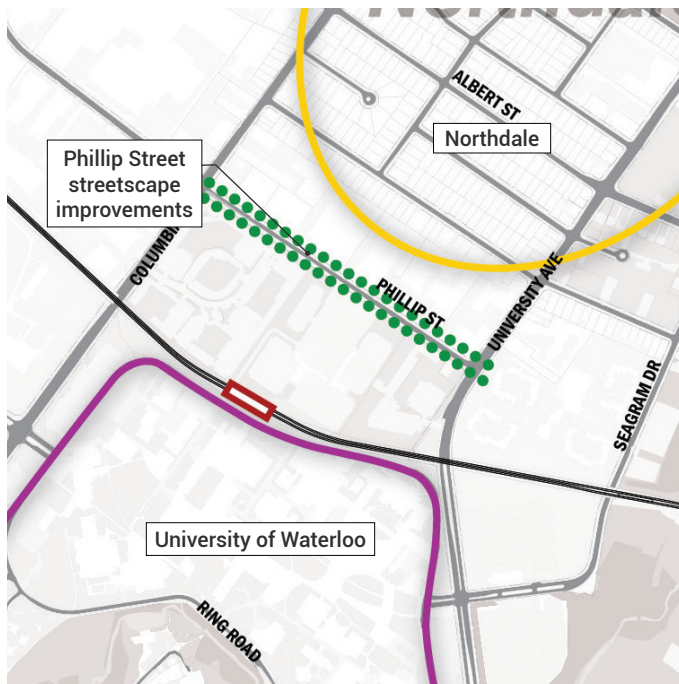


Figure 4-20. Public Realm Framework

Key Directions

- 1 Enhance the character of the Phillip Street corridor to create a setting for new investment and support pedestrians and cyclists
- 2 Create a high-quality public realm within the Convergence Hub to enhance amenity and establish a distinct character for the area
- 3 Create a new large public space at the Convergence Hub to act as a focal point for new activities and provide amenity for area users
- 4 Transform University Avenue into a more inviting and pedestrian-oriented street that serves as a gateway into the universities
- 5 Improve wayfinding to help direct visitors and residents to key public destinations

4.5.1 Enhance the character of the Phillip Street corridor to create a setting for new investment and support pedestrians and cyclists



Phillip Street is a Special Street and serves as a key link between Columbia Street, University Avenue and into the R&T station area. The street also acts as an important seam linking the Northdale neighbourhood with the University. The Northdale Urban Design Guidelines designate Phillip Street as a Main Street, which is intended to evolve as an active, multi-modal street that can accommodate a range of users. The design guidelines require active frontages along the east side of the street with convertible frontages along the west side.

To achieve the vision of a more urban and vibrant Phillip Street, **there is a need rebalance the street and prioritize the pedestrian and cyclist experience.** Existing sidewalks and bicycle lanes are not wide enough to support comfortable pedestrian and cycling movement, while the street boulevards are too narrow and encumbered by hydro wires to facilitate consistent tree planting. In comparison, the two lanes of vehicular traffic are quite wide, leaving little space for public amenity within the right-of-way.

The introduction of LRT is expected to strengthen the role of Phillip Street as an important link between Northdale, the University and the station. While the planned 20 metre right-of-way for Phillip Street is narrower than other Main Streets identified in the Northdale Urban Design Guidelines, there are still opportunities to incorporate wider sidewalks and bicycle lanes and support consistent tree planting on both sides of the street to improve amenity for pedestrians moving through the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a maximum lane width of 3.5m and reallocate the extra space to create minimum bike lanes of 1.8m, a minimum boulevard width of 1.8m and minimum sidewalk width of 1.8m.
- Make use of the boulevards on either side of the street for the planting of ornamental grasses or shrubs that can add to the character of the street.
- Setback buildings 4.5m from the edge of the sidewalk to facilitate the planting of a consistent row of columnar trees between the sidewalk and building edge.
- In areas designated as having an active frontage, plant trees in continuous soil trenches to provide adequate soil volume and utilize grates located flush to the sidewalk to support higher levels of pedestrian activity and spill-out uses.

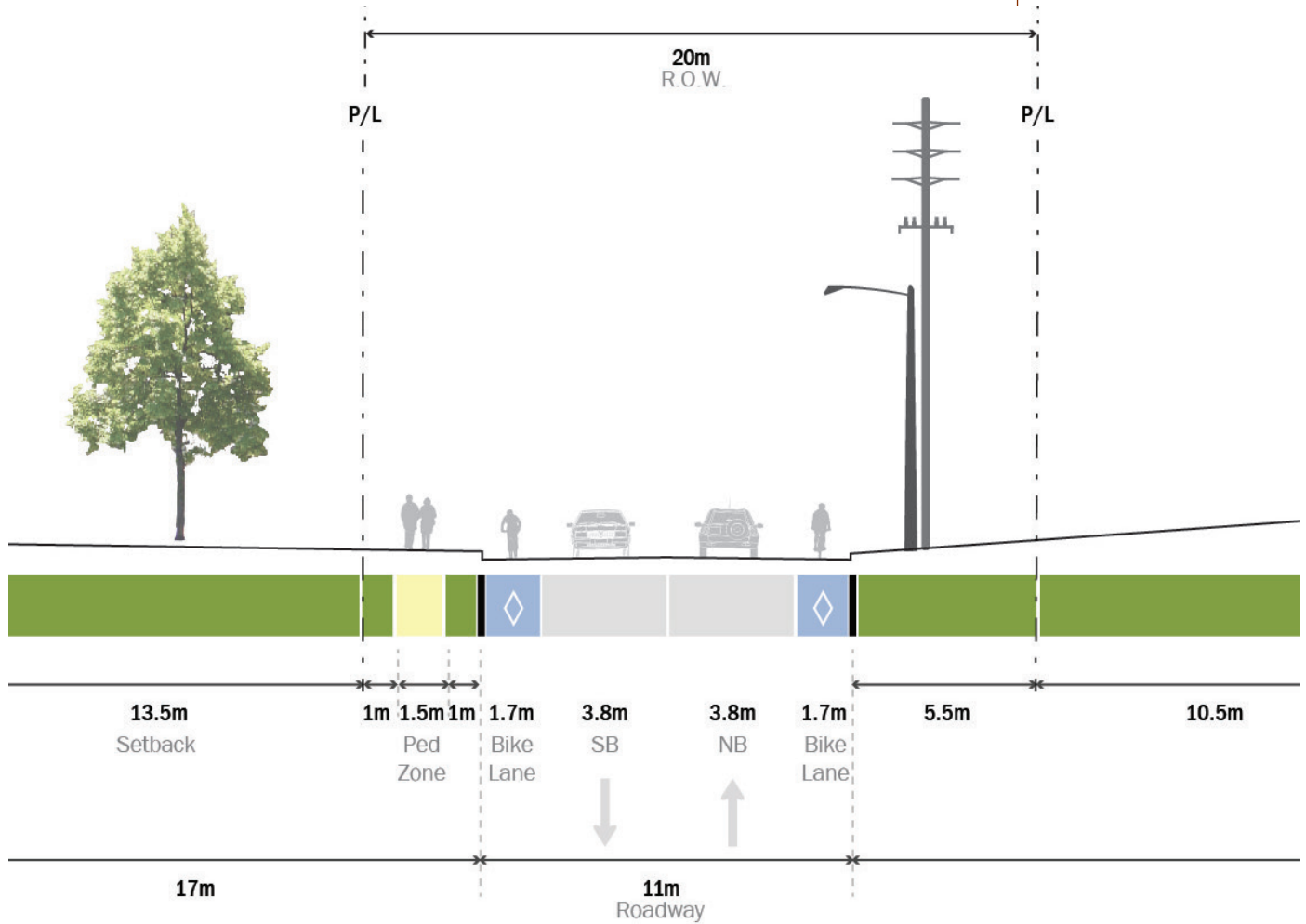


Figure 4-21. Typical section of Phillip Street Existing Conditions

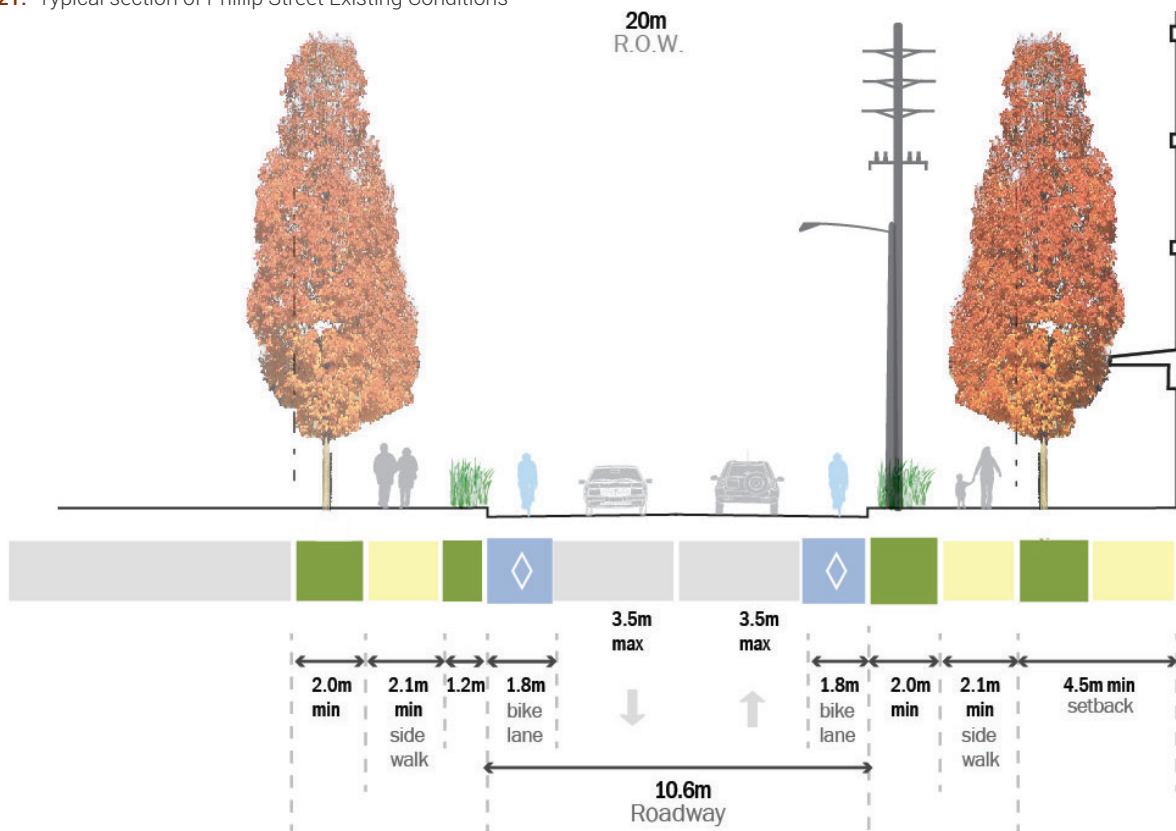


Figure 4-22. Proposed section of Phillip Street showing the reallocation of space in favour of pedestrians and cyclists

4.5.2 Create a high-quality public realm within the Convergence Hub to enhance amenity and establish a distinct character for the area



Figure 4-23. The South Lake Union innovation district in Seattle incorporates a high-quality public realm treatment from building face to building face to tie the various buildings together, create amenity for users and reinforce a distinct character for the area.

The area around the station and west of Phillip Street has the potential to become a vibrant place where students, researchers, employees, residents and transit users converge. As the area evolves into an important node and transit hub, there is a need to secure high-quality public spaces that can bring people together and support a range of formal and informal activities.

The creation of a high-quality public realm can help distinguish the Convergence Hub and provide amenity for students, residents and workers. The introduction of new courtyards or plaza spaces can help to link the area together, support access to the ION station, and structure new development. A high-quality public realm can also help distinguish the area as a prestige University research and innovation hub that can attract business growth and investment.

RECOMMENDED GUIDELINES AND STRATEGIES

- Encourage the establishment of a high-quality public realm that stretches building face to building face with comfortable places to sit, socialize, work and collaborate
- Design streets to integrate seamlessly into the surrounding public realm as a means of calming traffic and reinforcing the pedestrian-oriented nature of the district.
- Organize new buildings within the Convergence Hub, between Phillip Street and the Ring Road, to support the creation of an interconnected network of pedestrian connections, smaller scaled streets and open spaces.
- Plant trees throughout the new street and open space network to green the Convergence Hub and increase comfort during hot summer months.
- Support a high-quality public realm with new art which could celebrate themes of innovation and local achievement.

4.5.3 Create a new large common space at the Convergence Hub to act as a focal point for new activities and provide amenity for area users



Figure 4-24. The public common at UOIT's campus in Oshawa supports a range of informal and programmed activity.

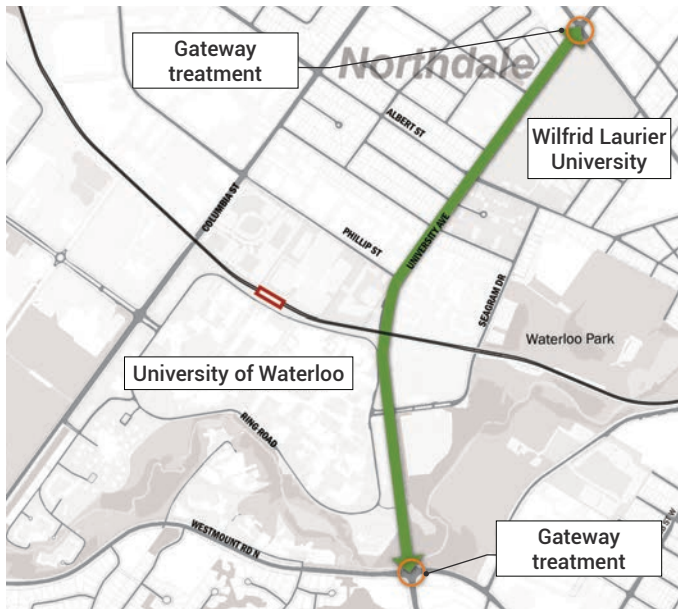
The station area features the highest residential and employment densities among the five station areas, yet also exhibits **the lowest availability of public park space**, with less than 1% public parkland coverage. The University of Waterloo campus contains a number of natural areas and some open spaces within the Ring Road, although open spaces are more limited around the ION station and Phillip Street corridor. The University of Waterloo Campus Master Plan already envisions a new open space at this East Campus Gateway, and the arrival of LRT creates an impetus to move forward with this concept.

A new common space as envisioned by the campus Master Plan can act as a focal point for new activity and help strengthen the interface between the campus, the station and the Phillip Street corridor. The provision of a new public space that offers seating areas, outdoor cafes and wireless Internet can enhance amenity for students and workers in the area, and provide a common meeting place that can support synergies and collaboration. This new public space can help to frame new development, and improve connectivity between new development and the transit station. Where possible, **this new public space should align with existing and planned neighbourhood parks and linkages to enhance connectivity through the area** and to other open space assets in the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Support the creation of a major new common space close to the station that can act as a focal point for new development and activity.
- b. Work with the University to actively program the space so it can act as a resource for the both the Convergence Hub and surrounding community.

4.5.4 Transform University Avenue into a more inviting and pedestrian-oriented street that serves as a gateway into the universities



University Avenue is an important gateway into the University of Waterloo and Wilfrid Laurier University campuses. This street supports four lanes of vehicular traffic, iXpress and local bus services, cyclists, and numerous students and pedestrians. The street is identified as a Main Street in the Northdale Urban Design Guidelines, with a cross section design that incorporates a centre median, a landscaped boulevard for tree plantings, and a minimum sidewalk width of 1.5 metres. Additional public realm space is needed to create a more comfortable experience for pedestrians, with wider sidewalks and room to support spill-out activity from adjacent uses. There is also a desire to enhance the character of the street to recognize University Avenue as a front door to two university campuses.

The integration of streetscape and public realm improvements along University Avenue can help create a more inviting and pedestrian-oriented street that is distinguished as a major access point to the universities. An opportunity exists to rebalance the street by allocating right-of-way space for sidewalk, boulevard and cycling lane enhancements. While the Northdale Urban Design Guidelines recommend a centre median, in narrow sections of University Avenue,

greater benefit can be achieved by dedicating this median space to pedestrians and cyclists. To create a more appealing and identifiable frontage along University Avenue, the implementation of streetscape improvements can be undertaken in consultation with the universities. Potential streetscape enhancements could include pedestrian-oriented lighting, consistent tree planting, street banners, and public art installations that speak the universities' presence and research capabilities.

RECOMMENDED GUIDELINES AND STRATEGIES

- Reallocate space within the ROW to implement the cross section for a typical Avenue (as outlined in Chapter 2) to achieve a minimum 2.1m wide sidewalk, minimum 2m planted furnishing zone and 1.5m wide cycling lanes with .5m buffers.
- Encourage building setbacks from the sidewalk of between 2 and 3m to provide additional room for spill-out space.
- Work with the universities to develop a coordinated streetscape palette along the length of University Avenue between King Street and Westmount Road. The palette should include elements such as street banners to celebrate the universities, pedestrian lighting to support the high levels of students using the street, and supportive street furnishings such as benches, waste receptacles and bike posts.
- Develop a gateway landscape strategy and treatment for the intersection of University Avenue and King Street and University Avenue and Westmount Road to signal the gateway to the universities.
- Explore the potential for new public art that can be integrated into the design of the streetscape. Themes could include university life, research, the pursuit of knowledge and/or innovation.
- Incorporate a consistent row of street trees along both sides of the street to create a softer, more inviting and attractive streetscape.

4.5.5 Improve wayfinding to help direct visitors and residents to key public destinations



Figure 4-25. Wayfinding improvements to help navigate the Campus and the surrounding areas

The station area contains a broad range of uses and destinations, including university campus buildings, the Northdale neighbourhood, stores and offices.

Parts of the station area, including the University of Waterloo campus, can be difficult to navigate, given that there are a variety of buildings, a meandering path network and lack of a street grid. The University of Waterloo Campus Master Plan identifies opportunities to improve wayfinding based on the previous ION station location at University Avenue. An opportunity exists to revisit some of these recommendations based on the current location east of the Ring Road.

Wayfinding at the ION station will be critical, since the station will be an access point for a range of users, including students, residents, workers and visitors.

Wayfinding improvements within the station area should be targeted at key destinations away from the station and along primary pedestrian and cycling routes, including along key streets such as University Avenue, Columbia Street, and Phillip Street. Key focus areas for wayfinding are detailed in Figure 4-20.

RECOMMENDED GUIDELINES AND STRATEGIES

- Focus wayfinding improvements at the station to guide transit users to surrounding destinations (see Figure 4-20).
- Work with the University of Waterloo to develop a coordinated wayfinding system that serves both university-related and non-university destinations.
- Establish a hierarchy of wayfinding signage leading from the station along pedestrian and cycling routes to key area destinations. This signage should help to guide pedestrians both around and through campus buildings as appropriate and provide additional guidance at key decision-making points along the way.
- Help guide pedestrians to the station by providing directional signage along Columbia Street, University Avenue, Phillip Street, and other major streets in the area.
- Update the wayfinding system as needed to respond to future development of new campus facilities, research spaces, transit hubs, and park spaces.

4.6. Economic Development

The University of Waterloo station area is home to a number of important features and destinations that can be strengthened by improving relationships between them. Investment can be leveraged by creating a more dynamic and vibrant employment area, strengthening working relationships between the Universities and local businesses, and promoting the rich range of cultural features in the area to engage the community and attract visitors.

1 Leverage the recently acquired University of Waterloo lands to create a dynamic innovation and research hub

The sale of the Blackberry buildings along Phillip Street to new investors and the University of Waterloo creates an opportunity to reposition this strategic area as a Convergence Hub that supports collaboration between the University and private sector to develop new ideas, technologies and businesses. Development in the hub should be outward looking, integrated into its surroundings and designed to blend and support interaction between the University and businesses.

A branded district, defined by high-quality architecture and pedestrian-oriented design, should be encouraged to help attract and retain the best and brightest and compete with more urban environments for new startup activity. Amenities and public realm features such as plazas and courtyards can be integrated into development to further contribute to the vitality of the area and support a culture of convergence and collaboration.

2 Encourage synergies between academic, R&D, and employment activities

The station area contains a vibrant mix of academic, research and business activities. Strengthening the relationships between the University of Waterloo, Wilfrid Laurier University, R&T Park, and the proposed Convergence Hub can support economic development within the City, and help transition graduating students into the workforce. Much of this will come through reorienting development toward the station, creating new physical connections between various users, and through engaging private sector partners such as the Waterloo Innovation Network. Investments in new high-quality public spaces and gathering places can also help support interaction and innovation among workers and visitors around the station.

Synergies could also be supported by considering the relocation of certain faculties into the hub that could benefit from greater exposure and proximity to the public sector. A relevant example from Ryerson University in Toronto would be the siting of the Digital Media Zone adjacent to Dundas Square in order to give it greater profile within the City.

3 Strengthen the relationship between students and the community

Effort should be made to support student retention post graduation by strengthening students' connection with the community. A greater diversity of entertainment and recreational options geared toward students and young professionals should be encouraged in the area, and the diversity of opportunities easily accessible from the University, via the ION LRT should be marketed as an asset to prospective students and investors.

An opportunity also exists to leverage the University's world renowned co-operative learning program to connect students with jobs along the LRT corridor within the city in order to reinforce the opportunities of studying, working and living within the city.

4 Create an arts and culture hub to attract tourism and showcase the area's valuable assets

The area contains a range of important cultural facilities including the University of Waterloo Art Gallery, Theatre Centre, the Earth Sciences Museum, and the Artery Gallery. The campus is also home to extensive natural landscapes and outdoor artwork. Despite these assets, there is limited understanding among the broader public of all the cultural amenities that the University has to offer.

An opportunity exists to take a more coordinated approach to the management and marketing of these cultural assets to help to position the University as an important destination within the Region for the celebration of arts and culture. This strategy would also help to elevate the profile of some of the University's arts and cultural programs to assist it in attracting new talent.

The City could work with the University or local cultural institutions to celebrate cultural assets by organizing discovery walks through the area and preparing coordinated marketing materials highlighting the full range of destinations. Other municipalities have successfully developed web applications to provide self-guided tours, complemented by interpretive panels and signage at key destinations. Marketing strategies can be supported by new investments in art and cultural resources as development takes place in and around the station area.

Bringing It All Together

The following illustration depicts how the various strategies can work together to create a multi-modal hub around the station and facilitate the creation of a Convergence Hub comprised of a mix of academic, research and employment uses with retail, restaurants and amenities at street level.

UNIVERSITY OF
WATERLOO

Improved connectivity and crossings to enhance pedestrian safety throughout the station area

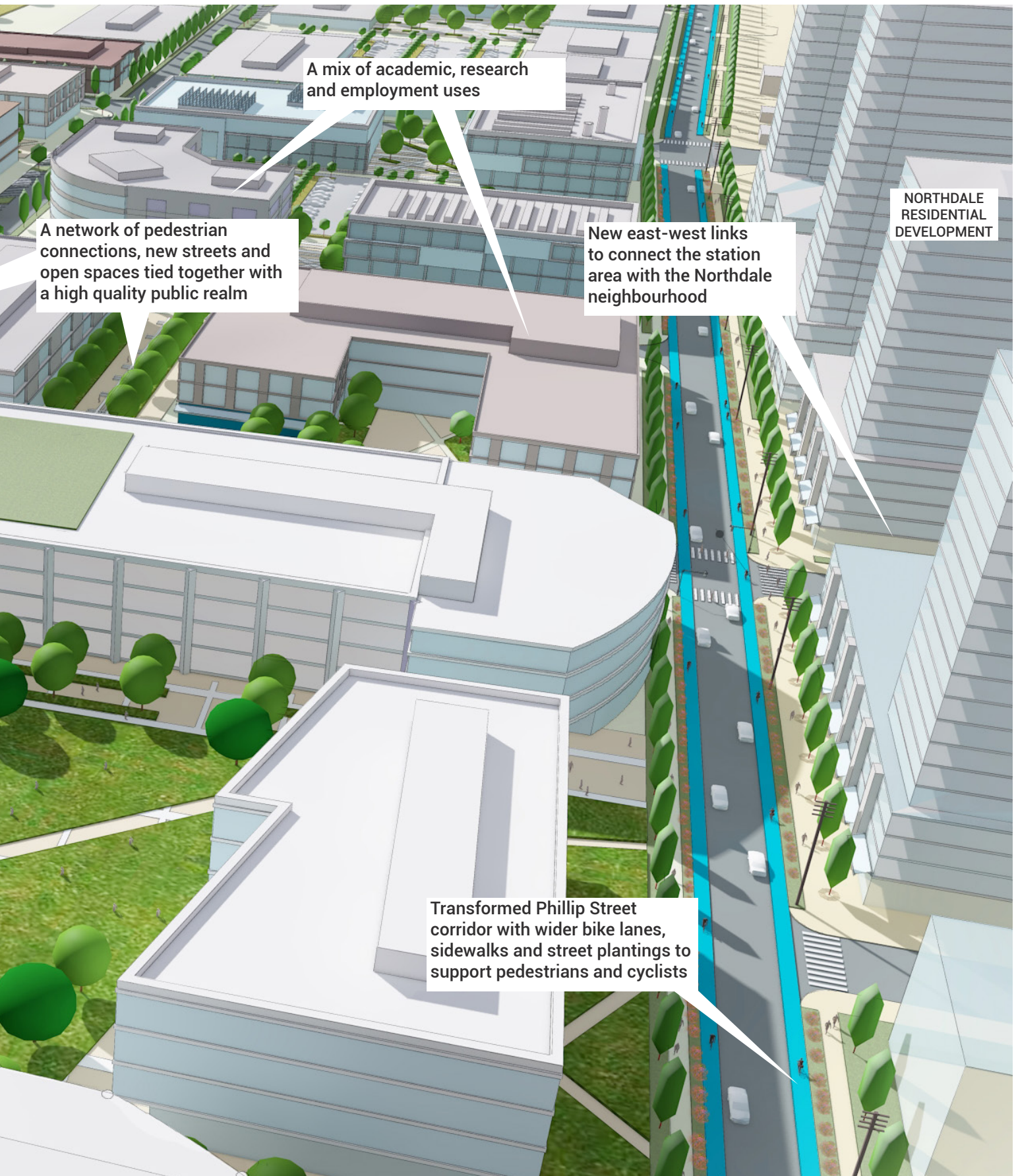
Parking designed and oriented where it will not detract from the street and public realm

Potential bus hub or transit and University service street

Enhanced cycling facilities at the station to integrate with the Laurel Trail

Active uses at street level in and around the station and transit hub to animate the station area

A large new common space capable of supporting both passive recreation and active programming



4.7. Implementation and Phasing

Achieving the vision for change will not happen all at once but will require the implementation of strategies over the short, medium and long term in coordination with a range of stakeholders. The following pages provide a recommended phasing strategy for each of the Key Directions, and identifies critical stakeholders and partners that will need to be engaged.

This section also itemizes the key intersection improvements that are needed to enhance access to the station and improve connectivity for students, staff and visitors to the University of Waterloo. Opportunities to secure new funding and investment are also identified to help implement the vision for the station area.

SHORT-TERM DIRECTIONS (0-5 Years)

SHORT-TERM DIRECTIONS (0-5 Years)	Lead(s)	Partner(s)
• Create an intermodal transit hub around the station (Direction 4.3.5)	Region (RT) Grand River Transit	University of Waterloo Federation of Students (FEDS)
• Establish a Pedestrian Transfer Zone to support transfers between the various transit services and modes of travel (Direction 4.3.6)	City of Waterloo (IPPW)	Grand River Transit Region (RT)
• Improve wayfinding to help direct visitors and residents to key public destinations (Direction 4.5.5)	City of Waterloo (IPPW)	University of Waterloo
• Enhance the Laurel Trail as a continuous transportation link through the station area (Direction 4.3.2)	City of Waterloo (IPPW)	Region (Transportation Services)
• Continue to implement and enhance the safety of pedestrian crossings of the Ring Road (Direction 4.3.4)	University of Waterloo Grandling	Region (RT)
• Promote a shift away from the automobile so that surface parking can be developed with new research and employment uses (Direction 4.3.1)	City of Waterloo (IPPW)	Private Developers Local Landowners
• Explore the potential for a bikeshare program to connect the University and neighbourhoods such as Northdale to the station (Direction 4.3.3)	City of Waterloo (IPPW)	University of Waterloo Local Residents

MEDIUM-TERM DIRECTIONS (5-15 Years)

MEDIUM-TERM DIRECTIONS (5-15 Years)	Lead(s)	Partner(s)
• Plan for a Convergence Hub and support placemaking around the station (Direction 4.4.1)	University of Waterloo City of Waterloo (IPPW)	City of Waterloo (Economic Development)
• Leverage the recently acquired University of Waterloo lands to create a dynamic innovation and research hub (Direction 4.6.1)	University of Waterloo	City of Waterloo (IPPW)
• Encourage synergies between academic, R&D, and employment activities (Direction 4.6.2)	City of Waterloo (Economic Development)	University of Waterloo Wilfrid Laurier University R&T Park

MEDIUM-TERM DIRECTIONS (5-15 Years)

	Lead(s)	Partner(s)
Improve connectivity between the campus and areas to the north of Columbia Street (Direction 4.3.7)	Region (Transportation Services)	University of Waterloo
Create an arts and culture hub to attract tourism and showcase the area's valuable assets (Direction 4.6.4)	City of Waterloo (Arts & Culture)	University of Waterloo Local Institutions
Enhance the character of the Phillip Street corridor to create a setting for new investment and support pedestrians and cyclists (Direction 4.5.1)	City of Waterloo (IPPW)	Private Developers Local Landowners
Transform University Avenue into a more inviting and pedestrian-oriented street that serves as a gateway into the universities (Direction 4.5.4)	Region (Transportation Services)	University of Waterloo Wilfrid Laurier University
Strengthen the relationship between students and the community (Direction 4.6.3)	City of Waterloo (Economic Development)	University of Waterloo Federation of Students (FEDS)
Support the transformation of the University Shops Plaza into a mixed-use and transit-oriented destination (Direction 4.4.2)	Private Developers	City of Waterloo (IPPW)
Ensure the design of taller buildings contributes to the pedestrian experience (Direction 4.4.4)	City of Waterloo (IPPW)	Private Developers

LONG-TERM DIRECTIONS (15-25 Years)

	Lead(s)	Partner(s)
Plan for more amenities and a greater range of uses along the Phillip Street corridor in proximity to the station (Direction 4.4.3)	City of Waterloo (IPPW)	Private Developers
Orient new buildings and continue to retrofit existing buildings over time so that they animate streets and public spaces (Direction 4.4.6)	Local Landowners University of Waterloo	City of Waterloo (IPPW)
Ensure new developments preserve opportunities for improved connectivity through the station area (Direction 4.4.5)	City of Waterloo (IPPW)	Private Developers
Create a high-quality public realm within the Convergence Hub to enhance amenity and establish a distinct character for the area (Direction 4.5.2)	University of Waterloo City of Waterloo (IPPW)	Private Developers
Create a new large common space at the Convergence Hub to act as a focal point for new activities and provide amenity for area users (Direction 4.5.3)	City of Waterloo (Parks)	University of Waterloo

RECOMMENDED INTERSECTION ENHANCEMENTS

Intersection	Recommended Improvements	Timing	Reference
University Avenue / Seagram Drive	- Complete the Seagram Drive sidewalk network to the south - Create more spacious standing areas for pedestrians waiting to cross the street - Extend bike lane markings across the intersection to alert drivers	Short Term	Direction 4.5.4
Columbia Street / Laurel Trail	- Consider installing a new pedestrian/cyclist activated crosswalk - Consider installing pavement markings/zebra crossings to alert drivers - Provide clear signage to notify motorists of the Laurel Trail crossing	Short Term	Direction 4.3.2
Columbia Street / Hagey Boulevard	- Create more spacious pedestrian waiting areas - Enhance pedestrian amenities around the intersection - Consider introducing pedestrian crossing signals on the north side of the street with countdown timers	Short Term	Direction 4.3.7
University Avenue / Laurel Trail	Consider further improvements that would create a more generous crossing to support comfortable travel for all users and potentially higher user volumes	Short Term	Direction 4.3.2
Columbia Street / Phillip Street	- Consider introducing zebra crossings - Complete the sidewalk on the northeast corner of the intersection and along Phillip Street	Medium Term	Direction 4.5.1
Columbia Street / Villages Road	- Consider establishing a new signalized pedestrian/cyclist crossing from Villages Road to the north side of Columbia Street - Create a link to the path along Columbia Lake	Medium Term	Direction 4.3.7
Westmount Road / University Avenue	Consider extending the median to create a pedestrian refuge to provide an enhanced buffer for pedestrians crossing the wide road	Medium Term	Direction 4.5.4
Phillip Street / New University Service Street	- Consider creating a new intersection to support a potential multi-modal transit hub around the station - Design the street and intersection to support a range of users - Provide clear signage and generous lighting	Medium Term	Direction 4.3.6

Funding/Investment

Region of Waterloo

Discussions between the City and the Region of Waterloo will be needed to implement a number of improvements within the station area. The Region, through its Rapid Transit Division and Grand River Transit, will be an important investment partner.

Capital funding will be needed to develop a new multi-modal transit hub at the station. Given that the transit hub will link to a number of regional transit services and help connect people throughout the Region of Waterloo, this project should be regarded as a high priority for the Region. In addition, recommended streetscape improvements along Regional Roads in the area, including University Avenue and Columbia Street would require a commitment from the Region.

University of Waterloo

The University of Waterloo owns a large share of the lands within the station area and is therefore a key implementation partner. Support from the University will be needed to achieve a number of key investments around the station, including pedestrian and crossing enhancements along the Ring Road, the creation of a new multi-modal transit hub, reorienting buildings towards the station, and establishing a Convergence Hub along the west side of Phillip Street. The University of Waterloo Campus Master Plan remains an important tool for directing future growth on the campus; however certain elements of the Plan may need to be reconsidered to reflect the new location of the ION station. The City will need to work closely with the University to prioritize investment on the campus and determine a logical phasing strategy for improvements and transformation around the station.

Wilfrid Laurier University

While much of Wilfrid Laurier University's landholdings are located along the south side of University Avenue, the University owns several properties in Northdale. The University is currently engaged with Waterloo Collegiate Institute to consider potential redevelopment options on their adjacent landholdings, which together represent approximately 17% of the total land area in Northdale. Potential redevelopment of these lands into a mixed-use educational facility or community hub will need to be considered within the broader context of the Northdale plans and the ION station. Beyond these land holdings, the University could also play an important role in supporting the transformation of University Avenue as a gateway to its campus.

New Development

Substantial redevelopment is occurring in the Northdale neighbourhood, and is likely to continue into the future. In addition, the lands around the station and west of Phillip Street have great potential to redevelop. As part of the planning approvals process, the City should work with the development community to secure a range of public realm improvements, including well-designed street frontages, generous sidewalks, tree plantings, and POPS. Through Section 37 agreements, there may also be an opportunity to secure funds for specific city-building projects that can enhance the quality of place within the station area.



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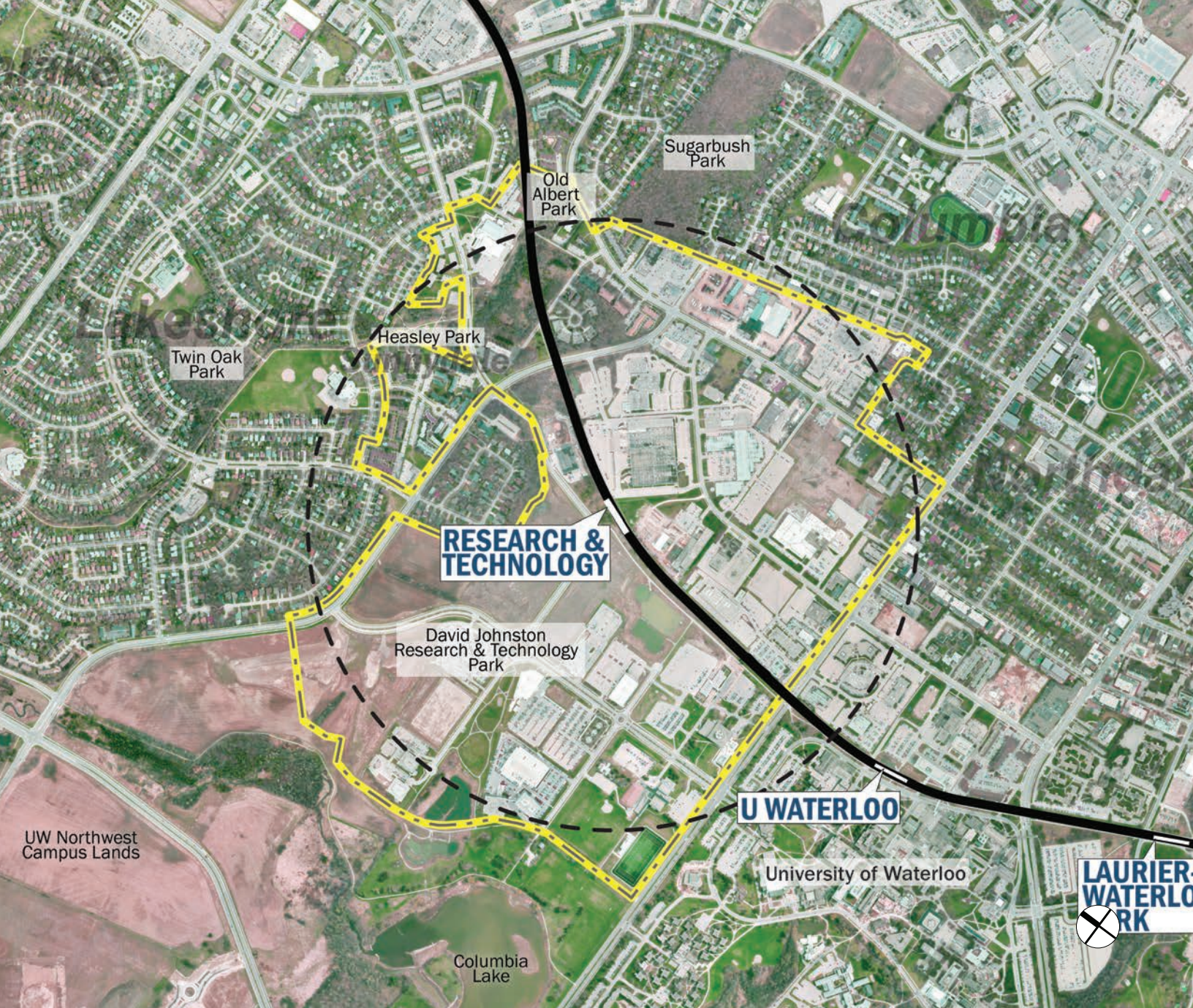
STATION AREA PLAN:

RESEARCH AND
TECHNOLOGY

JUNE 2017

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5.1 The Station Area Today

The Research and Technology station area is a major employment node and prominent high-tech innovation district within the City. The station area encompasses the David Johnston Research & Technology Park (R&T Park) and the evolving Phillip Street employment corridor. Around the edges of the station area are the residential neighbourhoods of Sunnyside, Lakeshore and Columbia.

The station will serve an important role as **a point of access for a growing cluster of research, technology and knowledge-based office uses** within the R&T Park. The 49-hectare research park is located on the

Size of Station Area: 187 hectares

No. of Residents: 4,600 residents (25 people/ha)

No. of Jobs: 8,500 jobs (45 jobs/ha)

Population/Jobs per Hectare: 70 people & jobs/ha

University of Waterloo's North Campus, and is home to approximately 3,500 employees and researchers. The R&T Park includes the Accelerator Centre, a focal point for commercialization and business development.

In addition, the station will serve as a key connection to the **Phillip Street employment corridor and the Waterloo Technology Campus** along Albert Street. The lands around Phillip Street have been subject to



Figure 5-1. The R&T Park is home to numerous technology-based businesses.



Figure 5-2. Areas of undeveloped land in the R&T Park present opportunities for infill and continued business expansion.



Figure 5-3. The Laurel Trail runs north through the station area, linking to the station near Wes Graham Way.



Figure 5-4. The Phillip Street employment corridor has potential for change and is being re-imagined as the Idea Quarter.

recent redevelopment interest. Planned redevelopment of these lands envisions the creation of a **mixed-use office and innovation district that is being re-imagined as the "Idea Quarter."** A new connection is planned between the ION station and Phillip Street to support access to the Phillip Street employment corridor.

The station will be located at the northern terminus of the Laurel Trail. Cyclists traveling north are diverted onto Wes Graham Way, where they are able to continue on streets in dedicated cycling lanes via Parkside Drive to Northfield Drive.

The broader area benefits from an abundance of green spaces, including Columbia Lake to the west, Heasley Park to the north, the University of Waterloo playing fields along Columbia Street, and the University of Waterloo Environmental Reserve. With mobility and connectivity enhancements, these features have the potential to become valuable assets serving the station area's workers and businesses.

Notwithstanding some higher-density employment uses which exist today, **development densities within the station area are generally low.** This is in part due to the presence of large undeveloped land parcels to the west of the station within the R&T Park. The result is that pedestrians accessing the R&T Park from the ION station will need to cross large areas of vacant space and surface parking before they reach their destination. The availability of land within the station area presents significant opportunity for infill, redevelopment and continued business growth.

While there is a predominance of employment uses within the station area, **there is a desire for additional amenities intended to serve local employees.**

Currently, many workers are required to drive outside of the area for lunch or to complete other day-to-day errands. Further, in the evenings when most businesses are closed, there is limited activity and the area can feel isolated. The provision of new amenities, retail uses and services within the area can support a more dynamic and competitive employment district.

Toward the northern and eastern edges of the station area are the established residential communities of Lakeshore and Columbia. These communities are characterized by single detached homes, townhouses and low-rise apartment buildings. While many of these neighbourhoods are located within walking or cycling distance to the station, improvements in connectivity can help support more convenient travel through the area.

Market Conditions

For many years, the station area served as a major node for BlackBerry, with the company occupying about 1 million square feet of office space in low-rise office and industrial buildings. Since BlackBerry's disposition of its buildings in early 2014, there has been significant absorption of these buildings, with growing demand for more urban office spaces and supporting amenities.

The station area is expected to continue to evolve as a location for technology and research firms. The station area can accommodate significantly more employment space through the re-absorption of existing buildings, development of lands within the R&T Park, and intensification around the Phillip Street corridor. In the medium and long-term, continued demand for office space creates the potential for transit-oriented office redevelopment around the station.

Recent private development interest around the Phillip Street corridor is seeing this area re-branded as the Idea Quarter, with a focus on creating a more vibrant mixed-use employment and innovation district. Active developments around the Phillip Street corridor include the Factory Square project at 451 Phillip Street, and The Hub, a major mixed-use residential project comprised of five residential buildings with ground floor commercial uses.

The introduction of LRT will help to support the ongoing transformation of the station area into a more urban employment district. The area has significant potential to evolve with a greater mix of uses and complementary amenities that will help position the area to attract new businesses and employees.

The Planned ION Station

The station will consist of a single platform and will be located midway between Columbia Street and Bearinger Road, where the Laurel Trail meets Wes Graham Way. At the southern end of the station platform, direct access to the Laurel Trail will be provided via a short access ramp. An LRT track crossing will be provided at the northern end of the platform and a new multi-use pathway will connect to Phillip Street.

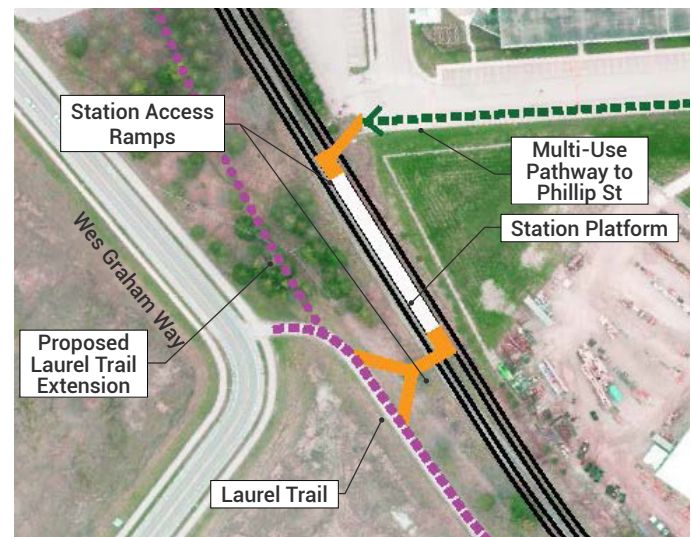


Figure 5-5. The station is located just east of Wes Graham Way adjacent to the Laurel Trail.

Current Planning and Policy Framework

Lands to the west of the rail corridor within the station area are designated as a **Major Node** in the City of Waterloo Official Plan. These lands are planned for medium to high-density mixed-use development. Where Bearinger Road and Phillip Street meet Albert Street, the lands are designated **Minor Node** and are intended for medium to medium-high density mixed-use development. The majority of the remaining lands to the east of the rail corridor are designated **Minor Corridor** and are planned for predominantly medium to medium-high density business employment with a limited amount of commercial.

Official Plan land use designations across the station area are primarily **Employment**. Toward the northern and eastern edges of the station area in the Columbia and Lakeshore neighbourhoods, the lands are designated **Mixed-Use Medium Density Residential**, **Mixed-Use Medium High Density Residential**, **Low Density Residential**, and **Commercial**, with some additional designated **Open Space** lands. There are no Special Provision Areas within the station area.

The Official Plan provides building height permissions for much of the lands in the station area. The majority of the lands west of the rail corridor are identified as **High Density Employment** with a maximum permitted building height of 81 metres (20 storeys). East of the rail corridor, the majority of the lands are categorized as **Medium-High Density Employment** where building heights up to 40 metres (10 storeys) are permitted. Toward the northern and eastern edges of the station area, **Medium Density** and **Medium High Density** development is permitted, to a maximum height of 20 metres (6 storeys) and 40 metres (13 storeys), respectively.

There are no flood lands located immediately around the ION station, however there are hazard lands near the western and northern edges of the station area boundaries that could impact development.

The **University of Waterloo Campus Master Plan** outlines a vision for development of its landholdings north of Columbia Street, including the R&T Park. The North Campus development framework envisions

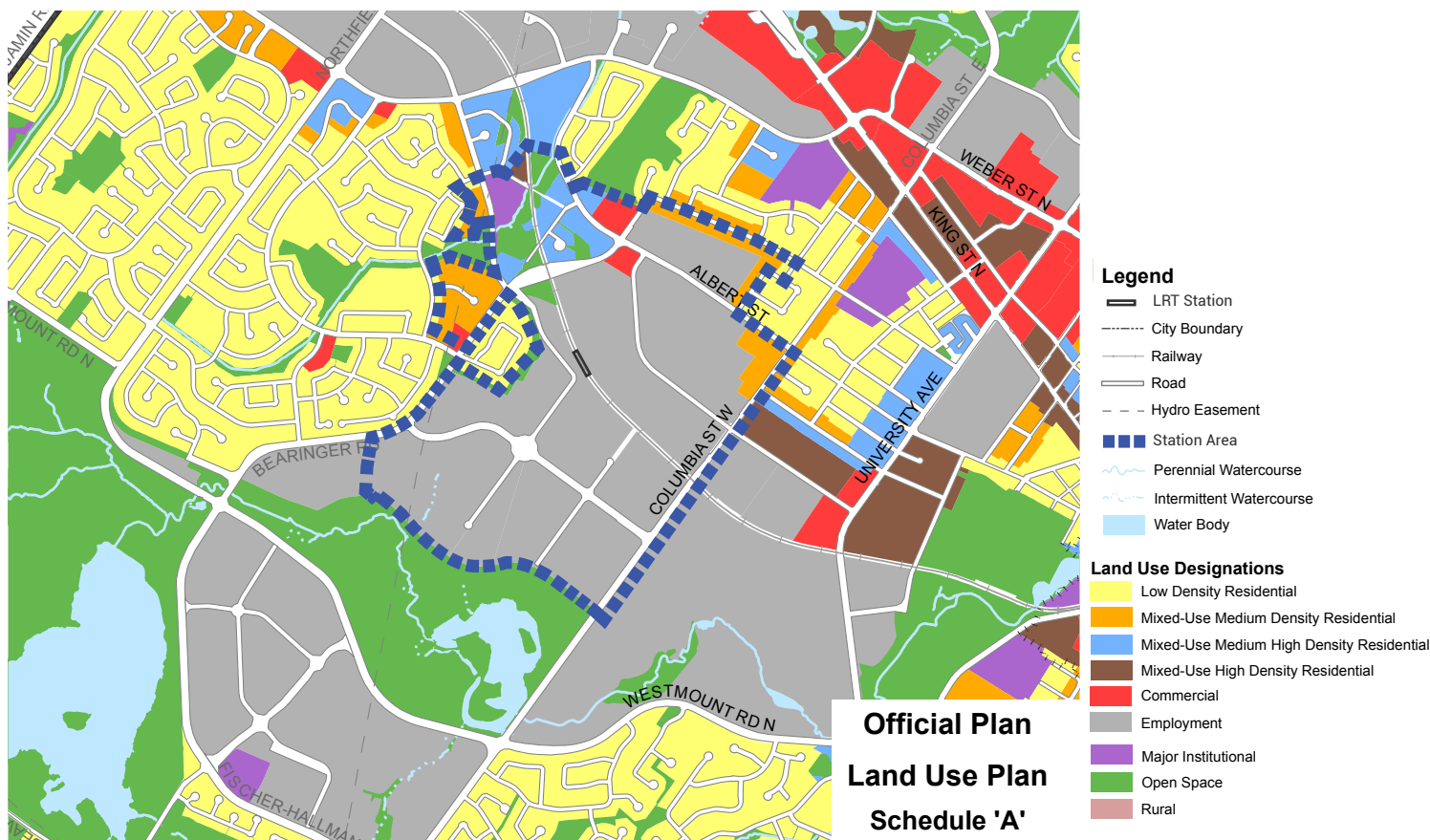


Figure 5-6. The City of Waterloo Land Use Plan

that the R&T Park will evolve into a more urban place, with improved connections to the main campus, the Phillip Street corridor, and the environmental reserve to the west. The Plan also recognizes that large areas of surface parking present opportunities for further intensification throughout the research park.

The Master Plan also identifies the immediate station area around Wes Graham Way as a focal point for the research park. This area is to be planned and designed in a way that enhances pedestrian connectivity,

accommodates a greater mix of uses, and supports public uses at grade. The Master Plan contemplates an eastward extension of Wes Graham Way across the rail line to connect to Phillip Street.

The Plan provides direction for the development of the athletics facilities along the north side of Columbia Street. While the area currently accommodates the Columbia Icefield and an outdoor stadium, there are plans to construct a 5,000 seat outdoor stadium.



Figure 5-7. The North Campus development framework sets out a vision for the development of the R&T Park over time.
(Source: University of Waterloo Campus Master Plan Update, 2009)

5.2 Vision for the Station Area

The Research and Technology station area will be strengthened as a prominent innovation hub within the City of Waterloo. The area's supply of vacant and underutilized lands will be leveraged to create a transit-oriented, compact, and urban employment destination. Local businesses will be supported with the introduction of a greater mix of transit-oriented uses, including a range of amenities geared toward workers, such as restaurants, cafés, retail, daycares, and other services to create a vibrant and dynamic place. A limited amount of residential developments in mixed-use buildings located in close proximity to the station will help to support activity at all times of day.

The emerging Idea Quarter east of rail corridor will evolve with a finer grained network of streets, buildings and open spaces. The expansion of

the sidewalk network, extension of the Laurel Trail and establishment of a more pedestrian and cycling-friendly environment will provide greater transportation choice.

The business park west of the corridor will retain a more corporate characteristic, with larger block sizes and a new node close to the station. A new, continuous green spine will be established stretching from the open space at Hagey Boulevard east to the station and then Phillip Street to make it possible for employees working around the station or along the Phillip Street corridor to access Columbia Lake and surrounding open spaces. Development in the R&T Park will continue to respond to existing natural features and extend an interconnected network of paths and green spaces to improve connectivity.

VISION STATEMENT

WATERLOO'S INNOVATION HUB

The Research and Technology station area will evolve into a vibrant and attractive urban employment hub centred around a dynamic activity node. With a mix of supportive land uses, including a broader range of amenities, the station area will serve the diverse range of businesses, high-tech workers, and students within the area. An interconnected network of pathways and green spaces will traverse the station area, connecting the R&T Park to Phillip Street and linking residential neighbourhoods with businesses and the LRT station.

Big Moves

1

Create a vibrant activity node at the station

The station will be located at the edge of the R&T Park and the Phillip Street corridor, in an area that has historically not been a focal point for development. The introduction of LRT creates an opportunity to transform the area around the station into a vibrant node that ties the eastern and western sides of the corridor together. High-density development and a transit-supportive mix of uses, including the strategic introduction of residential uses, should be encouraged to support activity around the station.

2

Strengthen the area as a prominent centre of innovation through placemaking and supporting amenities

The creation of a vibrant and attractive business district that offers amenities and attractive gathering spaces is key to supporting innovation and collaboration. Continued infill within the station area should be planned and oriented so that new development contributes to an enhanced mobility, open space and public realm network. Over time, the introduction of new amenities and high-quality architecture can create a distinct place that supports synergies and innovation.

3

Transform Phillip Street as the spine of the Idea Quarter and a complete green street

Phillip Street has the potential to evolve as a focal space of the Idea Quarter. The transformation of Phillip Street can help to enhance the setting for new investment and improve the character of the street. The street can be enhanced as a place for workers, pedestrians and cyclists by improving landscaping, completing missing sidewalks, and orienting buildings toward the street.

4

Establish a new street and block pattern to improve access to the station and support existing and new development

The historic development pattern within the station area has been characterized by large, low-density buildings surrounded by areas of surface parking. As LRT is introduced, there should be a shift toward a more urban pattern of development, with a mix of uses, higher densities and improved pedestrian connectivity. This transformation requires the creation of a finer grained street and block pattern that can help to structure new development and improve connectivity through the area.

5

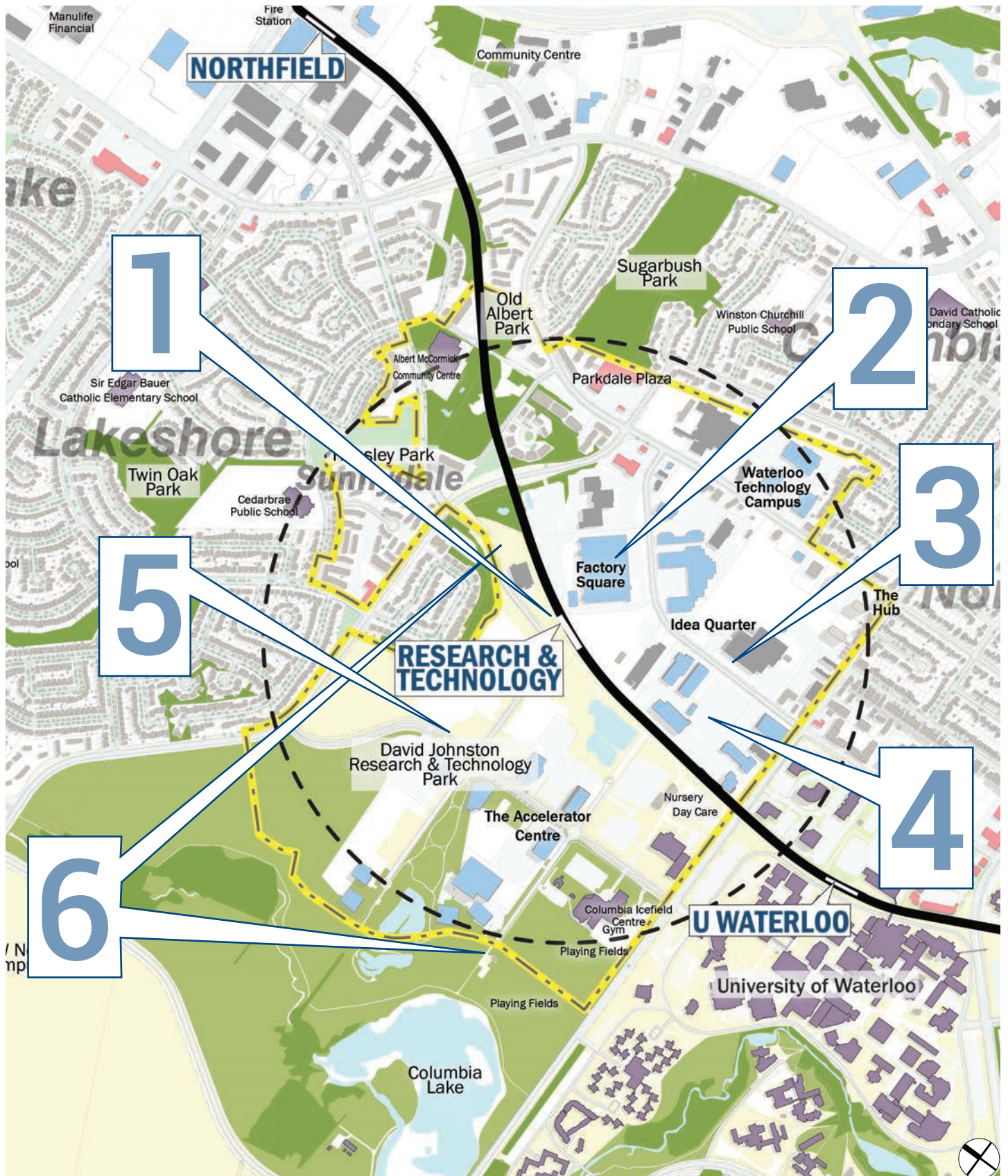
Protect the employment focus of the station area

The station area is a key employment node that accommodates over 3,500 jobs in the R&T Park and 1,500 more jobs along the Phillip Street corridor. As the area evolves over time into a more mixed-use, amenity-rich and transit-oriented place, new development will continue to focus on providing new employment space that will support job growth and economic development within the City and Region.

6

Create a network of pathways to improve connectivity to area businesses, neighbourhoods and open spaces

As the area is built-out over time, there is an opportunity to enhance connections throughout the area. Establishing an interconnected network of pedestrian and cycling connections, in addition to new mid-block pathways and trails, can help link area businesses together, support access to the Lakeshore and Columbia neighbourhoods, and improve connections to nearby open spaces and amenities.



5.3. Local Mobility Strategy

Mobility within the station area is generally auto-oriented, which reflects the historic pattern of development typical of older business districts and industrial areas. With large block sizes and a prevalence of surface parking lots, pedestrian travel through the area can be challenging. In addition, the ION station is located along the rail corridor, an area that was traditionally to the rear of area developments and therefore is obscured and difficult to get to from surrounding destinations.

Yet, the station area features a fairly robust active transportation network comprised of multi-use trails and cycling lanes along major streets. There is an opportunity to optimize use of these assets and encourage higher levels of walking and cycling by improving their connectivity to the wider station area.



Avenues

Indicates primary streets through the station area that are important transit corridors. Key considerations for Avenues are identified in Section 2.2.4.



Cycling Streets

Indicates streets intended to act as important cycling connections within the station area. Key considerations for Cycling Streets are identified in Section 2.2.4.



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4.



Proposed Street Network

Illustrates the potential for the establishment of a finer grained street and block network over time.



Pedestrian and Cycling Connections

Indicates existing (solid) and proposed (dashed) off-street pedestrian and cycling connections within the station area.

The introduction of new mid-block streets and path connections linking to the Laurel Trail can help to create an interconnected mobility network through that area that can enhance amenity for workers and improve connections to surrounding neighbourhoods. There is also an opportunity to establish a new north-south street on the east side of the corridor to improve access to the ION station and create a more walkable environment with smaller block sizes and buildings that animate the street. A key consideration within the station area will be the need to develop a parking strategy that allows for infill and redevelopment, while ensuring that parking areas do not detract from the pedestrian, cycling or transit user experience.

The following section outlines a series of directions to enhance mobility throughout the station area.



Trail Network

Indicates the potential for an interconnected network of trails to improve connectivity across the larger blocks within the R&T Park.



Intersection Improvements

Indicates areas where improvements to the existing intersection could help to enhance access and safety for pedestrian and cyclists.



Pedestrian-Activated Crossings

Indicates areas where the introduction of a new pedestrian-activated signalized crossing point could support connectivity between the station area and surrounding neighbourhoods and destinations.



Mobility Enhancement Zone

Indicates areas where improvements should be targeted to support a high number of transfers between pedestrians, cyclists and the transit network.



Station Area Boundary

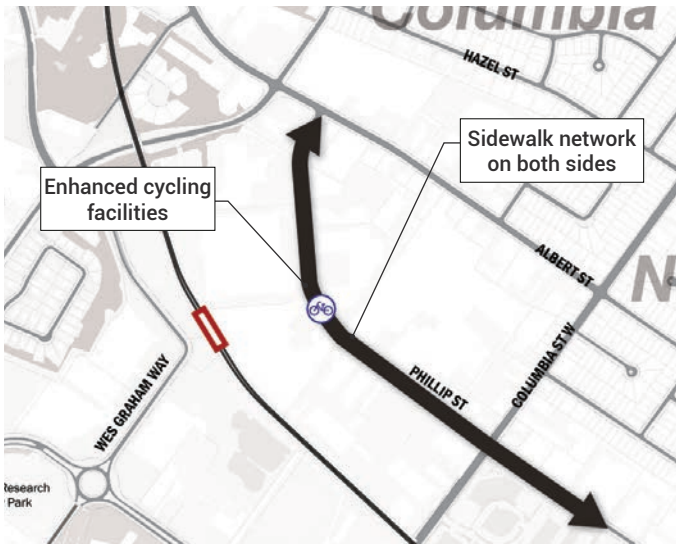


Figure 5-8. Mobility Framework

Key Directions

- 1 Enhance the pedestrian and cycling network along Phillip Street to strengthen the street as a key link through the Idea Quarter
- 2 Enhance connections to the Laurel Trail and plan for a northbound extension alongside the rail corridor
- 3 Consider new or adjusted local bus routes to connect neighbourhoods and businesses located outside a reasonable walking distance to the LRT
- 4 Plan for a finer grained street network to create a more urban development pattern
- 5 Enhance the interconnected network of trails within the R&T Park to improve connectivity for pedestrians and cyclists
- 6 Consider reducing parking supply rates, encouraging shared parking, and fostering a shift away from surface parking

5.3.1 Enhance the pedestrian and cycling network along Phillip Street to strengthen the street as a key link through the Idea Quarter



Phillip Street is an important north-south connection that has historically acted as a spine through the business park to the east of the rail corridor. The current design of the street prioritizes vehicular movement, with two relatively wide lanes of traffic and a narrow sidewalk along the west side of the road. Recently installed bicycle lanes have helped improve amenity for cyclists, although these lanes may need to be widened in the future to support growth in cycling activity. As this employment district transforms over time as the Idea Quarter, **there is an opportunity to enhance the street for pedestrians, cyclists and transit users.**

The LRT is a key driver for the potential transformation of the area around Phillip Street into a mixed-use, high-density office district. As redevelopment takes place, there is an opportunity to **re-balance the street and extend the cross section proposed in the University of Waterloo station area** between Columbia Street and University Avenue. The narrowing of driving lanes in exchange for wider sidewalks and more generous bicycle lanes can create a more comfortable experience for pedestrians and cyclists, and support access to local businesses. Introducing wider boulevards, consistent tree planting, and pedestrian-oriented lighting can also enhance the sense of pedestrian comfort along the street.

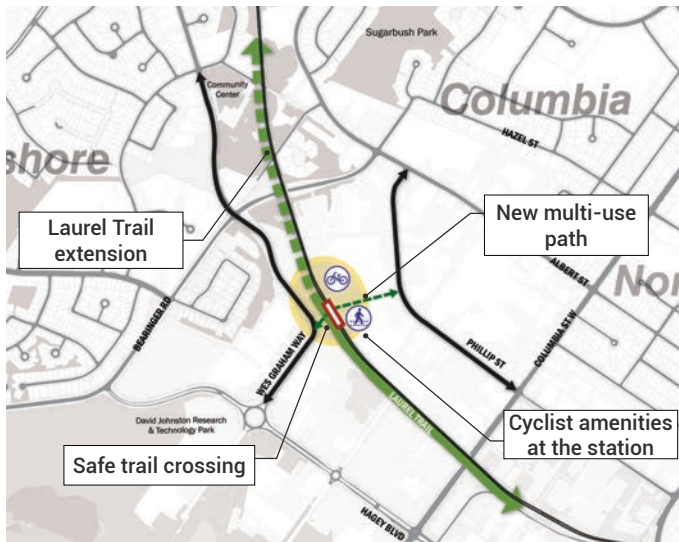
There is an opportunity to link sidewalk and cycling infrastructure improvements with new east-west street connections to support access to and from the ION station.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a maximum vehicle lane width of 3.5m and reallocate the extra space to other modes of travel.
- Complete the sidewalk network on both sides of Phillip Street, with a minimum width of 2.1m to support pedestrians accessing area businesses, amenities and the ION station.
- Provide minimum bike lanes of 1.8m, and link these facilities to the Laurel Trail and to bicycle facilities along nearby streets, including Columbia Street and the southern end of Phillip Street.
- Extend sidewalk and cycling facilities to new east-west streets that intersect with Phillip Street.

Refer to Section 2.4.12 for additional details on the recommended cross-section for Cycling Streets

5.3.2 Enhance connections to the Laurel Trail and plan for a northbound extension alongside the rail corridor



The Laurel Trail is an important active transportation link that runs along the west side of the rail corridor, connecting the R&T Park with the University of Waterloo and Uptown. Due to right-of-way constraints, the trail branches away from the station and converges with Wes Graham Way.

Existing east-west sidewalks and bike lanes along Wes Graham Way within the R&T Park provide a strong connection to the Laurel Trail; however, on the east side of the corridor, the lack of a street grid network hinders access to both the Trail and the station.

There is an opportunity to **establish a strong east-west pedestrian and cycling connection between Phillip Street, the station, the Laurel Trail and Wes Graham Way**. This link would help to provide a connection between the trail and employment areas on either side of the corridor; reinforce the relationship of the trail to the station; and connect the Phillip Street bike lanes to the Laurel Trail. The area immediately around the station should be a focal point for pedestrian, cycling and transit infrastructure improvements, helping to support transfers between the trails and the LRT.

A **future extension of the Laurel Trail alongside the rail corridor** would further improve connectivity within the area. This continuous active transportation corridor could help strengthen the relationship between the LRT and the surrounding pedestrian and cycling network by **supporting first and last mile travel to and from the stations**. The extended trail would enhance access to Northfield Station, the Northfield employment district and the St. Jacobs Market.

RECOMMENDED GUIDELINES AND STRATEGIES

- Integrate the Laurel Trail with the ION station, planned pedestrian/cycling routes, and future open spaces to strengthen the trail as a major link and public amenity through the area.
- Support integration of the LRT and active mobility by providing a higher level of pedestrian and cycling amenity at the station, including trail wayfinding signage, secure and sheltered bicycle parking areas, and a bicycle repair stand and pump.
- Establish a minimum 3.6m multi-use path between Phillip Street and Wes Graham Way that connects to both the station and the Laurel Trail.
- Support safe crossings of the trail for pedestrians and cyclists traveling to and from the station through the use of elements such as: signs and pavement markings that alert trail users to the crossing; enhanced surface treatments, such as paint or textured materials along the trail where it meets the station; and the application of tactile surfaces on either side of the trail to alert pedestrians.
- Plan for the incremental expansion of the Laurel Trail northward along the rail corridor to create a continuous active transportation link with a strong relationship to the transit corridor.
- In sections of the rail right-of-way that are too narrow to accommodate the trail, require new developments to incorporate setbacks that provide sufficient space for the trail to be established.

5.3.3 Consider new or adjusted local bus routes to connect neighbourhoods and businesses located outside a reasonable walking distance to the LRT



Figure 5-9. There may be opportunities to adjust local bus routes to better serve neighbourhoods and businesses located outside the station area

The station area is currently served by iXpress service along Parkside Drive, as well as other bus routes along Columbia Street and through the Lakeshore and Columbia neighbourhoods. With the arrival of LRT, the iXpress route will be realigned, reducing local transit service for residents of the Lakeshore community. Grand River Transit may also consider rationalizing other bus services to respond to changing travel patterns and demand as a result of the opening of the LRT in 2017. There is a benefit to maintaining local transit service throughout the station area to serve employment districts and surrounding neighbourhoods that are not within convenient walking distance from the station, particularly during the winter months.

An opportunity exists to **adjust local bus routes or create new routes to support access to surrounding destinations and provide a link to the ION station.** Consideration should be given to how neighbourhood routes that currently do not connect to the station might be reconfigured to link residents to the LRT. Grand River Transit currently operates Route #73, a busPlus service that uses cutaway vans to connects

the Lakeshore and Northlake neighbourhoods to the Albert McCormick Community Centre. This route has the potential to be adjusted and converted into a permanent fixed route, potentially using conventional buses that serve the neighbourhoods and local businesses that will be losing the iXpress service upon arrival of the LRT.

RECOMMENDED GUIDELINES AND STRATEGIES

- Undertake a review of local transit services to determine if additional service is required to serve the surrounding neighbourhoods or businesses beyond walking distance from the station.
- Consider adjustments to the existing busPlus route to improve service between the Lakeshore neighbourhood, local businesses and the ION station.
- Consider converting the adjusted busPlus route to a permanent fixed route with longer service hours.
- Explore the potential for adjusting Route #9 so that the route connects to the ION station.

5.3.4 Plan for a finer grained street network to create a more urban development pattern



The station area is characterized by large blocks, **numerous surface parking lots and vacant lands** which create an uncomfortable environment for pedestrians, cyclists and transit users.

The west side of the corridor contains a larger block pattern consistent with a more corporate office environment. Over time an opportunity exists to break down some of these larger blocks through the **extension of existing streets and transformation of driveways into new streets with sidewalks and streetscaping**.

The east side of the corridor has a different characteristic and the potential to develop as a much more urban employment district. Future change and redevelopment around the Phillip Street corridor presents an opportunity to create **a more urban place that is structured around a network of new streets, smaller blocks and internal pathways**.

The establishment of a new north-south street located between the corridor and Phillip Street could help support access to and from the station. This street should be designed with generous sidewalks, landscaping and on-street parking to help create a

comfortable pedestrian experience. New east-west streets and paths can be implemented over time to link this new street eastward to Phillip Street and Albert Street to improve access to businesses and destinations throughout the area. Enhancements to Albert Street could also be considered to improve the travel experience for pedestrians and cyclists.

RECOMMENDED GUIDELINES AND STRATEGIES

- Require new development east of the corridor to plan for and construct a new street and block pattern. The pattern should be comprised of a continuous north-south street running from Columbia Street north to the station and a series of connecting east-west streets that together establish a network of streets and blocks between Phillip Street and the corridor.
- Where possible, extend the east-west streets east to Albert Street to extend connectivity and improve access to the Columbia neighbourhood.
- Design the new north-south street as a special street with more generous sidewalks, on-street parking and streetscaping to distinguish the street as a pedestrian spine through the area.
- Consider opportunities to enhance the pedestrian and cycling experience along Albert Street through streetscape and public realm improvements.

5.3.5 Enhance the interconnected network of trails within the R&T Park to improve connectivity for pedestrians and cyclists



Travel through the **R&T Park can be uncomfortable for pedestrians and cyclists, given the large block sizes and dispersed development pattern.** The research park already contains a number of active transportation routes, including the westward branch of the Trans Canada Trail which runs along Frank Tompa Drive, as well as on-street bicycle lanes along Hagey Boulevard, Bearinger Road and the eastern section of Wes Graham Way. Yet, typical block sizes are approximately 300 metres in length, and accessing these pedestrian and cycling facilities may not be the most direct route for employees and visitors to use.

The arrival of LRT and the anticipated growth and build-out of the R&T Park serves as a driver for the continued expansion of the pedestrian and cycling network to break down the large block sizes and support movement through the area and to the station. **An interconnected network of mid-block pathways can be planned to create more direct routes** to local businesses, surrounding open spaces, new service amenities, the planned University of Waterloo stadium, and the ION station without compromising the ability of the research park to accommodate large corporate tenants.

RECOMMENDED GUIDELINES AND STRATEGIES

- Continue to develop an interconnected path network throughout the R&T Park, with a focus on mid-block connections that enhance walkability and create more direct routes to and from the station.
- Secure a minimum path width of 2.7m across the network to allow for comfortable travel for pedestrians and cyclists.
- Where the pathways meet public streets, consider design solutions that can support crossings, such as curb cuts to improve accessibility and zebra striping to alert drivers.
- Ensure that each phase of development contributes to the creation of the path network, and that future connections are preserved.

5.3.6 Consider reducing parking supply rates, encouraging shared parking, and fostering a shift away from surface parking

The station area is defined by vast areas of surface parking, with **almost 35 hectares of land used to accommodate some 11,500 surface parking spaces**. Many of these spaces are located within walking distance to the station. The largest clusters of surface parking are associated with the office and industrial buildings along the Phillip Street corridor, as well as at the office buildings throughout the R&T Park. The quantity and design of these parking facilities reinforces the area's auto-oriented character typical of older business parks, with large and highly visible areas of surface parking fronting onto the street or in some cases surrounding buildings on all sides.

The availability of parking within the station area is not supportive of increased transit use or the development of compact, transit-oriented employment districts. Over time, the amount of parking should be reduced, and large areas of surface parking should be redeveloped with new buildings oriented to define and activate streets and pedestrian connections.

To help encourage a shift away from surface parking and promote transit-oriented development, there is a need to **consider reducing parking supply rates and consider introducing rate maximums**. To support increased activity and allow for transit-oriented development around the station, restrictions on surface parking within close proximity to the station should be considered.

While parking will continue to be required, parking facilities can be designed to minimize their impacts on the public realm by **locating parking below grade or in structures with active uses at street level**, or by orienting parking to the rear of development. Opportunities for **shared parking between different businesses or properties can also be explored** to optimize the use of the available parking supply. Timed on-street parking can be used to support visitors while contributing to a more pedestrian-friendly street environment.

A range of transportation demand management strategies (TDM) can also be implemented to support a shift away from the private automobile to more

sustainable modes of travel. Given that the station area contains the largest cluster of jobs across the five station areas, **TDM strategies should be targeted to employees in the area**. Potential strategies and programs include carpooling and ridematching, establishment of a bikeshare program, expansion of the TravelWise program through partnerships with local employers, and alternative workplace arrangements such as telework or flexible work schedules.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Consider reducing parking supply rates and introducing maximums for new development, while ensuring that parking needs are still being met in the near term.
- b. Restrict surface parking within 100m of the station to support higher densities and a greater mix of uses at the station.
- c. Require larger development sites to submit plans illustrating how areas of surface parking could be intensified with new development over time.
- d. Provide parking for new development below grade or in structures where it will support intensification and not detract from the public realm.
- e. Where it is unfeasible to provide parking in decks or below grade, locate surface parking to the rear of buildings or internal to the block.
- f. Permit shared parking between developments and account for different use characteristics in required parking rates.
- g. Accommodate visitor and short-term retail parking on street where it can be shared between users and priced to encourage turnover.
- h. Consider implementing carpooling, carshare and bikeshare programs, and encouraging more businesses to partner with TravelWise to offer alternatives to driving to work.

Details of transportation demand strategies and proposed parking supply rates for the Research and Technology station are outlined in Chapter 8.

5.4. Built Form and Land Use

The station area is predominantly an Employment area, as illustrated in Figure 5-10. The area has evolved as a contemporary employment node, with a focus on high-tech jobs and innovation. The introduction of LRT creates an opportunity to strengthen the high-value employment character of the area by improving access and supporting an increase in employment densities.

Development within this employment district is characterized by lower-density office and industrial buildings. The land use and built form character on the east side of the corridor is typical of older industrial business parks, while development to the west of the corridor within the R&T Park has a more corporate characteristic, with larger offices oriented towards the street but surrounded by large areas of surface parking.

Despite the high number of jobs, there is a lack of amenities to serve employees and visitors. With limited availability of local cafes, restaurants or retail, many workers have no choice but to drive to more amenity-rich areas to access food or everyday services. This creates a competitive disadvantage with other more amenity-rich employment areas. The predominance of employment uses within the area also means

that activity levels are low during the evenings and weekends, which contributes to a sense of isolation in and around the station after hours.

There is a need to encourage greater levels of amenity within the station area by allowing for and encouraging a broader mix of uses. While a limited range of amenities and retail is permitted in Employment areas, there is an opportunity to encourage and make it easier for new employment facilities to support a greater mix of uses, including complementary street-related commercial activities. New amenities within the station area should be employment-focused and developed in transit-oriented building form and design.

While the focus of new development should be on providing additional employment uses, there is also the potential to consider the introduction of a limited amount of strategically located new residential. This should be integrated with and designed to support new employment uses, and targeted to areas adjacent to higher-order transit services, generally limited to within 250 metres of the station and along major transit corridors, to support transit ridership and increase after-hour activity.

Office Mixed-Use

Indicates areas that will be predominantly office employment in nature, and where a mix of supportive uses within buildings, such as retail or restaurant, will be encouraged to support local employees.

Office Mixed-Use Core

Indicates the lands within approximately 250m of the station and along higher order transit corridors where the highest intensity and mix of uses will be located, including office, supporting commercial/retail amenities, and consideration for new residential.

Commercial Mixed-Use

Indicates areas that will be predominantly commercial in nature but where a mix of uses within buildings or on the block will be encouraged, including office and upper level residential uses.

Residential Mixed-Use

Indicates medium-high to high-density residential areas where some street-related retail or active at-grade uses are permitted at the base of a building to improve amenity for local residents.

Station Area Boundary

Residential

Indicates areas of low to medium-density residential development.

Academic

Indicates university-related lands that are appropriate for a range of university-related uses, including new class/lab space or athletics facilities.

Civic/Institutional

Indicates existing community facilities such as schools, community centres or recreational facilities.

Open Space

Active Frontage

Indicates areas where the ground floor is required to accommodate non-residential uses at grade that are designed to animate the street and support area employees.

Convertible Frontage

Indicates areas which are planned and designed to accommodate mixed commercial, retail, and community/institutional uses at grade, at such time as these uses may be supported.

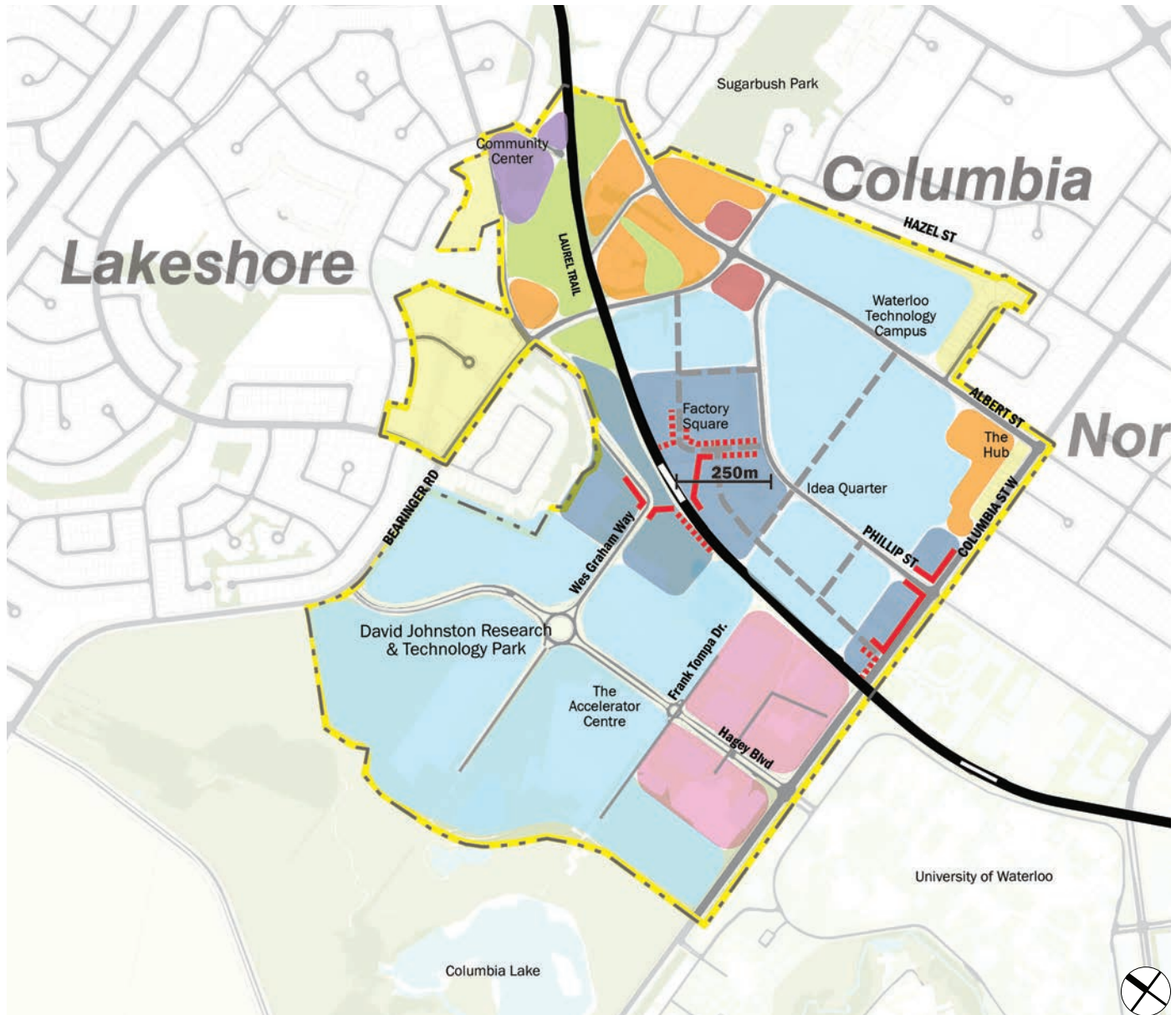


Figure 5-10. Land Use Framework

Key Directions

- 1 Support existing employment uses and business while encouraging new job growth
- 2 Encourage the introduction of more amenities within office and mixed-use areas
- 3 Support higher densities and a mix of uses at the station to support activity at all hours of the day
- 4 Consider the introduction of residential uses at strategic transit-adjacent locations
- 5 Orient new development to create interesting and active street frontages and public spaces

5.4.1 Support existing employment uses and business while encouraging new job growth



The Research and Technology station area contains the **greatest number of jobs among the five station areas**. There are over 7,000 office jobs and hundreds more workers employed in the industrial, institutional and retail sectors. As one of the most significant employment clusters within the City, the station area is a key driver of the Regional economy.

The employment lands within the area are an important economic asset for the City, and they should be protected and planned to accommodate business activities for the long term. The focus of growth and new development within the area will be on strengthening the employment base, creating new jobs, and supporting business activity.

While a greater mix of uses is expected as the R&T Park and the Idea Quarter transform and redevelop over time, there are a number of existing businesses, including some industrial and manufacturing operations, that are expected to remain in the longer term. It will be important to **ensure that new uses are planned and designed to allow existing businesses to continue to function** and thrive within the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Ensure that land use policies preserve the business function of the City's employment lands in the long term.
- Ensure that new development within Employment areas is compatible with existing employment uses.
- Work with existing businesses to ensure that new streetscape improvements and/or the design of new streets and blocks facilitate the operations of existing employment uses.
- Require developers to demonstrate through the site plan approval process how new development is designed to integrate with and support the function of existing uses, while still putting in place a pattern of development that supports the long-term objectives for the station area.

5.4.2 Encourage the introduction of more amenities within office and mixed-use areas



Figure 5-11. The integration of amenities in the ground floor of this office building in Uptown Waterloo helps to animate the street and support local employees

Currently, **R&T Park and Phillip Street employees have limited access to retail establishments, restaurants, and services.** While the station area will continue to primarily serve as an employment area, a greater range of compatible uses should be introduced to create a more vibrant place. New supportive uses can allow the station area to evolve as an attractive destination for employees to stay during lunch, after work, and potentially on weekends to run errands, dine, and socialize. The introduction of new uses will be critical in enhancing the competitiveness of these employment areas. Retail and service uses, such as restaurants, coffee shops, daycares and medical clinics, can be integrated into the ground floor of office buildings over time to animate the area and minimize the need for employees to travel elsewhere to meet their everyday needs.

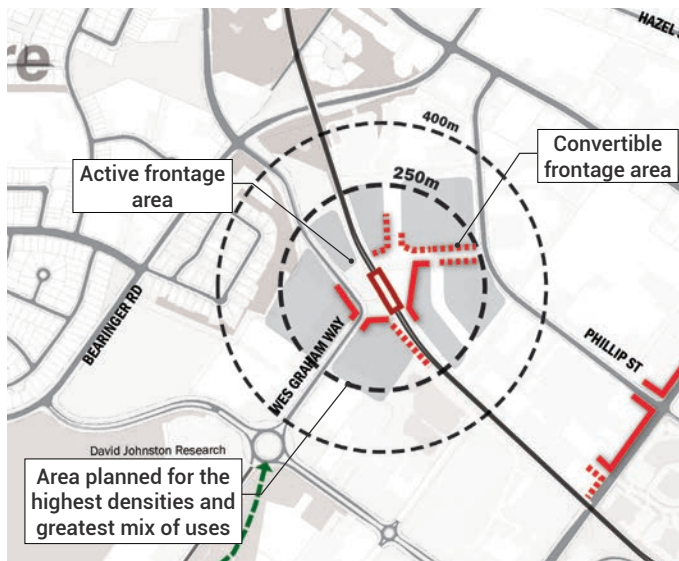
The introduction of amenities should be prioritized at key nodes and routes within the station area. A mix of uses clustered at the station can contribute to placemaking and support transit ridership. Key routes leading to and from the station should also be animated with street-oriented commercial, retail, or service amenities to draw workers and visitors into the station. While current Official Plan provisions

allow for a range of complementary uses within the business parks, there is the need to encourage a greater mix of uses by increasing the amount of area permitted for retail and restaurant uses and reducing parking requirements for these uses within mixed use buildings.

RECOMMENDED GUIDELINES AND STRATEGIES

- Support a greater mix of uses including retail, restaurants and service uses if integrated into the ground floor of new employment-focused development.
- Encourage the integration of amenities within office buildings by waiving the associated parking requirements. For example, allow 10% of the gross floor area within an office building to be dedicated to retail, restaurants, or service amenities without requiring additional parking.
- Design buildings with active frontages (Figure 5-10) to support active street level uses.
- Design buildings with convertible frontages (Figure 5-10) to support active street level uses over time.
- Encourage new amenities and active uses that help frame new public or semi-public spaces and open areas.
- Establish a minimum ground floor height of 4.5 metres to provide flexibility and support active street level uses over time.

5.4.3 Support higher densities and a mix of uses at the station to support activity at all hours of the day



The R&T Park and the Phillip Street employment district area east of the corridor currently have little relationship to one another and much of the land next to the station is either vacant or underutilized. **The area immediately surrounding the LRT station presents an important opportunity to create a vibrant destination** that supports activity at all hours of the day, tying the two sides of the station area together, attracting ridership, and enhancing the perception of safety.

Concentrating the highest densities and greatest mix of uses within a 250-metre radius of the station will help to support transit ridership and encourage more activity during the evening and weekends. **A limited amount of residential, integrated with mixed-use development, may be appropriate** within this area to support a live/work environment and attract higher-value, creative industries attracted to more urban environments with greater amenity. Introducing residential uses at the station will also help to strengthen the relationship between the station and the Lakeshore neighbourhood to the west, and support the development of more urban built form typologies at the station, with parking integrated within buildings or below grade.

RECOMMENDED GUIDELINES AND STRATEGIES

- Extend the Official Plan provision allowing building heights up to 81 metres to apply to all lands within a 250-metre radius of the station.
- Permit residential within mixed-use buildings at strategic locations within the station area to support activity throughout the day and night (see Direction 5.4.4).
- Establish a minimum building height of 3 commercial storeys within 250m of the station.
- Restrict auto-oriented uses such as drive through facilities, auto-dealerships and gas stations within 400m of the station.
- Promote flexibility of use and building adaptation with elements such as open floor plans and higher floor-to-floor heights to enable the area around the station to evolve and respond to changing needs over time.
- Encourage innovative design and architectural excellence to enhance the image of the station area.
- The impacts of taller buildings, such as shadows, wind, and visual impacts on the public realm, should be carefully considered and their design should incorporate setbacks, as appropriate.

5.4.4 Consider the introduction of residential uses at strategic transit-adjacent locations

The introduction of LRT presents an opportunity to create a more vibrant and mixed-use employment district capable of competing for jobs and talent in an environment where high-tech and high-value creative industries are increasingly making locational decisions based on lifestyle considerations. The introduction of new amenities and uses can help to create a more attractive environment for workers and businesses to thrive.

While the focus of new development within the station area will be on providing additional employment uses, there is the potential to **introduce residential uses in a number of strategic locations within the area**. These residential uses should be designed to be adjunct to the primary employment function of the area and located in close proximity to the station or along higher-order transit corridors to support a more complete employment district, with a greater mix of uses, higher densities, and more transit-oriented building forms.

The area within 250 metres of the station is recognized as the primary zone of influence and has the greatest potential to support transit ridership by developing into a vibrant, mixed-use activity node. The introduction of **residential uses integrated into higher-density employment-focused developments within 250 metres of the station** can help support activity throughout all hours of the day. Limited residential development within Employment areas **may also be appropriate along higher-order transit corridors** to optimize transit use and encourage more active streetscapes.

Plans for new residential development should demonstrate how they support the business function of employment lands within the station area. The City should consider developing employment targets for these employment lands, and require developers to **demonstrate that minimum job targets can be achieved**. Employment and residential should be developed in a lockstep manner, with limited residential uses permitted following the development of significant office and employment uses.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Through a forthcoming Municipal Comprehensive Review, explore opportunities for allowing limited residential development at strategic locations.
 - i) Priority will be given to lands within 250 metres of the station and where residential is:
 - a component of a mixed-use building or development with a substantial employment component; and
 - oriented to front onto the station and/or have direct access from active or convertible frontage areas.
 - ii) The City may also consider allowing for limited residential development at other strategic locations that are within 250 to 400 metres of the station where residential is:
 - a component of a mixed-use building or development with a substantial employment component;
 - oriented to front onto and/or have direct access to higher order transit service.
- b. Consider designating certain Employment lands as Class 4 areas to provide flexibility for more noise-sensitive residential uses to be located near existing industrial or commercial uses (refer to NPC-300 Guidelines).
- c. For projects that contemplate residential uses, require developers to submit a master plan that demonstrates:
 - i) Compatibility with existing and planned employment uses;
 - ii) A commitment to developing new employment uses on the site;
 - iii) How the design of residential uses supports area employees and employers; and
 - iv) A phasing plan that ensures substantial new employment uses are established prior to construction of residential uses.
- d. Encourage shared parking between uses to optimize use of the available supply and encourage more transit-oriented development (see Direction 5.3.6).



Figure 5-12. New residential integrated into this office development across from a SkyTrain station in Vancouver helps to extend hours of activity around the station while supporting the employment function of this corridor.

5.4.5 Orient new development to create interesting and active street frontages and public spaces

Currently, **many buildings across the station area are oriented away from streets, surrounded by surface parking lots**, and disconnected from the pedestrian realm. With the introduction of LRT, a greater number of employees, residents, and visitors to the area are expected to walk and cycle within the station area. Supported by the establishment of a new street and block network, an opportunity exists to enhance the walk for pedestrians by orienting new buildings to address and animate streets and pathways.

Orienting buildings toward streets and public spaces, and concentrating active uses at ground level along key frontages will establish a strong relationship with the mobility network and public realm, define key routes, and contribute to the character of the station area. **Consistent building setbacks can help frame the public realm** and provide opportunities for the implementation of high quality, consistent landscape treatments over time. To further enhance the public realm, the visual impact of large building footprints can be reduced through design features such as articulation.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a maximum building setback of 3m within 250m of the station to ensure the buildings address and help to provide spatial definition to streets and open spaces.
- East of the station, establish a maximum building length of 70m to encourage connectivity and a finer grained built form.
- Articulate frontages longer than 35m in length to break up the building massing so that the structure reads as a series of linked pavilions.
- Additional guidelines to ensure that new development helps to create interesting and active street frontages can be found in Chapter 2.0: Corridor-Wide Directions.



Figure 5-13. Buildings with active frontages can provide amenities and support active street level uses (Portland, Oregon)

5.5. Public Realm Plan

There are a number of open space assets, natural areas and multi-use trails throughout the station area. These include regional amenities such as the Laurel Trail/Trans Canada Trail, including the north-south route that runs alongside the rail corridor and the western branch which runs along Frank Tompa Drive and alongside Columbia Lake. A number of local community open spaces also exist throughout the Lakeshore and Columbia neighbourhoods, including Heasley Park, and Sugarbush Park. Albert McCormick Community Centre, Within the R&T Park, vast green spaces consist primarily of environmentally sensitive natural areas or large playing fields which are somewhat disconnected and not easily accessible. There are no open spaces along the Phillip Street corridor.

There is an opportunity to enhance the network of public and private open spaces throughout the station area to support placemaking and provide spaces for workers to gather socialize and innovate. The

introduction of public spaces along the Phillip Street corridor can help create a setting for new investment, enhance amenity for local employees, and improve area connectivity.

There are opportunities to strengthen connections to surrounding parks and green spaces by enhancing the Bearinger Road/Hazel Street corridor and establishing a new east-west greenway to link Phillip Street west to Columbia Lake. A new pedestrian-oriented north-south street east of the corridor can help to improve connectivity to the station. This street would be supported by the provision of a new station-related open space to link both sides of the corridor and support placemaking and pedestrian and cycling activity at the station.

The following section outlines a series of directions to improve the public realm throughout the station area.



Avenues

Indicates primary streets through the station area that are also important transit corridors. Key considerations for Avenues are identified in Section 2.2.4



Cycling Streets

Indicates streets intended to also act as important cycling connections within the station area. Key considerations for Cycling Streets are identified in Section 2.2.4



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4



Special Streets

Phillip Street and the new north-south street are recognized as Special Streets with distinct roles as key links through the station area, and as a front door of the employment district to the east of the corridor.



Station Area Boundary



Greenway

Indicates the location of the proposed Greenway linking Phillip Street west to Columbia Lake



Station Related Open Space

Indicates location of a proposed new large open space to act as focal point for station area activities.



Key Focus Areas for Wayfinding

Indicates priority areas for wayfinding signage to guide users to and from the station area.



New Open Space Opportunity

Indicates general location of a proposed new large open space to act as a focal point for station area activities.



Bearinger Road Streetscape Improvements

Indicates area for targeted improvements along Bearinger Road and Hazel Street to support access to the station and surrounding open spaces

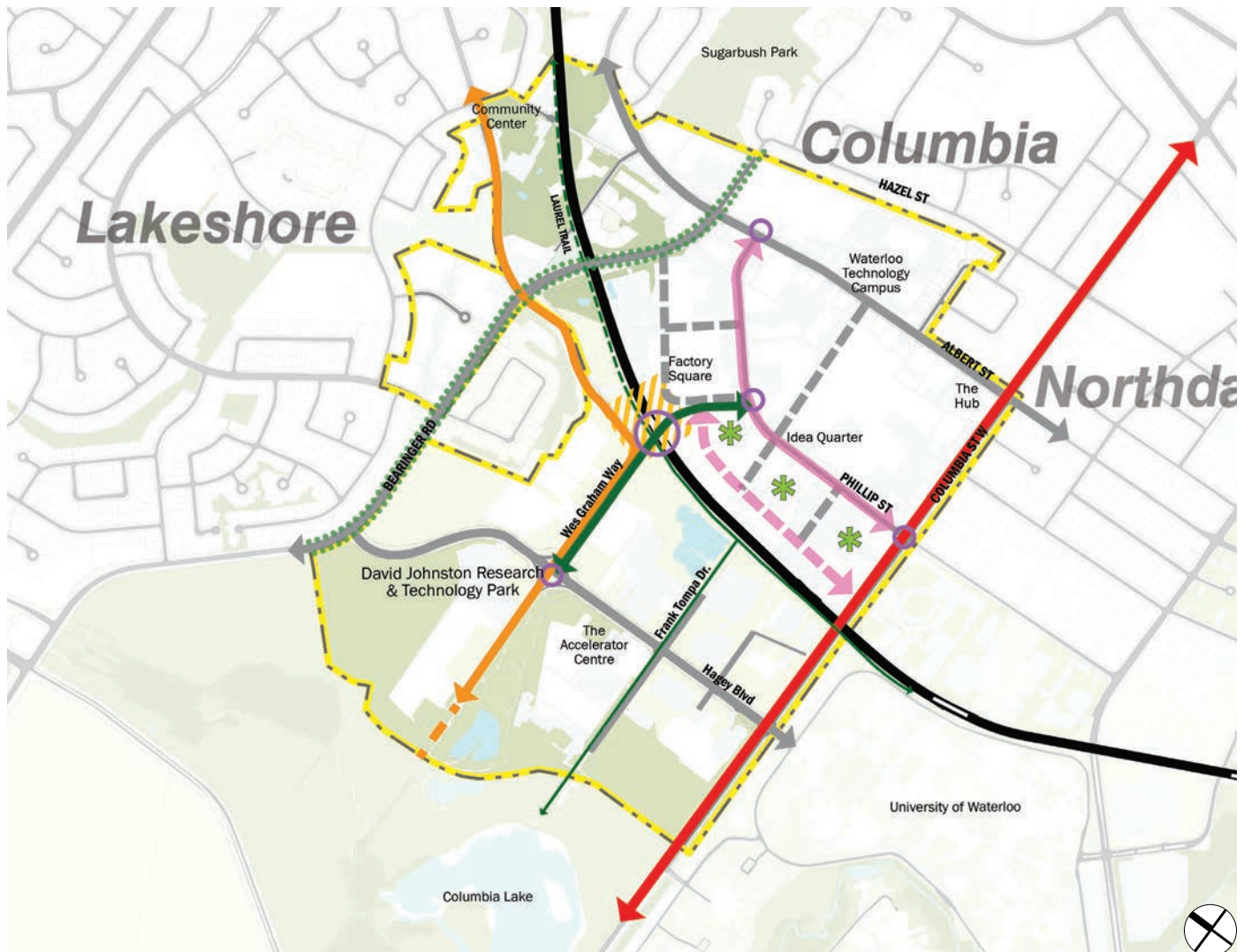
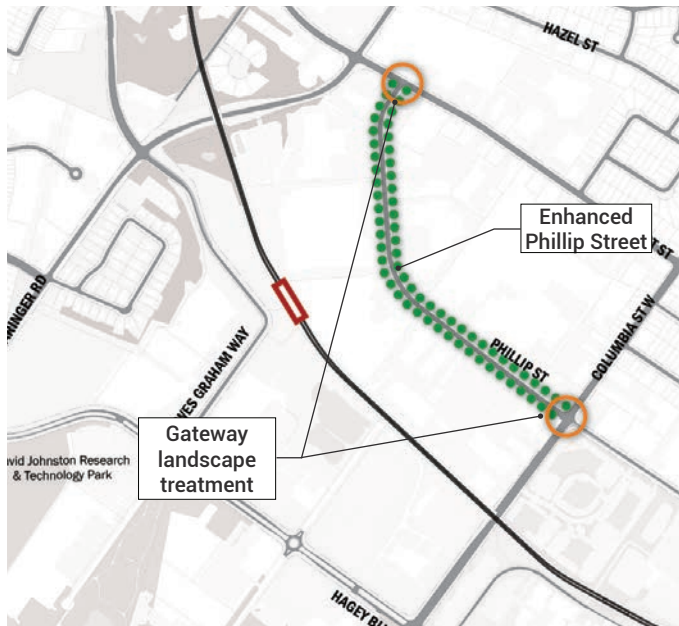


Figure 5-14. Public Realm Framework

Key Directions

- 1 Create a setting for new investment by enhancing the image of Phillip Street
- 2 Develop an enhanced green pedestrian spine between Phillip Street and Columbia Lake
- 3 Establish a new highly urban and pedestrian-oriented north-south Special Street between the rail corridor and Phillip Street
- 4 Strengthen the green connection along Bearer Road/Hazel Street linking the Columbia and Lakeshore neighbourhoods to the station
- 5 Introduce a network of open spaces east of the rail corridor
- 6 Establish a new station-related open space to link the two sides of the corridor and support placemaking at the station
- 7 Improve wayfinding to support access to and from the station and to surrounding destinations

5.5.1 Create a setting for new investment by enhancing the image of Phillip Street



Phillip Street has the potential to serve as an important address for businesses within the station area, and can act as a key link to the University of Waterloo station area. However, Phillip Street today provides limited amenity for pedestrians, with missing or narrow sidewalks, long blocks and few street trees. Infrastructure investments are needed to support increasing numbers of pedestrians and cyclists and lay the groundwork for private investment within the Idea Quarter so that this area can reach its full potential.

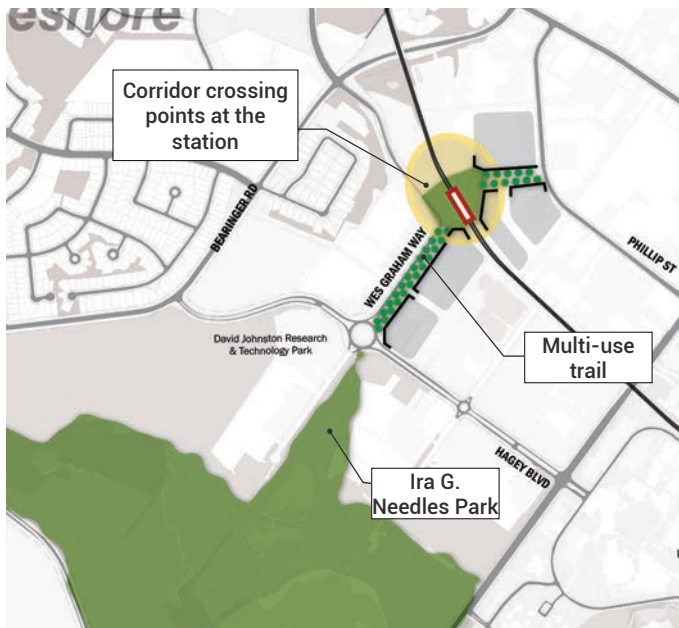
Streetscape enhancements, including a consistent row of trees and boulevard planting, will help to establish a distinct character for the Phillip Street corridor and signal its importance as a destination for businesses. These improvements should be consistent with proposed improvements south of Columbia Street (refer to the University of Waterloo Station Area Plan) to tie the two station areas together; however, gateway treatments at both Columbia Street and Albert Street can help to distinguish the R&T station area. The reallocation of space within the ROW to **increase space for pedestrians and cyclists**, and the completion of the sidewalk network along the east side of the street, will help to improve comfort for pedestrians and cyclists.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a maximum lane width of 3.5m and reallocate the extra space to create minimum bike lanes of 1.8m, a minimum boulevard width of 1.8m and minimum sidewalk width of 1.8m.
- Make use of the boulevards on either side of the street for the planting of ornamental grasses or shrubs that can add to the character of the street.
- Setback buildings 4.5m from the edge of the sidewalk to facilitate the planting of a consistent row of columnar trees between the sidewalk and building edge.
- In areas designated as having an active frontage, plant trees in continuous soil trenches to provide adequate soil volume and utilize grates located flush to the sidewalk to support higher levels of pedestrian activity and spill-out uses.
- Develop a gateway landscape treatment for the intersections at Columbia Avenue and Albert Street to help to distinguish the Phillip Street employment corridor from its surroundings.

Possible cross-sections for the Phillip Street corridor can be found in the University of Waterloo Station Area Plan (Figure 4-22)

5.5.2 Develop an enhanced green pedestrian spine between Phillip Street and Columbia Lake



The R&T station area is rich in green spaces, including Columbia Lake, the University of Waterloo Environmental Reserve, and the playing fields toward its western edge. These spaces have the potential to provide important amenity for local workers, but are somewhat disconnected due to the lack of east-west connectivity through the station area.

An opportunity exists to **strengthen the relationship between green spaces and employment areas within the station area** and improve the amenity for local employees. The establishment of an enhanced east-west greenway linking the west side of the R&T Park to the Laurel Trail, the ION station and Phillip Street would help to strengthen trail connections and link businesses east of the corridor to the larger open space network around Columbia Lake. Wes Graham Way may serve as the best candidate for this greening initiative, which could be achieved by setting back development along the south side of the street to establish a tree-lined multi-use path.

RECOMMENDED GUIDELINES AND STRATEGIES

- Setback new buildings along the south side of Wes Graham Way between 4 and 5m to provide sufficient space for a 3.6m multi-use path between a double row of trees.
- Initiate pedestrian and cycling crossing enhancements at the Wes Graham Way traffic circle to connect the multi-use path west to Ira G. Needles Park.
- Extend the multi-use trail through the station plaza so that it aligns with the proposed access to the station.
- Extend the multi-use path from the northeast corner of the station east to Phillip Street. This can be achieved by setting back new buildings along the south side of the proposed new east-west street to provide sufficient space for a 3.6m multi-use path between a double row of trees.
- Over time, work with Grandlinq and the Region to secure direct corridor crossing points at each end of the station so that users can travel conveniently from one side of the corridor to the other without having to travel from one end of the station platform to the other.
- Consider the long-term expansion of the greenway west of Hagey Boulevard to link with the University of Waterloo Environmental Reserve and the Northwest Campus.

5.5.3 Establish a new highly urban and pedestrian-oriented north-south Special Street between the rail corridor and Phillip Street



The introduction of a **finer grained network of streets and blocks** can help improve connectivity to and from the station while establishing a framework for intensification over time. A key element of the new street network to the east of the corridor should be the establishment of a new north-south street running from Columbia Street to the station. This new street can help establish a more pedestrian-oriented spine, framed on both sides by development leading to and from the station.

The new north-south street will serve as an important component of the public realm network and be designed to blend into the pedestrian realm with a strong relationship to surrounding uses. Highly active ground floor uses can frame the street, and **spill-out uses, such as restaurant patios, can contribute to its vibrancy**. A high degree of traffic calming measures, including narrow traffic lanes, landscaping and street trees, distinct paving, and on-street parking can reinforce the pedestrian nature of the street.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a new street between Phillip Street and the ION corridor connecting Columbia Street north to the station.
- Design the street as a blended pedestrian/vehicular environment with distinct paving treatments and narrower lane widths of between 3 and 3.3m to encourage slower vehicle speeds.
- Establish a consistent building setback of 0.5m so that new buildings help to define and animate the street.
- Allow additional setbacks of up to 2m in areas to support spill-out space for active ground floor uses such as restaurants or cafés.
- Provide on-street parking to accommodate visitors to adjacent employment uses and calm traffic. Consider the use of angled parking to accommodate a greater number of parking spaces.
- Break up stretches of street parking by extending the boulevard to the street edge in places and treating the area as a smaller plaza space with street plantings and seating.



Figure 5-15. Terry Avenue (Seattle) acts as a spine for area businesses, supporting both vehicles and pedestrians.

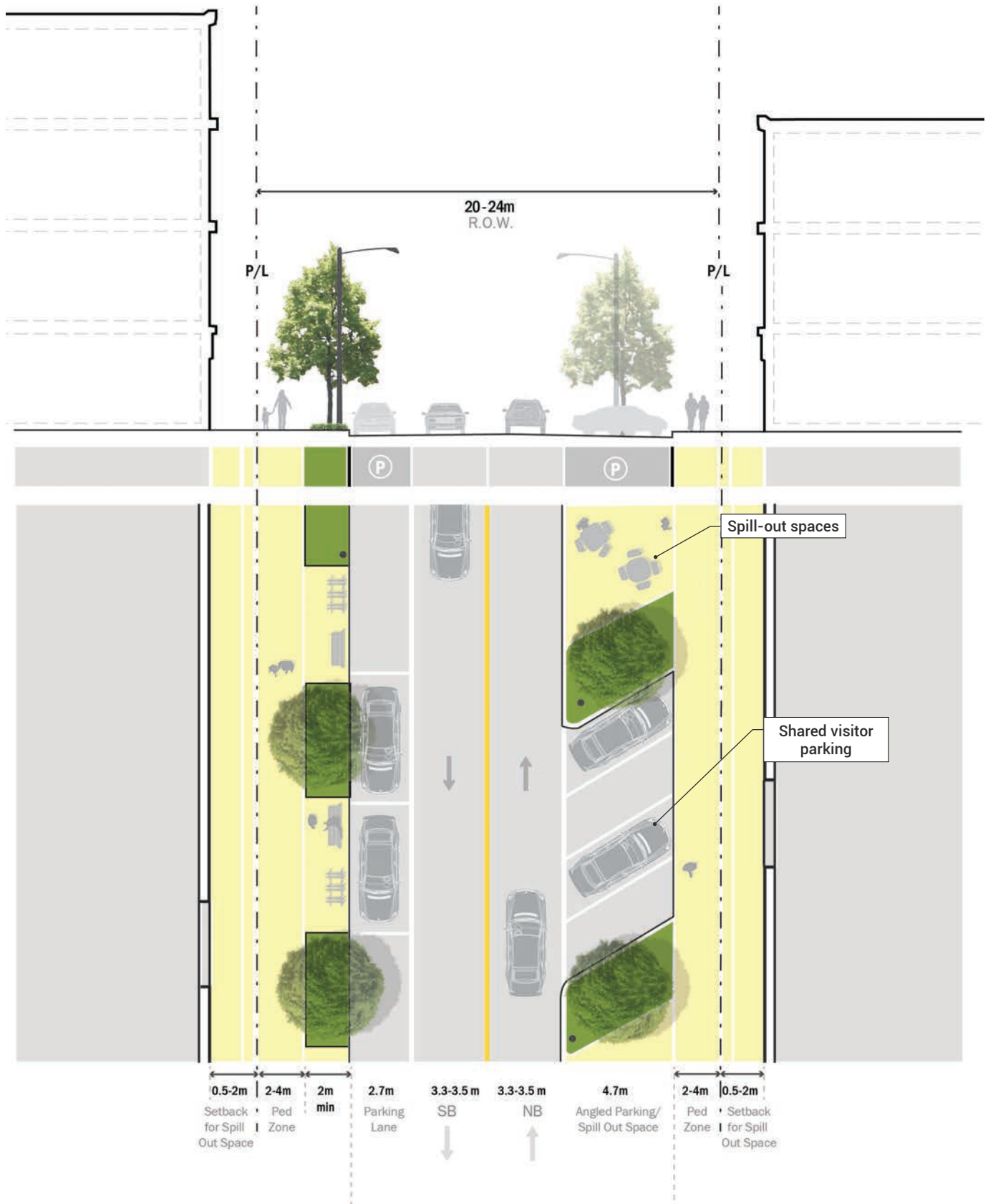


Figure 5-16. Illustration of a potential street section for the proposed Special Street. It should be designed as a blended pedestrian/vehicular environment with distinct paving treatments and narrower lane widths, incorporating spill-out spaces for active ground floor uses.

5.5.4 Strengthen the green connection along Bearinger Road/Hazel Street linking the Columbia and Lakeshore neighbourhoods to the station



The Bearinger Road / Hazel Street corridor is the key link connecting the Lakeshore and Columbia neighbourhoods to the station. In 2010, the City of Waterloo initiated a "road diet" along Bearinger Road, which reduced the number of vehicle lanes from four to two, reduced vehicular speed limits, and introduced on-street bike lanes, dedicated left-turn lanes, and pedestrian refuge islands. As a result of this transformation, Bearinger Road is an attractive green street that is lined with a mix of trees and vegetation, wide boulevards, sidewalks, and bike lanes that extend eastward to Albert Street.

There is an opportunity to **extend the pedestrian- and cyclist-friendly characteristics of Bearinger Road east along Hazel Street** to the Columbia neighbourhood to create a continuous green link through the area. An extension of the cycling lanes

east of Albert Street, in addition to new landscaping and streetscape improvements along Hazel Street, would help to strengthen the connection between the neighbourhood, the station, the Laurel Trail, and the open space assets to the west of the R&T Park. Over time the implementation of additional landscape elements such as new street trees and perennial plantings could help to further enhance the character of this important neighbourhood connector.

RECOMMENDED GUIDELINES AND STRATEGIES

- Extend the Bearinger Road bike lanes east of Albert Street along Hazel Street to connect with Sugarbush Park and the Columbia neighbourhood.
- Consider extending the green character of Bearinger Road eastward along Hazel Street to enhance connections from the neighbourhood to the station, the Laurel Trail and surrounding open spaces.
- Enhance the pedestrian experience by planting a consistent row of street trees along both sides of Hazel Street between Albert Street and Blythwood Road over time. On the north side of the street where there are hydro wires, this will require planting between the sidewalk and existing areas of surface parking.
- Re-balance Hazel Street over time, consistent with the typical multi-modal street section (Chapter 2) to increase space for pedestrians, cyclists and street planting.
- Establish a consistent "green street" image along the Bearinger Road / Hazel Street corridor through continuity of landscape elements such as street trees, perennial plantings, and installation of wayfinding signage.

5.5.5 Introduce a network of open spaces east of the rail corridor

The area along the Phillip Street employment corridor has the potential to become a vibrant, transit-oriented and mixed-use employment hub that is active at all times of the day and week. **An increase in density and uses should be complimented by an increase in open space** to serve the users of the area. New open spaces can help to provide amenity for area employees, contribute to street life and animation of the station area, and support a culture of collaboration.

It will be important to plan for high-quality, interconnected recreational amenities that can support the types of uses that are envisaged to emerge over time. The new street and pathway network should be punctuated with open spaces that provide a range of meeting places along key routes leading to and from the station, serving the diverse range of workers, transit riders, and visitors to the area. These open spaces can serve as a continuation of the potential open space network at the Convergence Hub at the University of Waterloo ION station, and may be integrated with future development projects. **They could take the form of smaller plazas and courtyards, or larger parks and green spaces** to provide a variety of recreational opportunities.

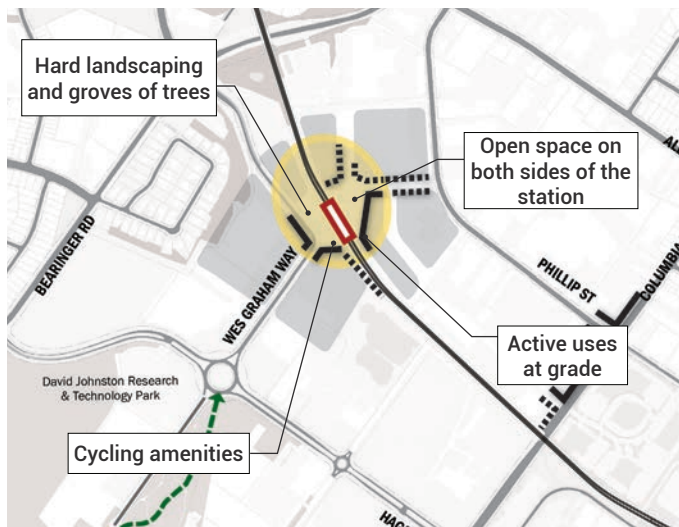
RECOMMENDED GUIDELINES AND STRATEGIES

- Support the creation of smaller plazas and open spaces with each new development to provide amenity for area employees.
- Recognize the significant potential that larger properties and redevelopment parcels have in supporting placemaking and establishing new open spaces.
- Incorporate a mix of hard and soft landscaping to provide a variety of places for workers and visitors to relax, have lunch, meet colleagues or friends, or engage in recreational activities.
- Ensure that open spaces are framed by a range of active uses such as restaurants, retail, or service amenities.
- Consider opportunities to integrate public art features within each open space.
- Encourage the provision of open spaces along key routes leading to and from the station, such as the proposed north-south pedestrian spine.



Figure 5-17. Example of a publicly accessible private open space including amenity areas for employees (San Francisco)

5.5.6 Establish a new station-related open space to link the two sides of the corridor and support placemaking at the station



The area around the station has the potential to evolve as a vibrant activity node, with a high-density mix of uses, including a limited amount of residential. It could also serve as an important linkage between the R&T Park to the west and the Phillip Street area to the east. The area could be a hub for active transportation with connections to the Laurel Trail and a proposed new east-west greenway connecting the Phillip Street cycling corridor west to Columbia Lake.

The creation of a new central open space at the station can complement this convergence of uses and users while strengthening the relationship between the east and west sides of the station area. It will serve as a key feature and focal point within the R&T station area, improving access to the station and supporting a range of amenities for the pedestrians and cyclists using the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a new open space on either side of the station to connect the LRT platform to the streets on either side of the corridor.
- Extend a continuous design language across the corridor to tie the two sides of the station together.
- Incorporate hard landscaping to support high volumes of pedestrians and cyclists interspersed with groves of trees and seating areas to provide shade and amenity during hot summer months.
- Integrate the Laurel Trail into the design of the plaza and include cycling amenities such as bike racks, sheltered bike parking and a repair stand to support cyclists accessing the Trans Canada Trail from this location.
- Frame the open space with active uses and high levels of glazing, and encourage spill-out uses such as patios from adjacent buildings to further animate the space.
- Consider integrating smaller pavilion buildings with restaurants or retail into the design of the open space to help to further animate the space.

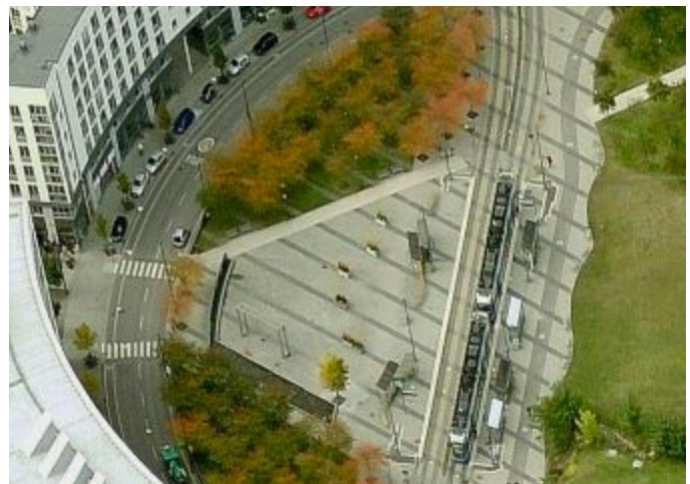


Figure 5-18. This station-related open space in Stockholm has been designed to link the two sides of the LRT corridor.

5.5.7 Improve wayfinding to support access to and from the station and to surrounding destinations

The ION station will be located between two major employment areas: the R&T Park and the Phillip Street corridor. The station is also located adjacent to the Laurel Trail and in close proximity to the Trans Canada Trail. To the north is the Albert McCormick Community Centre and the Lakeshore neighbourhood. To the west of the station are several campus facilities, including a planned University of Waterloo stadium and the environmental reserve at Columbia Lake, and to the east is Sugarbush Park and the Columbia neighbourhood. Yet, immediately around the station are **large areas of undeveloped land and surface parking, creating the perception that there are few destinations around the station.**

Improving wayfinding at the station and around the area can help **direct transit users to surrounding employment areas, and to the range of other destinations** within the station area. Wayfinding enhancements at the station and along routes with direct connections to the station can complement the introduction a finer grain street and pathway network and help to support mobility throughout the station area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Enhance wayfinding and directional signage to support access to local employment areas, the University of Waterloo facilities, surrounding neighbourhoods, and community amenities.
- Focus new signage at the station and along key routes, including Phillip Street, Wes Graham Way and the Laurel Trail.
- Explore the potential to integrate branding from R&T Park and the Phillip Street employment corridor into the wayfinding program to support placemaking.



Figure 5-19. Improved wayfinding highlighting both local and area-wide destinations can make it easier for people to get to their destinations (London, UK)

5.6. Economic Development

The Research and Technology station area is a hub of business activity and innovation. The introduction of LRT has the potential to strengthen the R&T Park and facilitate the transformation of the Phillip Street corridor into a vibrant employment and innovation district. The introduction of new amenities, a broader range of commercial uses and amenities, improved infrastructure, and new public spaces can help create a more attractive place that provides a setting for new investment and supports business development.

1 Leverage the LRT and area investments to strengthen the station area as a hub of business activity and innovation

R&T Park is already an important regional hub for research and development and high-tech businesses. However, recent growth within R&T Park has been slow. The introduction of the LRT has the potential to kick-start the creation of an attractive, amenity-rich destination that can draw new businesses and attract new workers. This can be facilitated by providing high quality pedestrian connections to the station from both existing businesses and key development sites, introducing a network of open spaces geared toward workers, and encouraging active street-oriented uses and new amenities. Effort should be made to retain existing research and technology firms and support their expansion.

2 Support Phillip Street's transformation into the Idea Quarter, and strengthen the relationship between businesses and the University of Waterloo

The transformation of the Phillip Street corridor from Albert Street to University Avenue can leverage ongoing private investment interest in creating a contemporary employment corridor with a range of amenities, uses and a high-quality public realm. The diverse population of employees, students, and residents of adjacent neighbourhoods in the area can help to support mixed-use development and intensification along Phillip Street and within the Idea Quarter. A mix of retail, services, public space and other amenities will help to serve high-tech employees and university students, and in turn transform the area into an attractive place for businesses to locate.

3 Facilitate opportunities to better brand the R&T Park and station area as an innovation hub

The introduction of a new ION station will enhance R&T Park's competitiveness as an employment node. The business park could be marketed and promoted as an innovation hub with land availability and opportunities for transit-oriented employment growth. The area's access to a young and creative pool of workers and recent university graduates should be leveraged, and its substantial long-term land development potential should be marketed. There are opportunities to foster and encourage synergies between the universities and surrounding high-tech firms and start-ups.

4 Establish employment targets to strengthen the area as a key employment and high-tech node with supporting amenities to attract talent

The R&T Park and Phillip Street employment corridor have been planned for employment uses. Aligning higher-order transit with higher-intensity job growth is a key economic development objective for the City. In this station area, the transformation of traditional employment lands with a greater range of uses can be coupled with employment targets to ensure redevelopment achieves city-building, employment and transit planning objectives. Higher-density employment growth should be prioritized as part of any future development, and residential and amenity uses should be supportive of business activity and secondary to job growth. Job growth in the station area should be monitored over time to ensure new development is fulfilling the City's economic development objectives.

Bringing It All Together

The following illustration depicts how the various strategies can work together to create a vibrant activity node around the station comprised of a mix of employment and residential uses with retail, restaurants and amenities at street level and high-quality public realm.

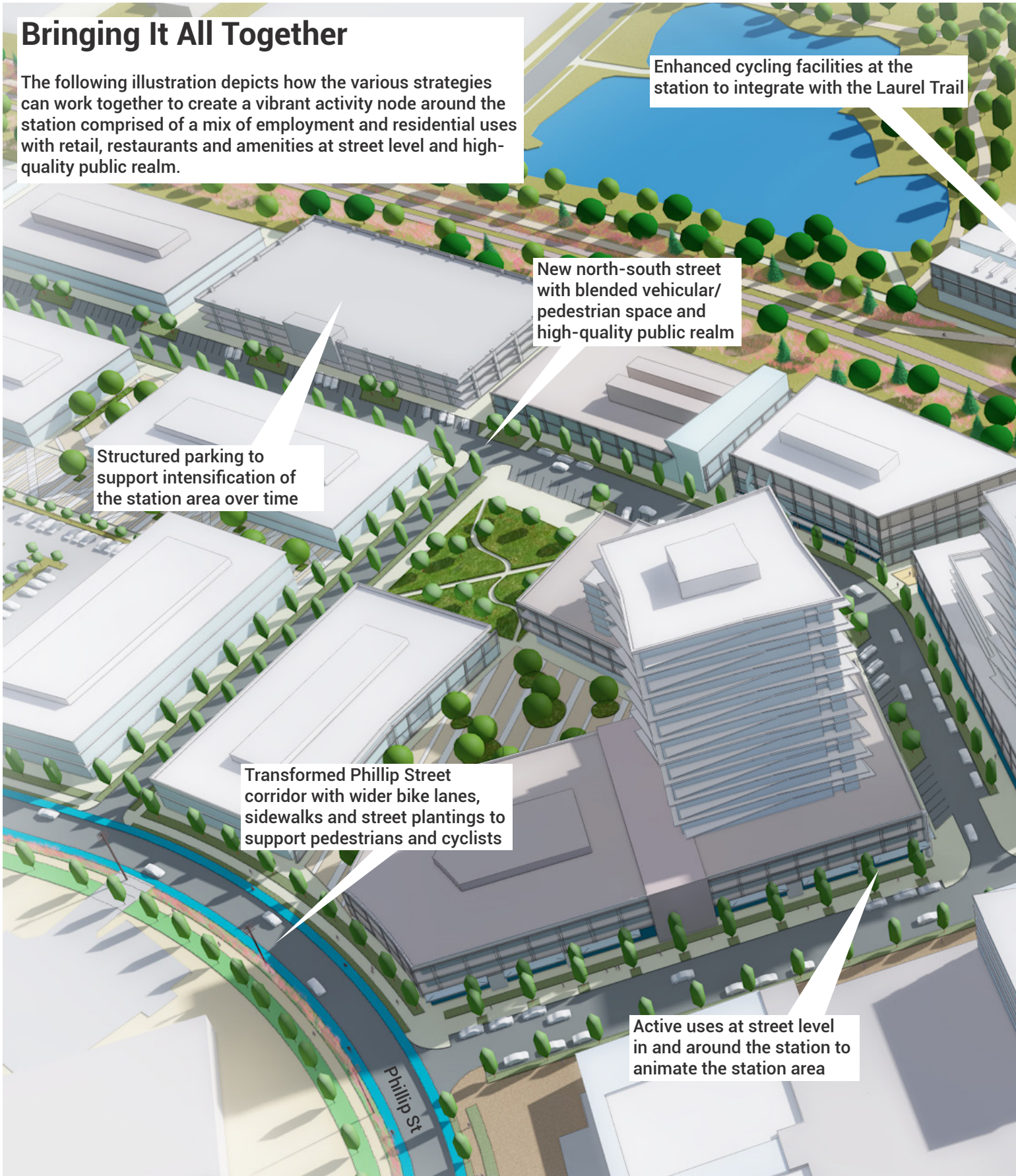
Enhanced cycling facilities at the station to integrate with the Laurel Trail

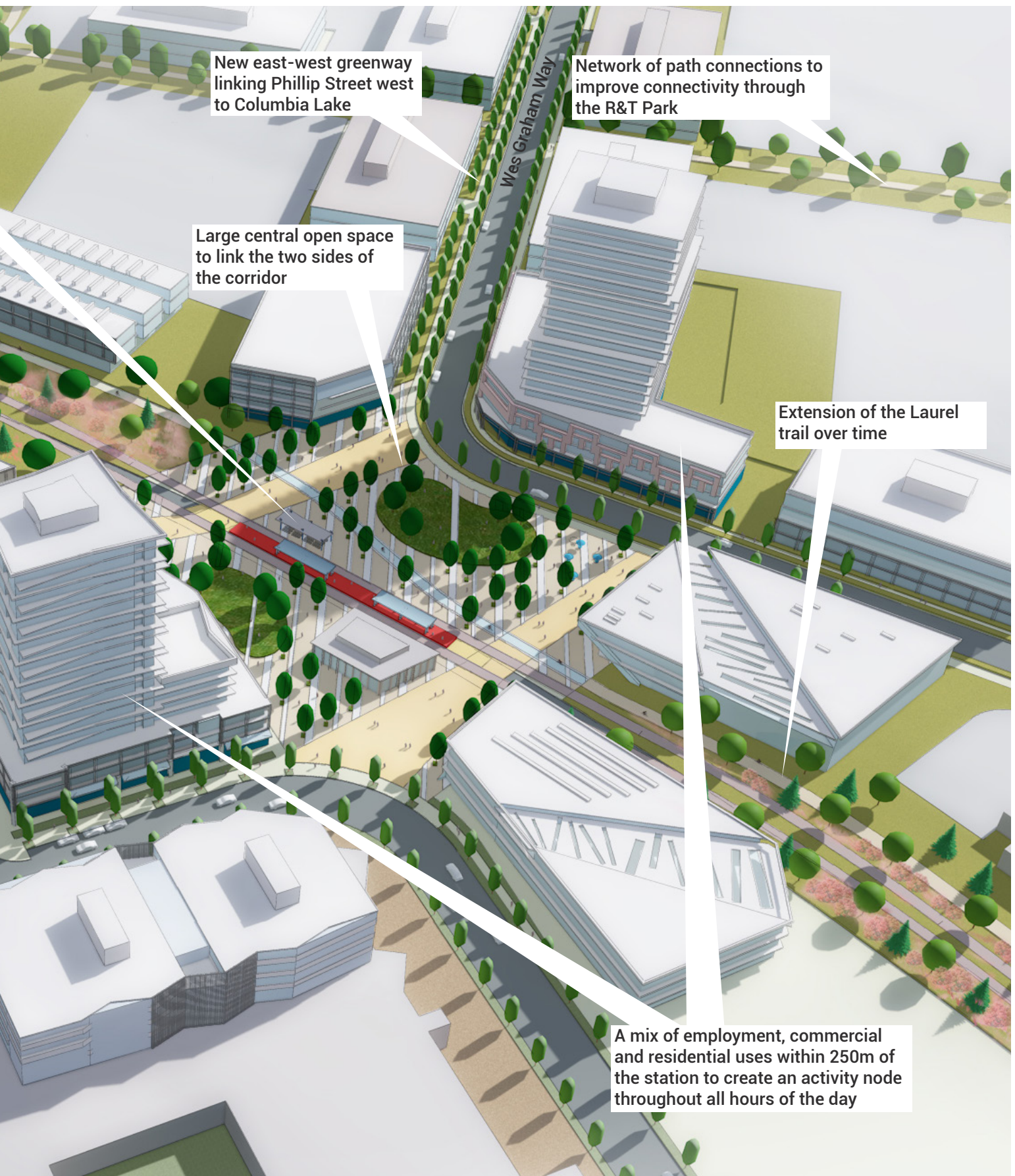
New north-south street with blended vehicular/pedestrian space and high-quality public realm

Structured parking to support intensification of the station area over time

Transformed Phillip Street corridor with wider bike lanes, sidewalks and street plantings to support pedestrians and cyclists

Active uses at street level in and around the station to animate the station area





5.7. Implementation and Phasing

The transformation of the Research and Technology station area will take place incrementally over time. The implementation of the recommended Key Directions will help to support a greater mix of uses and amenities that can support continued employment growth within the station area. The following table outlines a phasing plan to guide short, medium and long-term actions, and identifies key stakeholders and partners that will

need to be engaged throughout the implementation process. This section also details the key intersection improvements that can support access to the research park, the Phillip Street corridor, the ION station, and surrounding neighbourhoods. Opportunities to secure new funding and investment are also identified to help implement the vision for the station area.

SHORT-TERM DIRECTIONS (0-5 Years)	Lead(s)	Partner(s)
Support higher densities and a mix of uses at the station to support activity at all hours of the day (Direction 5.4.3)	City of Waterloo (IPPW)	Private Developers
Support existing employment uses and business while encouraging new job growth (Direction 5.4.1)	City of Waterloo (IPPW)	Businesses Community Private Developers
Encourage the introduction of more amenities within office and mixed-use areas (Direction 5.4.2)	City of Waterloo (IPPW)	Businesses Community Private Developers
Establish a new station-related open space to link the two sides of the corridor and support placemaking at the station (Direction 5.5.6)	City of Waterloo (IPPW)	City of Waterloo (Parks)
Consider the introduction of residential uses at strategic transit-adjacent locations (Direction 5.4.4)	City of Waterloo (IPPW)	Private Developers Businesses Community
Consider new or adjusted local bus routes to connect neighbourhoods and businesses located outside a reasonable walking distance to the LRT (Direction 5.3.3)	Grand River Transit	Local Residents
Consider reducing parking supply rates, encouraging shared parking, and fostering a shift away from surface parking (Direction 5.3.6)	City of Waterloo (IPPW)	Private Developers Local Landowners
Improve wayfinding to support access to and from the station and to surrounding destinations (Direction 5.5.7)	City of Waterloo (IPPW)	R&T Park Region (RT)
MEDIUM-TERM DIRECTIONS (5-15 Years)	Lead(s)	Partner(s)
Create a setting for new investment by enhancing the image of Phillip Street (Direction 5.5.1)	City of Waterloo (IPPW)	Private Developers
Enhance connections to the Laurel Trail and plan for a northbound extension alongside the rail corridor (Direction 5.3.2)	City of Waterloo (IPPW)	Region (RT)

MEDIUM-TERM DIRECTIONS (5-15 Years)	Lead(s)	Partner(s)
Plan for a finer grained street network to create a more urban development pattern (Direction 5.3.4)	City of Waterloo (IPPW)	Private Developers
Establish a new highly urban and pedestrian-oriented north-south Special Street between the rail corridor and Phillip Street (Direction 5.5.3)	City of Waterloo (IPPW)	Private Developers Local Landowners
Enhance the interconnected network of trails within the R&T Park to improve connectivity for pedestrians and cyclists (Direction 5.3.5)	R&T Park	City of Waterloo (IPPW)
Enhance the pedestrian and cycling network along Phillip Street to strengthen the street as a key link through the Idea Quarter (Direction 5.3.1)	City of Waterloo (IPPW)	
Support Phillip Street's transformation into the Idea Quarter, and strengthen the relationship between businesses and the University of Waterloo (Direction 5.6.2)	Private Developers Local Businesses	City of Waterloo (IPPW & Economic Development)
Introduce a network of open spaces east of the rail corridor (Direction 5.5.5)	Private Developers	City of Waterloo (Parks)
Establish employment targets to strengthen the area as a key employment and high-tech node with supporting amenities to attract talent (Direction 5.6.4)	City of Waterloo (IPPW)	Business Community
Develop an enhanced green pedestrian spine between Phillip Street and Columbia Lake (Direction 5.5.2)	City of Waterloo (IPPW)	R&T Park Local Landowners
Orient new development to create interesting and active street frontages and public spaces (Direction 5.4.5)	City of Waterloo (IPPW)	Private Developers
Facilitate opportunities to better brand the R&T Park and station area as an innovation hub (Direction 5.6.3)	R&T Park Local Businesses	City of Waterloo (Economic Development)
LONG-TERM DIRECTIONS (15-25 Years)	Lead(s)	Partner(s)
Leverage the LRT and area investments to strengthen the station area as a hub of business activity and innovation (Direction 5.6.1)	City of Waterloo (Economic Development)	Businesses Community Private Developers
Strengthen the green connection along Bearinger Road/Hazel Street linking the Columbia and Lakeshore neighbourhoods to the station (Direction 5.5.4)	City of Waterloo (IPPW)	Local Residents

RECOMMENDED INTERSECTION ENHANCEMENTS

Intersection	Recommended Improvements	Timing	Reference
Hagey Boulevard / Columbia Street	• Create more spacious pedestrian waiting areas • Enhance pedestrian amenities around the intersection • Consider introducing pedestrian crossing signals on the north side of the street with countdown timers	Short Term	See University of Waterloo Plan (Direction 4.3.7)
Laurel Trail / Columbia Street	• Consider installing a new pedestrian/cyclist-activated crosswalk • Consider installing pavement markings/zebra crossings to alert drivers • Provide clear signage to notify motorists of the Laurel Trail crossing	Short Term	See University of Waterloo Plan (Direction 4.3.2)
Phillip Street / Columbia Street	• Consider introducing zebra crossings • Complete the sidewalk on the northeast corner of the intersection and along Phillip Street	Medium Term	See University of Waterloo Plan (Direction 4.5.1)
Columbia Street / Villages Road	• Consider establishing a new signalized pedestrian/cyclist crossing from Villages Road to the north side of Columbia Street • Create a link to the path along Columbia Lake	Medium Term	See University of Waterloo Plan (Direction 4.3.7)
Beainger Road / Albert Street	• Extend the Beainger Road cycling lanes east along Hazel Street • Widen sidewalks along Beainger Road and Albert Street • Consider introducing zebra crossings	Long Term	Direction 5.5.4

Funding/Investment

Local Businesses

The R&T Park and the Phillip Street corridor are already home to numerous businesses and thousands of workers. These businesses will be key partners in the implementation of station area improvements. Implementation of TDM programs and strategies, such as TravelWise partnerships, transit pass incentives, carpooling or alternative work arrangements, will require participation from local businesses. The business community may also have an interest in supporting potential economic development initiatives for the area, such as marketing or branding efforts to strengthen the presence of the R&T Park or the emerging Idea Quarter within the Region. There may also be an opportunity to work with local businesses to help fund a wayfinding program.

Development Community

Large areas of vacant land and surface parking within the station area present numerous opportunities for redevelopment. The achievement of a finer grain street and block pattern requires that each new development be planned, designed and oriented to support an interconnected street and path network and mid-block connections. The provision of a greater mix of uses, new amenities and active frontages will also require coordination with developers. Through the planning approvals process, the City should work the development community to encourage innovative approaches to parking and secure new private or public open spaces that can enhance amenity for workers in the area. Ongoing engagement with area developers, including the Waterloo Innovation Network and other private interests within the emerging Idea Quarter, can help ensure that change within the area helps implement the desired vision for change.

University of Waterloo / R&T Park

The R&T Park is located on lands owned by the University of Waterloo, and the University is committed to strengthening the research park over time to support business growth, product development and innovation. The University would therefore have an

interest in creating a high-quality place within the R&T Park and on its landholdings north of Columbia Street. Investments in improved connections to and from the station, new amenities, and new pedestrian and cycling linkages will help create a more vibrant and attractive employment district. Ongoing discussions with the University and R&T Park officials will be needed to help secure their support and implement the vision.

Regional, Provincial and Federal Governments

Given the influence of the R&T Park and surrounding employment areas on the regional economy, there may be opportunities to engage with other levels of government to secure new investment. The Region, the Province and the federal government all have an interest in supporting economic development and business growth. The Province's Ministry of Research and Innovation offers a number of programs and services to stimulate commercialization and innovation, while the federal government has created a new portfolio of Minister of Innovation, Science and Economic Development, which could serve as an additional resource for local researchers, businesses and start-up firms. The City could explore the potential to expand partnerships with various regional, provincial or federal organizations and secure new investment.

Business Community

The R&T Park is one of the most dynamic technology, research and innovation hubs in the Region. As noted above, the companies which exist within the area will be key implementation partners. Beyond these private interests, a number of non-profit business organizations will also play a role in securing investment in the area. Organizations such as Communitech are important partners that can help attract new private investment to the R&T Park and broader station area. Encouraging these and other business groups to continue their marketing and business development efforts will help accelerate job growth within the station area and serve as a catalyst for ongoing redevelopment and facility expansion.

An aerial, isometric view of a city plan, rendered in a monochromatic orange color. The image shows various building footprints, streets, and green spaces with trees. A large, semi-transparent orange rectangle covers the entire image. Overlaid on this are white text elements and a white line.

6

STATION
AREA PLAN:
NORTHFIELD

JUNE 2017

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6.1 The Station Area Today

Northfield station is located west of Conestoga Parkway within **a major employment area at the northern end of Waterloo**. This area functions as a key link into the City, with a major highway interchange with direct access to Conestoga Parkway via Northfield Drive. The station area is bounded by the highway to the east and Randall Drive to the north, and includes a range of office, industrial and warehousing activities clustered between Weber Street and the Conestoga Parkway. The station area extends to the west of Weber Street and encompasses the eastern edges of the Lakeshore and Northlake neighbourhoods.

Size of Station Area: 126 hectares

No. of Residents: 2,200 residents (18 people /ha)

No. of Jobs: 7,400 jobs (59 jobs/ha)

Population/Jobs per Hectare: 77 people & jobs/ha

An LRT train yard and maintenance facility is under construction on Dutton Drive, between the rail corridor and the Conestoga Parkway.

The LRT has the potential to significantly improve access to businesses and destinations within the Northfield employment area. A number of office and industrial buildings are located east of Weber Street,

including the Waterloo Innovation Park, a major high-tech office campus. Ongoing redevelopment of the Waterloo Corporate Campus is creating a new mixed-use employment centre that will be well-served by the LRT. North of the station area is the St. Jacobs Farmers' Market, an important regional destination.

The area has historically been home to more industrial and manufacturing-based uses. South of Northfield Drive are a number of industrial businesses, car dealerships, and recreational facilities, including the Northfield Racquet and Fitness Club. More recent developments, such as the Northfield Station project immediately west of the ION station, as well as the Waterloo Innovation Park, have attracted more contemporary office activities, including businesses within the financial services and technology sectors.

The station area is currently an auto-oriented place with numerous surface parking areas, large blocks, and a fragmented sidewalk network. This creates an uncomfortable environment for pedestrians, cyclists or transit users. There is also a lack of mixed-use development within the area, which has resulted in limited amenities to serve local employees and visitors, and has reinforced the need to access the area by car. While this is being somewhat addressed through the introduction of retail on the Waterloo Corporate Campus, these amenities are located away from the station and designed primarily for automobile access.



Figure 6-1. The Waterloo Corporate Campus lands are being developed into a mix of office and retail uses.

The station area features the fewest active transportation routes among the five station areas, and a generally disconnected path and trail network. Existing active transportation routes include cycling lanes along portions of Weber Street and Parkside Drive, as well as the Laurel Trail/Waterloop Trail at the southern edge of the station area, which runs north along Parkside Drive, east along the Cedar Creek and Albert Street, and terminates at Weber Street. With the arrival of LRT, there is the potential to transform the area into a more pedestrian and cycling-oriented place, which can help promote access to nearby places of employment and residential areas.

At the western and south ends of the station area are the established Lakeshore and Northlake neighbourhoods. These residential communities consist predominantly of lower-density single-family housing, with townhouses and low-rise apartment buildings situated along Weber Street and Parkside Drive. The Northfield Centre plaza is isolated at the corner of Weber Street and Northfield Drive. Despite the relative proximity of the nearby residential community, the station area contains the lowest residential densities among the five station areas, which reaffirms the station's role as an important link to nearby employment activities. While surrounding neighbourhoods are within a 10 minute walk of the station, pedestrian conditions along Northfield Drive today are uninviting.



Figure 6-2. Northfield Drive contains a number of car dealerships with parking areas that front onto the street.

Market Conditions

The station area is expected to continue to evolve and strengthen over time as a major employment node, with growth in higher-value office and technology-based activities which will add to existing and stable manufacturing and industrial uses. The station area benefits from strong access to the Conestoga Parkway, proximity to Conestoga Mall and surrounding amenities, and recent office development that has helped contribute to the local employment base.

The area has significant redevelopment potential, with several large parcels offering short and medium-term infill potential. Recent development projects have helped meet demand for new office space. The Waterloo Innovation Park along Kumpf Drive offers a number of modern and flexible office spaces to accommodate both small and large businesses. The recently completed Northfield Station project adds approximately 66,000 square feet of new office space immediately adjacent to the ION station.

The former NCR property is undergoing redevelopment as the Waterloo Corporate Campus. This three-phase project anticipates the development of over 800,000 square feet of space, including a mix of employment, commercial, retail, and restaurant uses. The broad range of uses and amenities planned for these lands will likely serve nearby workers and residents, and has the potential to encourage further redevelopment and business growth within the station area. Residential demand in proximity to the station may also increase with the introduction of new office and commercial activities, although the focus of new development within the station area will continue to be on new employment uses.

It is expected that some of the existing industrial, manufacturing and warehousing buildings will be converted to office to accommodate higher-value corporate, technology and research activities. New purpose-built office construction is also expected over the medium to long term through infill of surface parking areas and the introduction of structured parking facilities, similar to the Waterloo Innovation Park complex. Some stable manufacturing and heavier industrial operations within the station area are likely to remain into the longer term.

A key challenge for the local market is the current lack of amenities within the area. This, combined with a limited pedestrian realm, creates a competitive disadvantage to businesses seeking to locate in more complete, amenity-rich employment districts found in other parts of the City or Region.

The Planned ION Station

The LRT station will consist of a single platform and will be located immediately south of Northfield Drive and west of the Conestoga Parkway ramp. The station will connect with several local bus routes operating along Northfield Drive, including Routes 9 and 14. These routes will have stops a short distance from the station closer to Parkside Drive to avoid conflict with traffic entering and exiting the highway. The station will be connected to the north side of Northfield Drive via a signalized crossing to the west of the station platform.

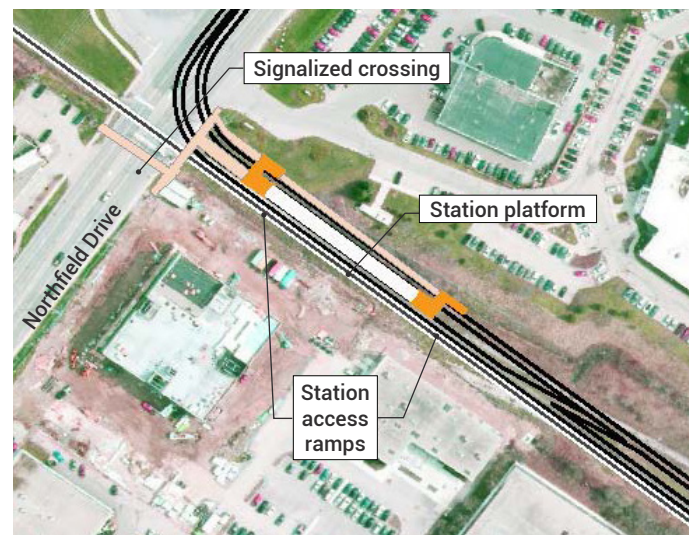


Figure 6-3. The station will be located along the south side of Northfield Drive

Current Planning and Policy Framework

Certain lands within the station area are recognized as a node or corridor within the City's Official Plan. Most of the lands abutting Northfield Drive to the west of the rail corridor are designated as a **Major Node**, and are planned to function as an employment destination with medium to high-density development. A section of land on the south of Northfield Drive between Parkside Drive and the rail corridor is designated as a **Minor Corridor**, and intended to support medium to higher-density development. The lands to the east of the corridor and immediately north and south of Northfield Drive are also designated as a **Minor Corridor**.

Most of the lands to the east of Weber Street within the station area are designated as **Employment**. A large portion of these Employment areas are intended to support **Business Employment** activities, including prestige office uses, technology and information-related businesses, and light industrial uses related to high-value production. Limited ancillary uses such as restaurants and convenience retail, are permitted within Business Employment areas within a Major Transit Station Area or Major Node.

Other lands along the east side of the rail corridor are designated as **Flexible Industrial**, and planned to support more traditional industrial uses, such as manufacturing, warehousing, distribution and office uses. Along the west side of Weber Street is the Lakeshore neighbourhood, consisting of a mix of **Low-Density Residential**, **Mixed-Use Medium Density Residential**, **Mixed Use Medium High-Density Residential**, and **Commercial** lands.

Most of the Employment lands within the area are planned to accommodate **Medium Density Employment**, with buildings up to 27 metres (6 storeys) permitted. The Employment lands that are located within a Major Node, including the Waterloo Corporate Campus property and the lands around the Weber Street and Northfield Drive intersection, are planned to support **High Density Employment** uses up to 81 metres (20 storeys). Within the surrounding residential neighbourhood, the lands along the west side of Weber Street are planned for **Medium Density** and **Medium High Density**, with heights of 20 metres (6 storeys) and 40 metres (13 storeys), respectively.

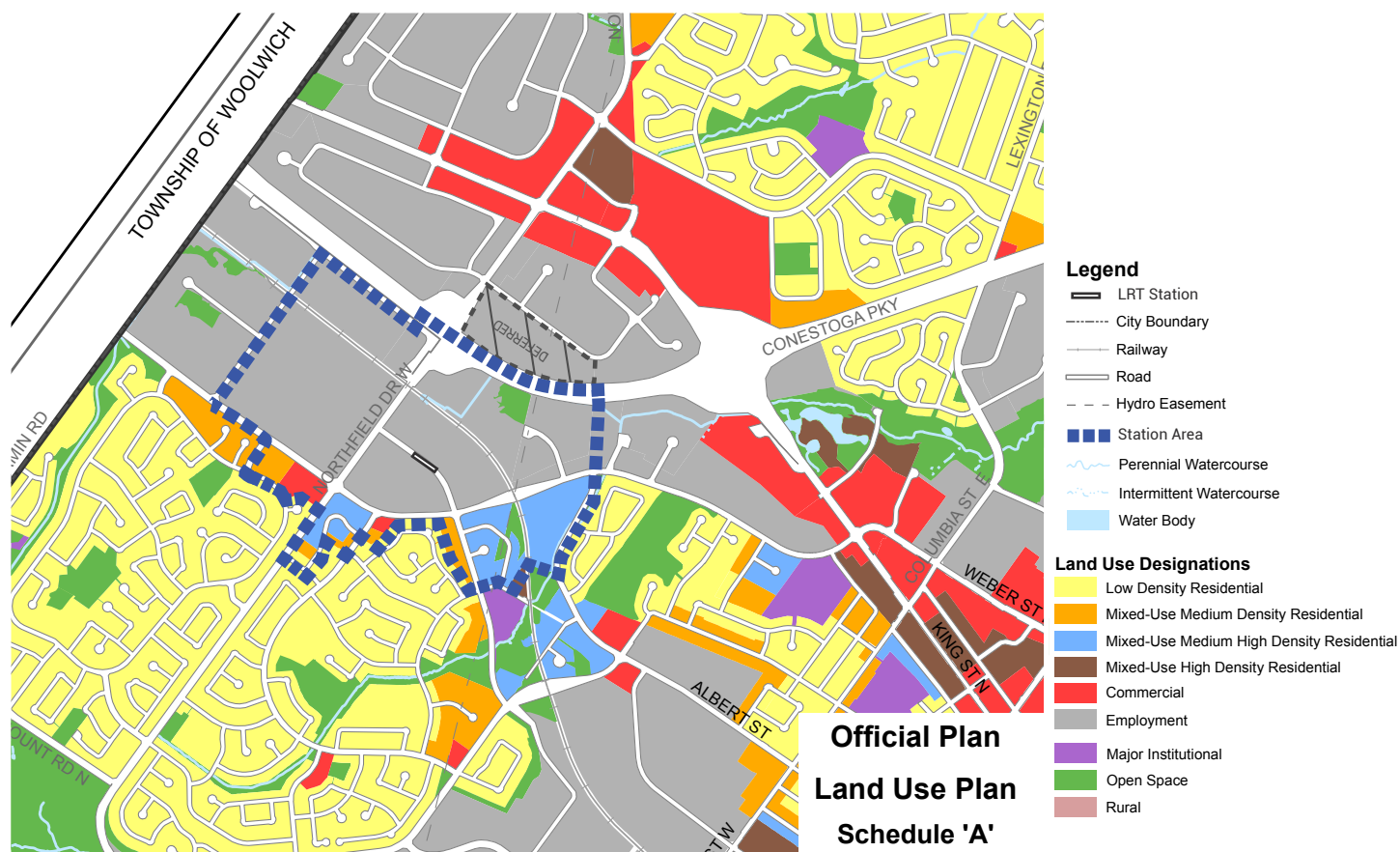


Figure 6-4. The City of Waterloo Land Use Plan

There is one Specific Provision Areas (SPAs) within the station area. **SPA 42** provisions apply to the Waterloo Corporate Campus lands, and sets out a vision for the re-urbanization of these lands into a high-quality, transit-oriented employment centre, with secondary retail, service and hotel uses. The first phase of the three-phase redevelopment project is complete, and construction for subsequent phases is underway.

There are flooding hazard lands within the area, including large areas of land immediately around the station (see Figure 6-5). Much of the block bounded by Kumpf Drive, Randall Drive, the rail corridor, and

Northfield Drive is recognized as a **Candidate Two Zone Policy Area**, while other hazards immediately north of the station area include a **Two Zone Floodway** and **Two Zone Flood Fringe** north of Randall Drive. In many cases, development is restricted on these hazard lands, or is subject to additional study and technical analysis before redevelopment can occur. Minor alterations and additions to existing buildings may be permitted, subject to certain conditions and flood-proofing requirements. These conditions can be addressed through on-site or district-wide flood protection strategies.

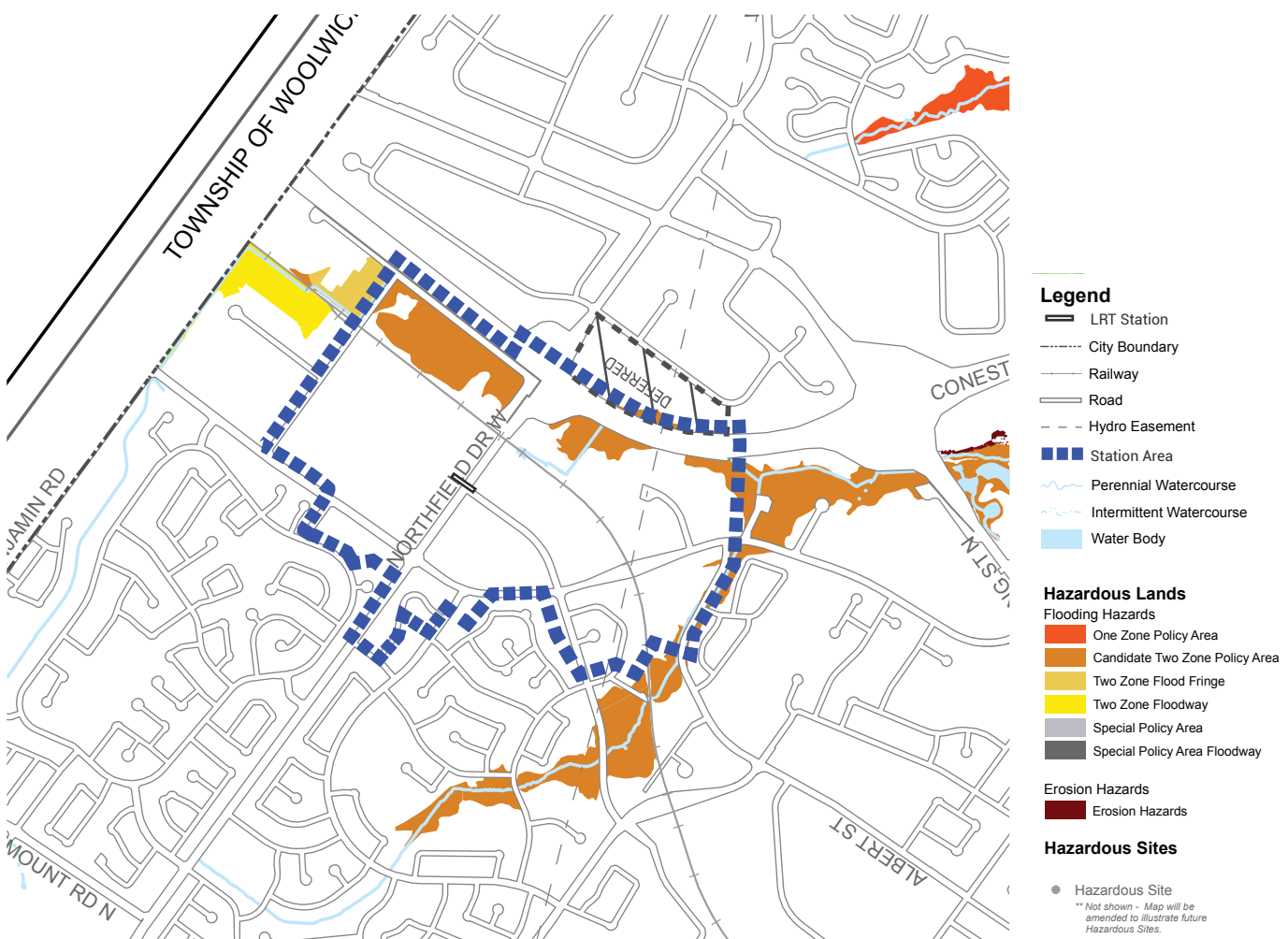


Figure 6-5. Official Plan Natural Hazards Map illustrating the flooding hazards that impact the eastern edge of the station area

6.2 Vision for the Station Area

The Northfield station area is a place that will evolve over time into **a more vibrant employment district with new uses and sustainable infrastructure** that distinguish the area from other employment districts. Many established industrial uses will remain, however the area will continue to attract a growing number of technology and innovation-based businesses, corporate offices, and higher-value professional service activities. The Northfield employment area will offer an attractive alternative to a traditional office park setting, with modern and flexible office spaces designed to accommodate small and mid-sized firms, and a growing employment base.

Workers in the area will be supported by a greater mix of amenities, with complementary retail and service uses integrated within new development or available within a short walking distance from their workplace. The area immediately around the station on either side of Northfield Drive will serve as a focal point for higher-density, mixed-use development, with **active street frontages and transit-supportive uses that help create a more vibrant hub around the station**.

Connectivity throughout the station will improve over time as a network of finer grain streets and new mid-block connections is implemented. An extension of Parkside Drive northward will enhance access to the Waterloo Corporate Campus, while an extension of Kumpf Drive can improve access to amenities within St. Jacobs. Northfield Drive will serve as the key link to the ION station, and the street will become a more pedestrian and cycling-oriented, with new bike lanes, wider sidewalks and improved landscaping. A more robust active transportation network will further improve access to businesses and to the Lakeshore and Northlake communities.

A key characteristic of the station area will be the network of green connections and open space linkages. The presence of natural landscapes and floodplains creates a distinct opportunity to leverage these lands to create a network of new paths and recreational spaces. The introduction of **green infrastructure and sustainable building design strategies can help define a more clear station area identity**, while enhancing the setting for business growth and investment.

VISION STATEMENT

A THRIVING EMPLOYMENT DISTRICT SET WITHIN A SUSTAINABLE LANDSCAPE

Northfield Station will be a thriving employment hub with a mix of stable industries and growing research and innovation sectors. It will have a strong identity as a flexible and green hub of high-tech manufacturing, technology firms and service industries. Over time, the station area will evolve into a more pedestrian-friendly place with new amenities and uses linked by a network of green connections, sustainable infrastructure and open spaces.

Big Moves

1

Support the transition of the area into a higher-value employment district with new amenities

The station area is an important employment district within the City, and is experiencing a transition into a higher-value employment node. To support job growth, new amenities are needed to create a more vibrant, mixed-use employment area and allow the area to compete with more amenity-rich employment nodes across the Region.

2

Plan for increased densities and a greater mix of uses around the station

The area is characterized by single-use office, commercial and employment uses. To enhance activity levels and support access to a greater range of destinations, higher densities and a greater mix of uses should be developed around the station on both sides of Northfield Drive. Infill and redevelopment will require innovative parking management strategies that can free up land for new development.

3

Support pedestrians in and around the station area through an expanded public realm

The station area has historically developed with a focus on the automobile. To support higher levels of walking, cycling and transit throughout the area, there is an opportunity to invest in an enhanced public realm, new open spaces, and an improved active transportation network.

4

Enhance Northfield Drive as the key connector to the station

Northfield Drive is a key connector to the station, a key link through the northern end of the City, and a transfer point for local buses. The street accommodates high volumes of traffic, with Conestoga Parkway on and off-ramps located to the east of the rail corridor. There is an opportunity to transform Northfield Drive into a more attractive pedestrian and cycling street that supports transit users and local employees, and improves walkability to residential neighbourhoods.

5

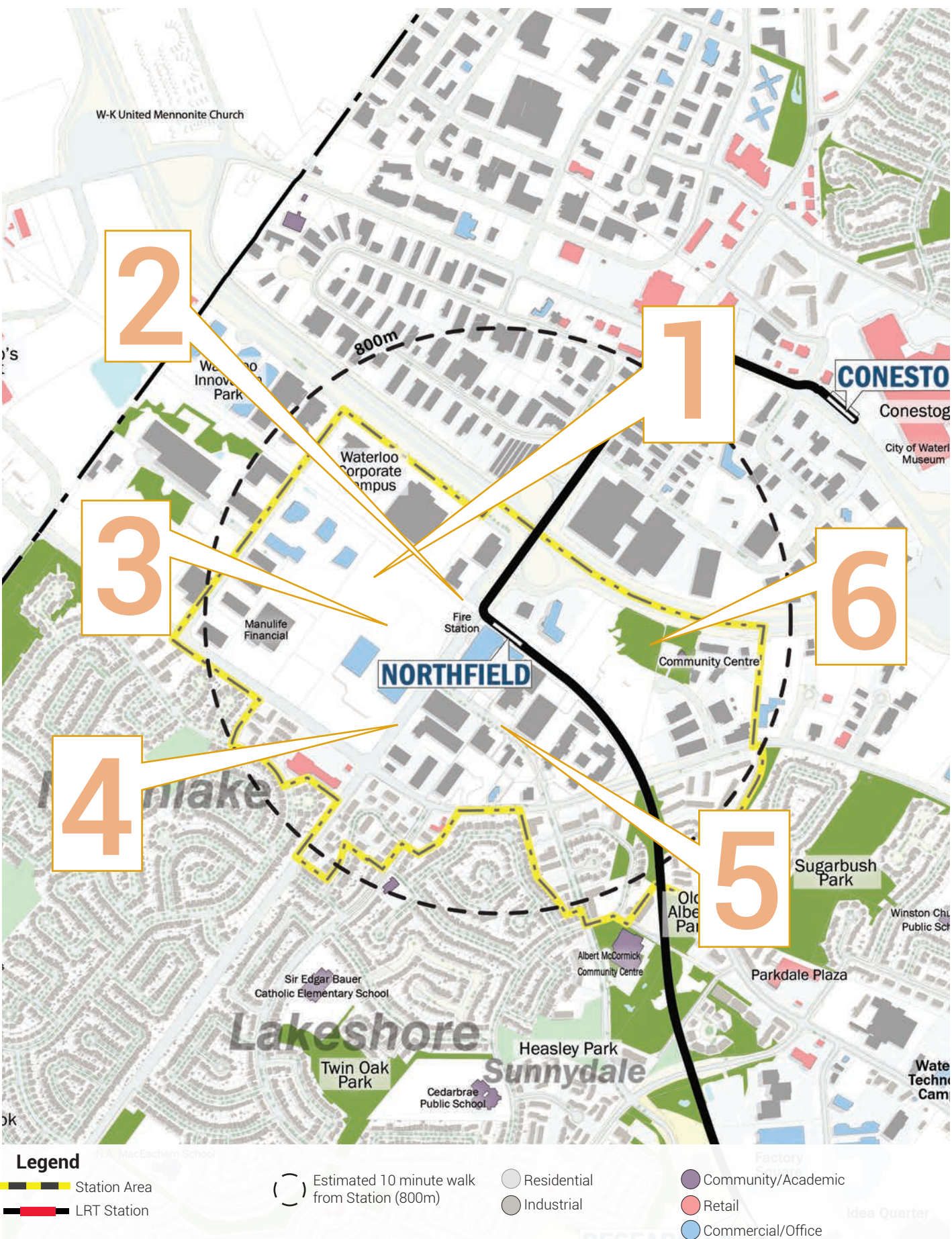
Extend Parkside Drive northward and create a finer grain street and block network

The area is characterized by large blocks, limited mid-block connections, and large surface parking lots, which limit connectivity through the area. The extension of Parkside Drive north to Randall Drive, along with the creation of a finer grain street network throughout the station area, can help support accessibility by establishing a more walkable environment, while also creating an address for new development.

6

Support investments in green infrastructure to create a setting for new investment and job growth

There is an opportunity to create a distinct station area identity through investments in green infrastructure and sustainable building design which complement the area's natural landscapes. The station area has the potential to evolve into an innovative environmental employment district framed around a network of trails that promote active recreation, an integrated system of open spaces, enhanced landscaping, storm water management and sustainable building design.



6.3. Local Mobility Strategy

The station area has evolved as a predominantly auto-oriented place aided by its location at the northern end of the City and at a Conestoga Parkway interchange. The station is also located within a major industrial park and business area which has been developed with an auto-oriented character. It features large blocks, lots of surface parking, and a limited sidewalk and active transportation network. Traffic congestion at peak hours, as well as the lack of pedestrian and cycling amenity along Northfield Drive, hinder access to nearby employment uses and the surrounding Lakeshore and Northlake neighbourhoods. Walking and cycling throughout much of the area is challenging, given the lack of a finer grain street network that could provide more direct access to local businesses and destinations.

The introduction of LRT presents an opportunity to enhance the travel experience for pedestrians, cyclists and transit users. While the area will continue to rely

heavily on automobile access, mobility improvements are needed to help support greater levels of employees opting to walk, cycle or take transit to work. There is the potential to establish a finer grain street network to support connectivity throughout the area and enhance access to jobs and the surrounding neighbourhoods. To enhance the active transportation network, investments in sustainable transportation infrastructure such as the Laurel Trail, cycling connections, and pathways are needed. Northfield Drive is a key link to and from the station and to the Northlake and Lakeshore neighbourhoods. It can be strengthened with an improved sidewalk network, on-street cycling lanes, and enhanced landscaping. A more strategic approach to parking is also required to ensure that parking areas do not detract from the image of the Northfield employment district, and that new employment uses support higher levels of activity along the street.

The following section outlines a series of directions to enhance mobility throughout the station area.



Avenues

Indicates primary streets through the station area that are important transit corridors. Key considerations for Avenues are identified in Section 2.2.4.



Cycling Streets

Indicates streets intended to act as important cycling connections within the station area. Key considerations for Cycling Streets are identified in Section 2.2.4.



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4.



Proposed Street Network

Illustrates the potential for the establishment of a finer grained street and block network over time.



Pedestrian and Cycling Connections

Indicates existing (solid) and proposed (dashed) off-street pedestrian and cycling connections within the station area.



New Open Space Opportunities

Path Connections

Indicates the potential for new pathways between buildings and properties to improve connectivity across the larger blocks within the station area.



Intersection Improvements

Indicates areas where improvements to the existing intersection could help to enhance access and safety for pedestrian and cyclists.



New Intersections

Indicates areas where the introduction of a new intersection requiring enhanced pedestrian crossings or traffic signal are recommended.



Pedestrian-Activated Crossings

Indicates areas where the introduction of a new pedestrian-activated signalized crossing could support connectivity between the station area and surrounding neighbourhoods and destinations.



Pedestrian Transfer Zone

Indicates areas where improvements should be targeted to support a high number of transfers between pedestrians, cyclists and the transit network.



Station Area Boundary

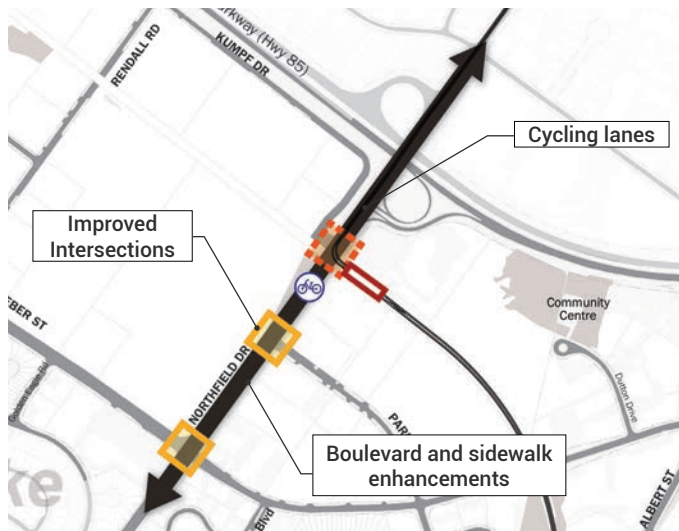


Figure 6-6. Mobility Framework

Key Directions

- 1 Improve pedestrian and cycling conditions along Northfield Drive
- 2 Establish a Pedestrian Transfer Zone at the station to support transfers between local transit services and the LRT
- 3 Extend Parkside Drive north to help establish a finer grained street grid, and enhance the sidewalk network to support access to the Northfield employment district
- 4 Revisit local transit routes to support travel to neighbourhoods and businesses beyond a comfortable walking distance from the station
- 5 Extend the Laurel Trail as the spine for a new interconnected network of green connections integrated with natural flood lands
- 6 Complete the cycling network to improve access to area businesses, the St. Jacobs Market and the station
- 7 Encourage shared parking, structured parking and reduced parking standards to support the development of new employment uses and amenities

6.3.1 Improve pedestrian and cycling conditions along Northfield Drive



Northfield Drive is an importation connection to and from the ION station and across the northern end of the City. The street is wide, with a 30 metre wide right-of-way accommodating 4 lanes of vehicular traffic as well as a turning lane. Northfield Drive serves as a key highway interchange, with on and off-ramps to the Conestoga Parkway located east of the station. These ramps will become right-in and right-out access points upon completion of the LRT.

Sidewalks are generally narrow, and on the south side of Northfield Drive the sidewalks abut the roadway with a limited boulevard to buffer pedestrians. While there has been some new landscaping along Northfield Drive in recent years, planned widening to accommodate the LRT will reduce this, and will force pedestrians on the south side of the street onto a narrow sidewalk between the street and areas of surface parking. The sidewalk network is also broken up by large driveways which are designed to facilitate vehicular access to properties. There are currently no cycling lanes east of Weber Street, although they will be installed on-street along Northfield Drive as part of the LRT construction.

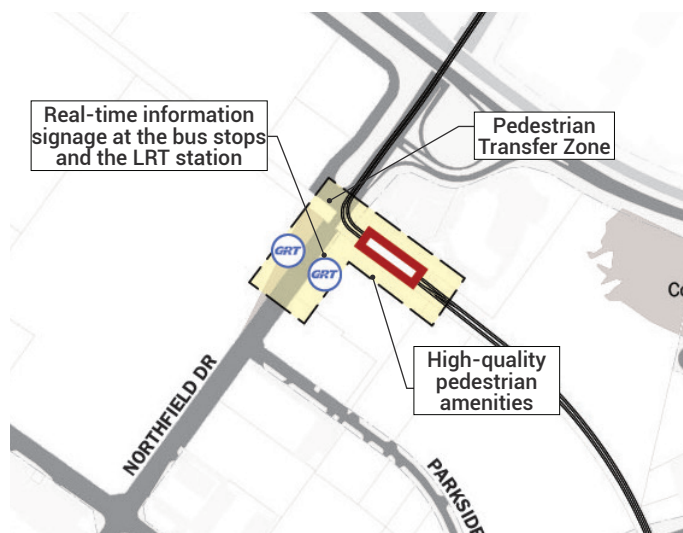
There is an opportunity to **transform Northfield Drive into a more pedestrian and cycling-oriented street** to support east-west connectivity through the station area and enhance station access.

The implementation of on-street cycling lanes is an important initiative, although given the volumes of traffic along Northfield Drive, wider cycling lanes and a buffer from the vehicular lane is warranted. In addition, it will be important to ensure that sidewalks are sufficiently wide to support comfortable travel for pedestrians. In areas where the right-of-way is too narrow to accommodate expanded cycling and pedestrian infrastructure, there **may be a need to reduce the width of driving lanes and reallocate space to the public realm**. In areas where the right-of-way is too narrow to accommodate more generous sidewalks, cycling lanes and boulevards, new development should incorporate setbacks that allow for an expanded public realm. Intersection and crossing improvements at the rail corridor, Weber Street and Parkside Drive can further support pedestrian and cycling travel through the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Provide a minimum 2.1 metre sidewalk on both sides of the street to support walking to and from the ION station.
- Secure minimum 1.5m wide cycling lanes with a 0.5m buffer to enhance the cycling experience and reduce conflict with vehicular traffic along Northfield Drive.
- Introduce more generous landscaping and streetscape improvements along a 2.0m wide boulevard to enhance pedestrian comfort and create a more attractive connection to and from the station.
- Consider a reduction in vehicle lane widths if needed to provide sufficient space for pedestrians, cyclists and landscaping.
- Improve intersections at Weber St. and Parkside Dr. with more visible zebra striped crossing points and additional sidewalk space at the intersections.

6.3.2 Establish a Pedestrian Transfer Zone at the station to support transfers between local transit services and the LRT



The station location has historically not been a focal point of activity, and existing uses are generally oriented away from the rail corridor. As a result, the station is difficult to access for pedestrians. There are also **a number of impediments to pedestrian movement and street crossings**, including highway on and off-ramps, a significant grade change along Northfield Drive, and the LRT trains which turn east along Northfield Drive. Bus transfers are also not possible immediately at the station, given the proximity to the Conestoga Parkway on-ramp. There is a need to **focus mobility and infrastructure improvements around the station to support workers and transit riders getting off at the station** to access places of work or surrounding neighbourhoods.

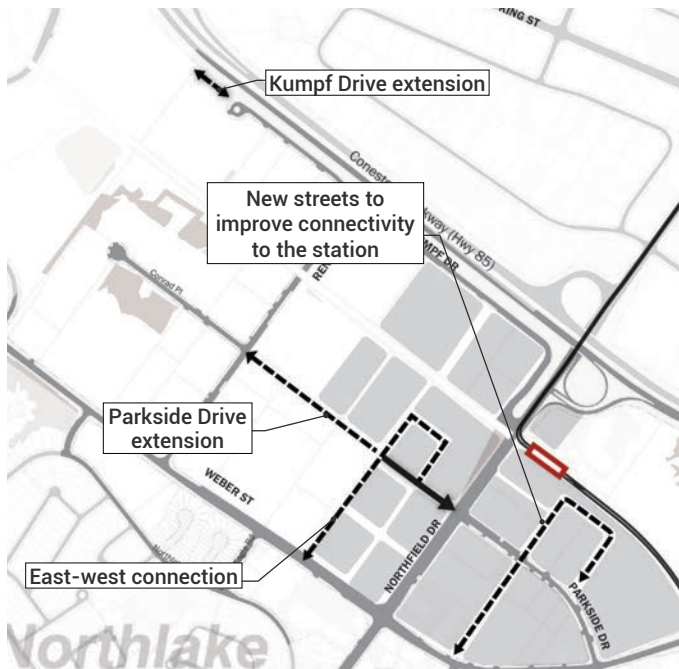
An opportunity exists to overcome these challenges by **establishing a Pedestrian Transfer Zone at the station and along Northfield Drive**, where the highest level of transit amenity and supporting infrastructure is needed. The zone would extend across Northfield Drive and west along the street to capture connecting bus stops and support transfers. Establishing a comfortable connection to local bus routes will be critical to supporting last-mile travel to surrounding employment areas or the Lakeshore neighbourhood.

Another critical opportunity to improve mobility at the station involves the **creation of a high-quality crossing of Northfield Drive** to facilitate access from the station to major businesses and destinations north of the station, including the Waterloo Innovation Park and the emerging Waterloo Corporate Campus.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a Pedestrian Transfer Zone that includes the station and nearby bus stops on either side of Northfield Drive.
- Incorporate a higher level of pedestrian amenity throughout the Pedestrian Transfer Zone, including pedestrian-oriented lighting, wayfinding signage and street furnishings.
- Incorporate real-time information signage at the bus stops and the LRT station to support passengers accessing the local bus system or transferring between transit services.
- Provide weather-protected waiting areas at transfer points to facilitate more comfortable transfers, particularly during the winter months.
- Establish a wide, high-quality crossing at Northfield Drive, with a pedestrian-activated signal, zebra stripes or surface treatments, and clear signage to inform motorists of the crossing point.

6.3.3 Extend Parkside Drive north to help establish a finer grained street grid, and enhance the sidewalk network to support access to the Northfield employment district



The station area is characterized by **large blocks and a limited local street network**, which concentrates vehicular traffic along Northfield Drive and creates challenges accessing buildings located internally on the block. In addition, key streets within the employment district, such as Kumpf Drive and Randall Drive, lack sidewalks on both sides of the street, which makes it difficult for pedestrians to safely access places of work.

There is an opportunity to improve access to surrounding businesses and destinations for all users by **establishing a finer grain network of streets over time**. To the north of Northfield Drive, there are a number of logical street connections that can be established to break up the large blocks, including:

- A northward extension of Parkside Drive linking Northfield Drive to Randall Drive
- A new east-west street that would formalize the existing driveway leading into the Waterloo Corporate Campus
- An extension of Kumpf Drive north from the Waterloo Innovation Park to Farmers Market Road to support access to St. Jacobs Market and other amenities to the north

To the south of Northfield Drive, the winding street pattern makes it more difficult to transform the street network, although new east-west connections should be considered and preserved for as redevelopment occurs to improve connectivity to the station.

An interconnected street grid and enhanced sidewalk network can help **improve connectivity to and from the station, support access to jobs, and create address** for more intense mixed-use development over the longer term. New streets connections also have the potential to distribute vehicular traffic more evenly through the station area, which could alleviate some congestion along Northfield Drive.

RECOMMENDED GUIDELINES AND STRATEGIES

- Improve north-south connections by extending Parkside Drive north to Randall Drive, and work with the developer of the Waterloo Corporate Campus to ensure the design and orientation of new buildings and parking areas do not preclude a northward street extension.
- Work with the Township of Woolwich to explore the potential to extend Kumpf Drive north alongside the Walmart to connect with Farmers Market Road.
- Preserve for a new east-west street connecting Glen Forrest Road to Parkside Drive and the station over time to help link local businesses and the Lakeshore neighbourhood to the LRT.
- Plan and orient new developments to establish shared access driveways that can further enhance travel options for pedestrians and cyclists.
- Complete the sidewalk network and ensure that new streets are constructed with 1.8 metre sidewalks on both sides of the street to support employees and transit users walking to nearby places of work, and help improve access to the surrounding neighbourhoods.

6.3.4 Revisit local transit routes to support travel to neighbourhoods and businesses beyond a comfortable walking distance from the station



Figure 6-7. Enhanced local bus services can improve access to surrounding neighbourhoods and businesses

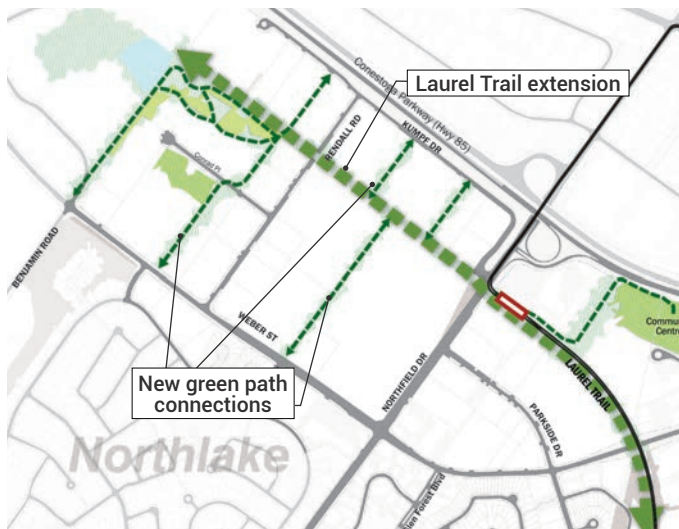
The station area is currently served by several local and regional bus routes that provide access to the Northlake and Lakeshore neighbourhoods, as well as to surrounding employment areas. The iXpress route which operates along Northfield Drive will be realigned, which will reduce service along Parkside Drive and to the Lakeshore community. Route #14 serves the employment districts north of Northfield Drive, however the service currently operates only in one direction. Given the size of the station area, **a number of jobs and some medium-density residential areas are located beyond a comfortable walking distance from the ION station.**

There is a need to reconsider existing bus routes to ensure that surrounding businesses and neighbourhoods are well-served by reliable transit service. To enhance access to surrounding employment areas, **Route #14 could be adjusted to provide more frequent service in both directions.** As demand for local transit increases over time, **there may be an opportunity to convert Route #73, a busPlus service, into a permanent fixed route** to support access to surrounding areas. All buses within the area should connect to the ION station to support transfers from the LRT to the local transit network.

RECOMMENDED GUIDELINES AND STRATEGIES

- Undertake a review of local transit services to determine if additional service is required to serve the surrounding neighbourhoods, the St. Jacobs Market or businesses beyond walking distance from the station.
- Consider enhancing Route #14 to provide service in both directions and coordinate its schedule to coincide with work commuting schedules.
- Consider converting the Northlake busPlus route to a permanent fixed route with longer service hours as demand for service increases.
- Coordinate local bus schedules with the LRT and ensure that all bus routes within the area offer a transfer point at the ION station to facilitate transfers between various services and reduce waiting times for commuters.

6.3.5 Extend the Laurel Trail as the spine for a new interconnected network of green connections



While the area features a series of **naturalized areas and open green spaces**, the path and trail network through the station area is limited. The only major trail within the station area is the Waterlooop Trail, which runs along Albert Street and the Cedar Creek at the southern end of the station area. There are **no formalized trails that serve the Northfield employment district**. The introduction of improved green linkages can help to enhance connectivity through the area, further break down the large blocks, and provide recreational amenity for workers.

A northward extension of the Laurel Trail alongside the rail corridor is a key infrastructure enhancement that could improve connections from the R&T Park and the ION station to the Waterloo Innovation Park, and support access to amenities around the St. Jacobs Market. The Laurel Trail extension could also act as a spine for new network of green connections utilizing the natural flood lands and spaces between properties. The implementation of an enhanced trail and path network can strengthen the relationship between the station, Northfield businesses, and the surrounding community, while also **serving as an important green infrastructure and mobility asset that enhances the character of the area**.

RECOMMENDED GUIDELINES AND STRATEGIES

- Plan for a northward extension of the Laurel Trail along the rail corridor to connect the station to the Waterloo Innovation Park and amenities around the St. Jacobs Market.
- Explore the potential for new green connections through the natural lands within the Northfield employment district that link with the Laurel Trail.
- Work with property owners to establish a new east-west pedestrian and cycling connection along the north end of the Waterloo Corporate Campus, which could link to Golden Eagle Road and the Northlake neighbourhood.
- Plan for new east-west connections south of Northfield Drive, including a possible mid-block connection along the south end of the tennis club, which could connect to Glen Forrest Boulevard and the Lakeshore community in the absence of a street connection.
- Ensure that green connections incorporate landscaping and amenities, such as pedestrian-oriented lighting, to create a more inviting environment and provide recreational amenities for local employees.

6.3.6 Complete the cycling network to improve access to area businesses, the St. Jacobs Market and the station



The station area features a fragmented cycling and trail network. Bicycle lanes exist on Weber Street, however they do not continue south of Northfield Drive to link with cycling facilities at Parkside Drive or the Waterloo Trail. Similarly, existing cycling facilities along Parkside Drive terminate at Weber Street. This limits access to businesses and recreational destinations along the south side of Northfield Drive. The Northfield Drive cycling lanes begin at Weber Street and extend into the Lakeshore neighbourhood, however they do not connect east to the ION station or to the commercial amenities within the Conestoga station area. **Improved cycling infrastructure is needed to establish a more complete cycling network** linking neighbourhoods, employment areas, surrounding amenities, and the station.

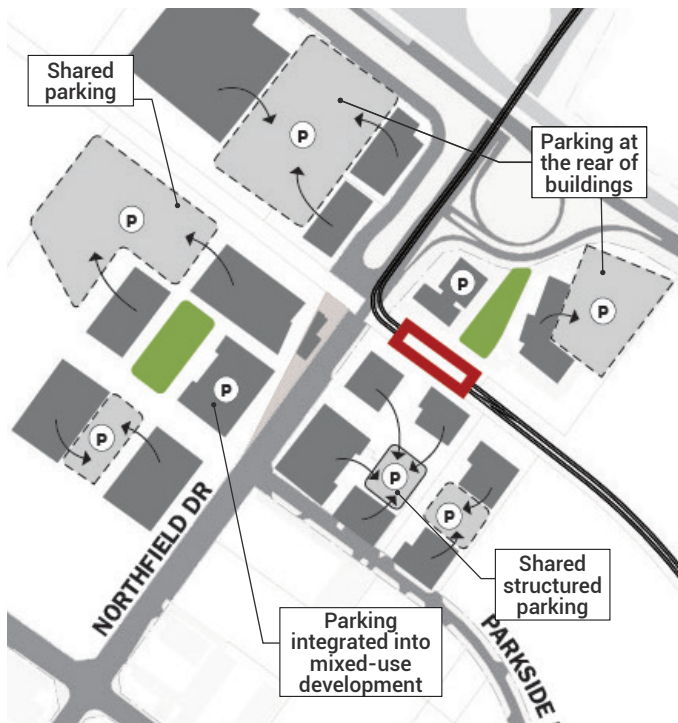
There is an opportunity to **expand the existing cycling and trail network to encourage non-vehicular travel** throughout the station area, and better connect the Lakeshore and Northlake neighbourhoods to the employment district. The planned installation of bike lanes along Northfield Drive to Davenport Road is an important improvement that will support cycling to and from the station. Other key links to consider include an extension of the Weber Street cycling lanes to link with the Waterloo Trail; a northward extension of the

Parkside Drive bike lanes to Randall Drive to promote access to the Waterloo Corporate Campus and the ION station; and a northward extension of the Laurel Trail alongside the rail corridor (as discussed in Direction 6.3.5).

RECOMMENDED GUIDELINES AND STRATEGIES

- Support the installation of cycling lanes along Northfield Drive, and consider the potential to secure wider bike lanes or an additional 0.5m buffer from vehicular traffic to enhance comfort for cyclists along the busy street.
- Extend the Parkside Drive bike lanes to Northfield Drive in the short term, and plan for an extension northward to Randall Drive over the longer term as a finer grain street and block pattern is developed.
- Extend the Weber Street cycling lanes south to link to the Waterloo Trail, helping to connect the Northfield employment district to the Lakeshore neighbourhood.
- Plan for a northward extension of the Laurel Trail alongside the rail corridor to connect directly to the ION station and enhance access to the north part of the station area, including the Waterloo Innovation Park.
- In the long term, explore opportunities to introduce a segregated cycling facility along Northfield Drive.

6.3.7 Encourage shared parking, structured parking and reduced standards to support the development of new employment uses and amenities



The station area contains 13.8 hectares of surface parking, or approximately 4,500 spaces, most of which are used by local employees commuting to work. Large areas of surface parking exist throughout the area, including at the office buildings immediately east and west of the station, within the Waterloo Innovation Park, on the Manulife property, and throughout the warehousing and industrial properties at Parkside Drive and Weber Street. There are also a number of automobile dealerships in the area, which typically include large outdoor parking areas. A structured parking garage was recently constructed at the Waterloo Innovation Park, and it provides over 700 parking spaces to support future infill of this key office node. In many cases, each development provides its own parking supply, which can lead to a surplus of parking.

The introduction of LRT will create a viable commuting alternative for workers within the Northfield employment area, and increased transit ridership could alleviate some demand for parking. Yet, **the area will continue to rely heavily on automobile access**, given its location at a major highway interchange and at the northern end of the City. The approach to parking for the station area should focus on ensuring that parking areas do not detract from the ability to create a more transit-oriented place over time.

Over time, there is a need to **shift parking away from the station to allow for infill and redevelopment**. Consideration should be given to parking rate reductions within 400 metres of the ION station to support higher-density development and a greater mix of uses. Accessibility within this area will improve significantly with the introduction of LRT, and this area has the greatest potential to transform into a more pedestrian-oriented place over time. Within 100 metres of the station, new surface parking should be restricted to facilitate a more intense cluster of activity and an enhanced arrival experience at the station.

There is also an opportunity to **optimize use of the existing parking supply by encouraging shared parking** between businesses and new developments. Shared parking arrangements would prevent an oversupply of parking for individual buildings, and offers flexibility for businesses and tenants to draw on the available supply as needed. In the case of mixed-use developments, such as on the Waterloo Corporate campus, the use of shared parking can respond to variations in parking demand for different uses throughout the day and evening.

To improve the character and setting of the station area, **design and orient parking so that it does not detract from the public realm.** By orienting parking areas to the rear of a building and screening them with landscaping treatments, the building frontage can contribute to the creation of a more active street frontage and a more comfortable streetscape for pedestrians. **Over time, parking should be provided in structured parking facilities or below grade to free up land for redevelopment.**

A range of transportation demand management (TDM) strategies can also be introduced, with a focus on providing alternatives to workers within the area. Potential strategies could include the expansion of the TravelWise program through partnerships with local employers; carpooling and ridematching programs; transit pass incentives; alternative workplace arrangements and flexible work schedules; and a bikeshare program to support first and last mile travel to and from the station.



Figure 6-8. Structured parking facilities can be integrated in the lower levels of a mixed-use development (Dallas, TX)

RECOMMENDED GUIDELINES AND STRATEGIES

- Reduce parking supply rates within 400m of the station, and restrict surface parking within 100m of the station, to support higher-density infill and an improved public realm.
- Facilitate and encourage shared off-site parking between businesses and new developments to optimize use of the available parking supply.
- Locate parking areas to the rear of a building where they can be screened from the street to create a more vibrant streetscape and a more comfortable experience for pedestrians.
- Consider implementing carpooling and bikeshare programs, and encourage more businesses to partner with TravelWise to offer alternatives to driving to work.

Details of transportation demand strategies and proposed parking supply rates for Northfield station are outlined in Chapter 8.

6.4. Built Form and Land Use

Most of the station area is a designated Employment Area (see Figure 6-9). The Northfield employment district plays an important role in supporting the City's economy by providing a large, contiguous land area that can accommodate a range of traditional industrial uses as well as a growing cluster of higher value office and technology-based activities. The arrival of LRT presents an opportunity to strengthen the character of this employment area by improving access and accelerating growth in high-value jobs and innovation.

The Northfield employment node is characterized by a built form pattern typical of traditional industrial business parks. Most buildings are single-storey in height, with large building footprints and surrounded by large areas of surface parking. In many cases, outdoor storage facilities and back-of-house industrial and warehousing activities are visible from the street. This detracts from the image of the area as an evolving higher-value business node. The presence of surface parking areas along the front face of an employment building further detracts from the public realm and creates an uncomfortable pedestrian and cycling experience for workers and nearby residents.

The current lack of amenities requires workers to drive outside the area for lunch or to access coffee shops, convenience retail, or other services. There is a desire to introduce a greater range of amenities within the Northfield employment district to support placemaking and to meet the day-to-day needs of local employees. More flexible zoning permissions are needed to permit small-scale retail and amenities that are integrated as part of new office developments. The transformation of single-use retail and commercial uses into higher-density, transit-supportive destinations has further potential to enhance amenity for local employees and surrounding residents.

While the Northfield employment district will continue to transform into a higher-value employment district, there is an opportunity to introduce limited residential within 250 metres of the station to increase activity levels, enhance animation, and improve the visibility of the ION station. New residential uses would only be permitted as adjunct to the primary employment function of the area, and should be provided as a vertically integrated component of an employment-focused development. Permissions for new residential uses within the immediate vicinity of the station would be contingent on demonstrating compatibility with existing and planned business operations within the area.

Office Mixed-Use

Indicates areas that will be predominantly office employment in nature, and where a mix of supportive uses within buildings, such as retail or restaurant, will be encouraged to support local employees.

Office Mixed-Use Core

Indicates the lands within approximately 250m of the station and along higher order transit corridors where the highest intensity and mix of uses will be located, including office, supporting commercial/retail amenities, and consideration for new residential.

Commercial Mixed-Use

Indicates areas that will be predominantly commercial in nature but where a mix of uses within buildings or on the block will be encouraged, including office and upper level residential uses.

Residential

Indicates areas of low to medium-density residential development.

Residential Mixed-Use

Indicates medium-high to high-density residential areas where some street-related retail or active at-grade uses are permitted at the base of a building to improve amenity for local residents.

Convertible Frontage

Indicates areas which are planned and designed to accommodate mixed commercial, retail, and community/institutional uses at grade, at such time as these uses may be supported.

Active Frontage

Indicates areas where the ground floor is required to accommodate non-residential uses, including commercial, retail and community uses at grade that are designed to animate and activate the street.



New Open Space Opportunity

Open Space



Station Area Boundary

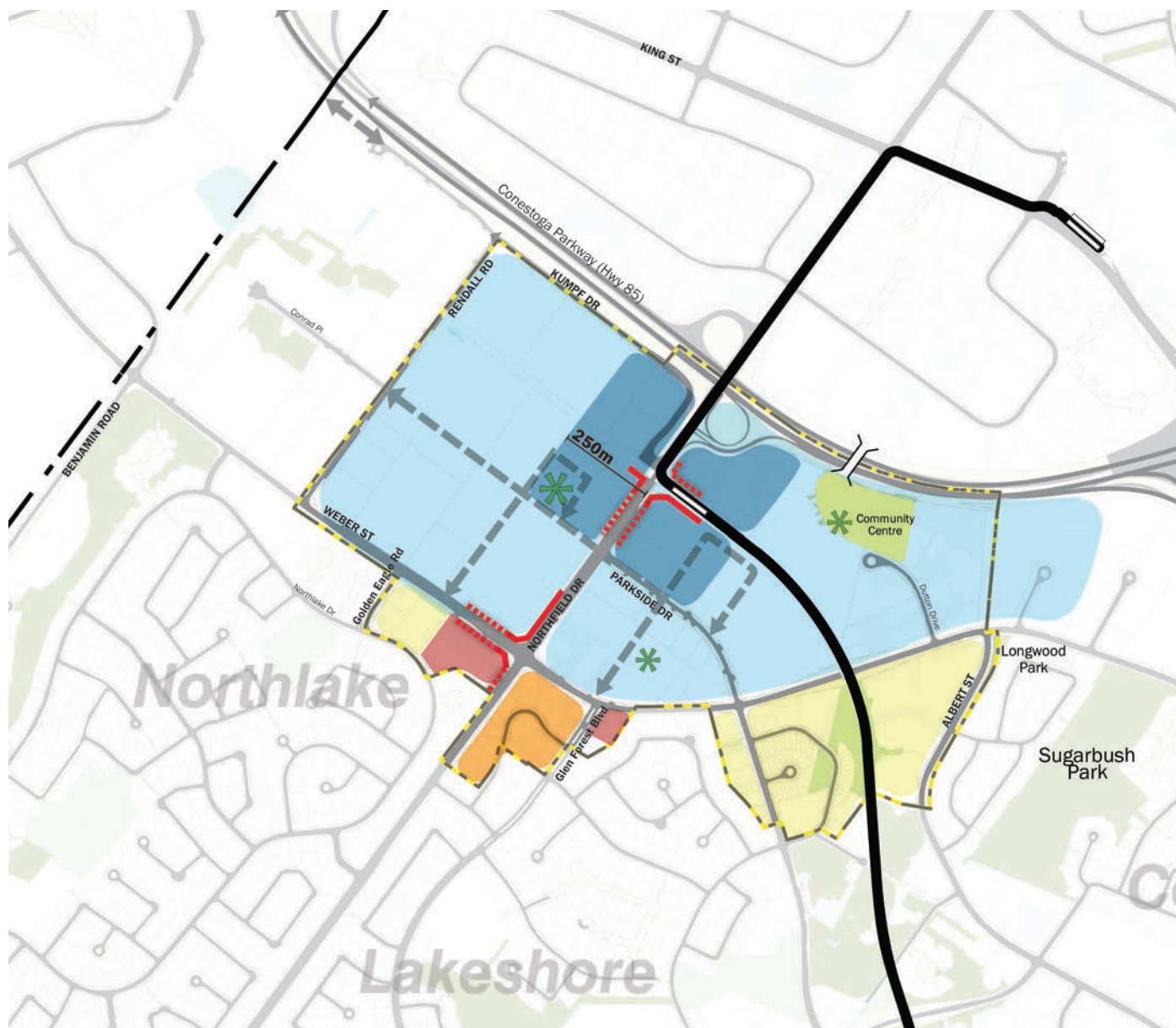


Figure 6-9. Land Use Framework

Key Directions

- 1 Reinforce the transformation of the station area into a destination for high-value employment uses
- 2 Encourage the introduction of more amenities throughout the Northfield employment district to support businesses and workers
- 3 Consider limited residential uses within 250 metres of the station to support greater levels of activity throughout the day and evening
- 4 Encourage the intensification of single-use retail areas to create more mixed-use and transit-supportive commercial destinations around the station

6.4.1 Reinforce the transformation of the station area into a destination for high-value employment uses



Figure 6-10. The Northfield Station development is an example of the station area's expanding office market

The station area is an important employment node within the City, supporting over 5,000 office workers and approximately 1,700 industrial jobs. The area contains a variety of businesses, including older industrial, manufacturing and warehousing activities, and newer offices that accommodate high-tech research and development activities, as well as professional business uses.

While the traditional industrial operations in the area play an important role in the regional economy and will continue to do so in the future, **the design and orientation of these buildings sometimes detracts from the image of the area.** In many cases, warehousing activities, storage facilities, back-of-house areas, and large surface parking lots are visible from the street. As the area evolves into a higher-value employment centre over time, it will be important to **ensure that existing buildings and new development help to reinforce a positive image of the station area and employment district.**

As infill and redevelopment occurs over time in response to the LRT, effort should be made to **ensure that new development is designed and oriented to actively address the street**, with loading, parking and outdoor storage areas located to the rear where they can be concealed from public view.

These design strategies will be most critical along key streets through the area, including Northfield Drive, Parkside Drive, Kumpf Drive, Weber Street and Randall Drive, which have the greatest visibility and where the greatest levels of pedestrian traffic are expected. There is also an opportunity to work with landowners to retrofit existing buildings so that these employment facilities better address the street, with design and landscaping treatments to help conceal back-of-house areas.

RECOMMENDED GUIDELINES AND STRATEGIES

- Require buildings to be setback closer to the street, and prohibit parking between the face of the building and the street to help create a more active public frontage.
- Create visual interest and enhance permeability of the street by incorporating transparent glazing and other high-quality materials along the primary street frontage.
- Work with property owners to retrofit existing buildings so that they contribute to the character of the area. Consider opportunities to extend office spaces and active uses towards the street, and introduce design or landscaping treatments to conceal outdoor storage areas, warehousing activities, and other back-of-house uses.
- Restrict surface parking to the side or rear of a building to promote active street frontages, and encourage structured parking over time to limit the amount of land required for parking.
- Restrict outdoor storage areas and limit servicing activity to the rear or side of new development.

6.4.2 Encourage the introduction of more amenities throughout the Northfield employment district to support businesses and workers



Figure 6-11. Introduction of small-scale retail and restaurants on the ground floor within new development (Seattle, WA)

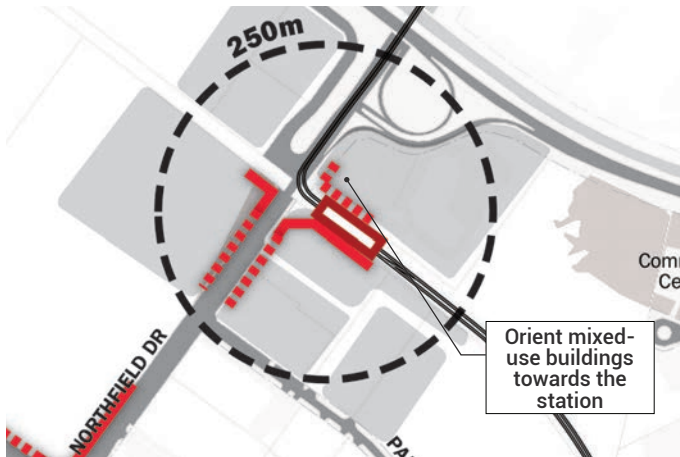
A key issue for businesses in the area is the lack of amenities to meet the day-to-day needs of local employees. With limited access to nearby amenities, many workers are required to drive outside of the area for lunch or to access coffee shops, convenience stores or other services. The introduction of new commercial uses within the Waterloo Corporate Campus will enhance amenity within the area, although these will primarily benefit businesses in close proximity to Northfield Drive and designed to cater primarily to drive-in traffic.

There is an opportunity to allow for and encourage small-scale amenities within the Northfield employment district to serve the immediate day-to-day needs of local employees, and to help create a more complete, amenity-rich business district. While current Official Plan policies permit ancillary uses – including restaurants, convenience retail and personal service establishments – within Business Employment areas, **a more flexible zoning framework is needed to permit complementary small-scale retail and commercial uses that are envisioned in the Official Plan.** To encourage new amenities while avoiding an oversupply of parking, a reduced parking requirement for the commercial amenity component of new office development should be considered which reflects the intended walk-in nature of these supporting uses.

RECOMMENDED GUIDELINES AND STRATEGIES

- Permit complementary commercial and retail uses that are integrated into the ground floor of a new employment-focused building, up to a maximum of 15% of the total building area, to enhance amenity for local employees.
- Encourage the integration of amenities within new buildings by waiving the associated parking requirements. For example, allow 10% of the gross floor area within an office building to be dedicated to retail, restaurants, or service amenities without requiring additional parking.
- Establish a minimum ground floor height of 4.5m for non-residential development within 400m of the station to allow for active ground-floor uses.

6.4.3 Consider limited residential uses within 250 metres of the station to support greater levels of activity throughout the day and evening



The introduction of LRT has the potential to support greater levels of activity around the station, and can serve as an impetus for a broader range of uses within the Northfield employment district. The station area will continue to evolve with a focus on business growth; however, the area immediately around the station will benefit most from improved transit accessibility, and has the greatest potential to transform into a more mixed-use, pedestrian-oriented node.

There is an opportunity to introduce limited residential uses within 250 metres of the station to support activity throughout all hours of the day and into the evening. New residential uses around the station can optimize the LRT investment by encouraging reverse commuting from Northfield station to other parts of the City. They would also help enhance the vibrancy of the Waterloo Corporate Campus and the immediate station area by increasing the market for retail, restaurants and grocery stores in the base of new office development.

The provision of residential uses as part of an employment-focused development can support placemaking around the station. **Residential uses would need to be vertically integrated into a building that contains non-residential uses and active at-grade amenities**, helping to create a more complete community around the station.

In keeping with the employment focus of the area, new residential uses would only be permitted as a secondary component of an employment-focused development. A development that contemplates

the introduction of residential uses would need to **ensure compatibility with surrounding employment activities**, and would need to demonstrate how the inclusion of residential uses would support the primary employment function of the property.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Through a forthcoming Municipal Comprehensive Review, explore opportunities for allowing limited residential development at strategic locations.
 - i) Priority will be given to lands within 250 metres of the station and where residential is:
 - a component of a mixed-use building or development with a substantial employment component; and
 - oriented to front onto the station and/or have direct access from active or convertible frontage areas.
 - ii) The City may also consider allowing for limited residential development at other strategic locations that are within 250 to 400 metres of the station where residential is:
 - a component of a mixed-use building or development with a substantial employment component;
 - oriented to front onto and/or have direct access to higher order transit service.
- b. Consider designating certain Employment lands as Class 4 areas to provide flexibility for more noise-sensitive residential uses to be located near existing industrial or commercial uses (refer to NPC-300 Guidelines).
- c. Encourage shared parking between uses to optimize use of the available supply and encourage more transit-oriented development (see Direction 6.3.7).
- d. For projects that contemplate residential uses, require developers to submit a master plan that demonstrates:
 - i) Compatibility with existing and planned employment uses;
 - ii) A commitment to developing new employment uses on the site;
 - iii) How the design of residential uses supports area employees and employers; and
 - iv) A phasing plan that ensures substantial new employment uses are established prior to construction of residential uses.

6.4.4 Encourage the intensification of single-use retail areas to create more mixed-use and transit-supportive commercial destinations around the station



Figure 6-12. Example of a mixed-use commercial redevelopment in Vancouver, with residential uses above lower-storey retail

The station area includes a **limited number of commercial and retail destinations, many of which retain a low-density character that is not supportive of transit.** Most of these retail and commercial sites are characterized by single-storey retail buildings setback away from the street edge and surrounded by large areas of surface parking.

With the introduction of LRT, the Northfield area has the potential to **evolve into a more pedestrian and transit-oriented place that can support higher-density, mixed-use retail destinations.** Redevelopment of existing commercial properties can provide new ground floor retail space that is integrated into a mixed-use building, with office uses on the upper storeys. **Orienting retail frontages close to the street edge can help animate the streetscape** with at-grade commercial uses, and can attract increased walk-on traffic.

Parking lots should be shifted away from the street edge, and in the case of larger mixed-use projects, can be provided in a structured parking deck or below grade.

RECOMMENDED GUIDELINES AND STRATEGIES

- Restrict single-storey retail buildings and auto-oriented commercial uses within 400m of the station to support greater levels of pedestrian activity and limit automobile use.
- Encourage the long-term redevelopment of retail uses within the employment district into multi-level, mixed-use retail developments, with commercial uses provided at grade and office uses on the upper storeys.
- Encourage the long-term redevelopment of retail uses within commercial areas into multi-level, mixed-use retail developments, with commercial uses provided at grade and office or retail uses on the upper storeys.
- Orient retail buildings close to the street edge to create more vibrant streetscapes which can attract pedestrian traffic and enhance amenity for transit users, local employees and nearby residents.
- Locate retail parking to the rear of the building, or within a structured parking deck or below grade in the longer term, to create a more attractive public realm and an improved image for the employment district.

6.5. Public Realm Plan

The station area is auto-oriented with large areas of surface parking, narrow or fragmented sidewalks, and few street trees. There are no public parks within the station area. While there are sensitive natural lands throughout the area, they are generally not utilized or accessible and therefore provide limited amenity to nearby workers and residents. The surrounding path and trail network is also limited, which hinders connectivity to and from the station and to surrounding businesses and destinations. Many streets within the area could benefit from improved landscaping and sidewalks. In addition, many of the surface parking lots in the area front onto these streets and detract from the public realm by creating uncomfortable conditions for pedestrians.

The introduction of LRT presents an opportunity to transform the image and character of the station area as a green and inviting employment district structured around a network of naturalized trails and open spaces.

A key priority is the transformation of Northfield Drive, into a more attractive and pedestrian-oriented street with improved landscaping, more generous sidewalks, and new plaza spaces around the station. The introduction of a major public open space within close proximity to the station has the potential to provide amenity and act as a focus for new development.

Underutilized lands straddling properties have the ability to support new trails, sustainable infrastructure and stormwater management initiatives that could reinforce the area's natural characteristics. To further strengthen the identity of the area, new development can incorporate sustainable design solutions and green technologies.

The following section outlines a series of directions to improve the public realm throughout the station area.



Avenues

Indicates primary streets through the station area that are also important transit corridors. Key considerations for Avenues are identified in Section 2.2.4



Cycling Streets

Indicates streets intended to also act as important cycling connections within the station area. Key considerations for Cycling Streets are identified in Section 2.2.4



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4



Proposed Street Network

Illustrates the potential for the establishment of a finer grained street and block network over time.



Pedestrian Realm Improvement Area

Indicates an area immediately around the station that could benefit from high-quality hardscaped plaza space geared to support pedestrian movement.



New Open Space Opportunity

Indicates opportunities for new open spaces to act as a focal point for new development or station area activities.



Green Infrastructure

Indicates the potential location of a new network of green connections, open spaces, storm water management and low impact design features that could help define a distinct station character.



Existing Open Space



Station Area Boundary

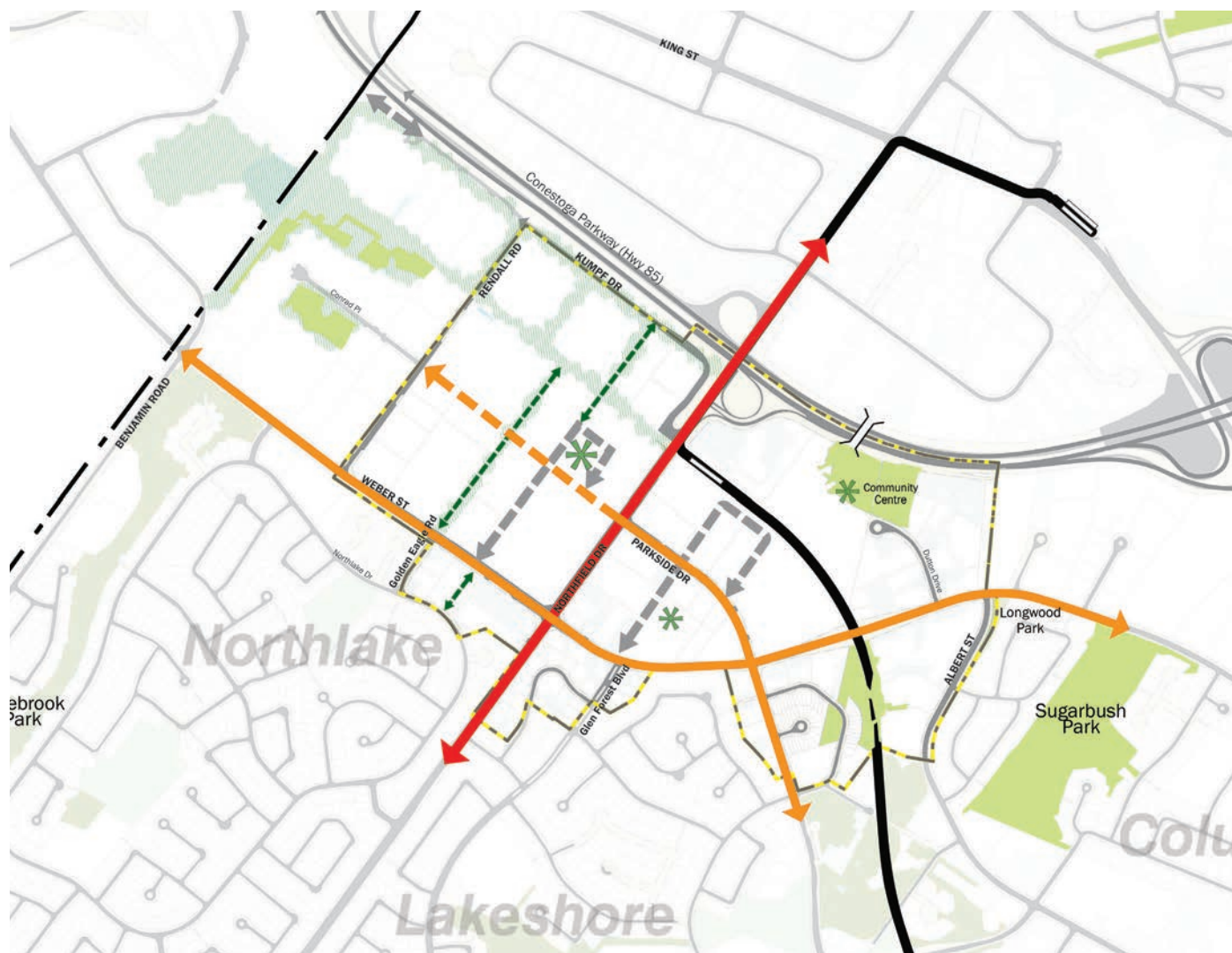
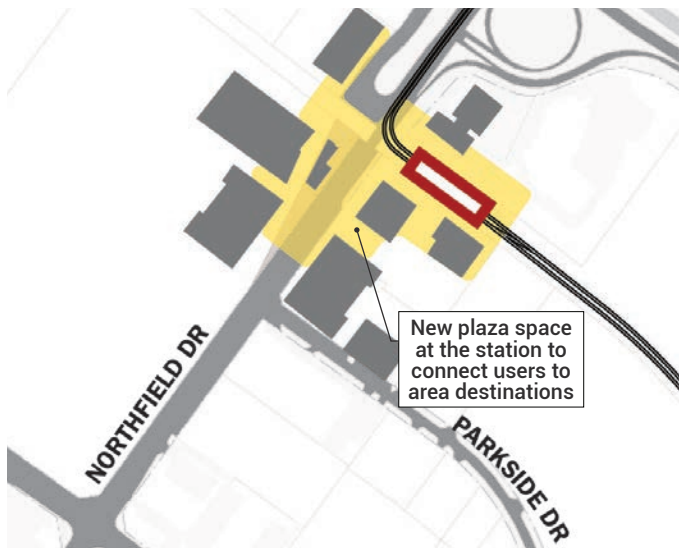


Figure 6-13. Public Realm Framework

Key Directions

- 1 Create a comfortable and inviting pedestrian realm at the station and along Northfield Drive
- 2 Establish a signature open space as a component of the Waterloo Corporate Campus while encouraging other smaller-scale public spaces throughout the area
- 3 Integrate sustainable infrastructure throughout the station area to help define a distinct station character
- 4 Advance a more robust urban tree canopy to enhance the setting for workers and businesses
- 5 Break down large areas of surface parking with new landscaping and public realm improvements which support a future block structure

6.5.1 Create a comfortable and inviting pedestrian realm at the station and along Northfield Drive



The station is abutted by surface parking lots and narrow sidewalks with limited streetscaping. This condition will be exacerbated by the widening of Northfield Drive and the reduction in boulevard space on either side of the road. While the area today is highly auto-dependent, the arrival of LRT will result in an increasing number of pedestrians traveling to and from the station. These people will need space to walk and routes to support them as they travel from the station to diverse destinations throughout the station area. Nowhere will this be more important than in the areas immediately adjacent to the station.

The new ION station will create an opportunity to **place a greater emphasis on the pedestrian environment around the station** and extending along Northfield Drive connecting to key destinations. Around the station, there is an opportunity to support pedestrian activity by encouraging buildings to incorporate more hardscaped plaza space. As parking shifts increasingly toward shared and structured configurations over time, these plazas could be expanded into existing surface parking areas to connect the buildings to the station. Combined with streetscaping along Northfield Drive, these initiatives will contribute to a clear pedestrian environment associated with the ION station and linking it to surrounding destinations.

RECOMMENDED GUIDELINES AND STRATEGIES

- Restrict parking (see Direction 6.3.7) and introduce high-quality public realm between the station and adjacent buildings to support higher levels of pedestrian activity and support the walk from the station to area uses.
- Ensure that plaza space around the station is well-lit with ample seating areas to improve pedestrian comfort and the perception of safety.
- Link landscaping initiatives to Northfield Drive to provide continuous pedestrian connections, characterized by distinct landscaping, lighting, and other public realm and streetscaping elements.
- Ensure new development next to the station includes active uses at grade or convertible frontages that can contain active uses over time.



Figure 6-14. Plaza space incorporated into new development surrounding the station can help support activity and facilitate travel to and from area destinations. (Minneapolis, MN)

6.5.2 Establish a signature open space as a component of the Waterloo Corporate Campus while encouraging other smaller-scale public spaces throughout the area



Figure 6-15. An open space close to the station, incorporating both hard and soft landscaping can provide amenities for workers, transit users and residents (Cambridge, MA)

There are no parks or formal open spaces within the Northfield employment district, which limits amenity for workers in the area. While the planned redevelopment of the Waterloo Corporate Campus proposes a new public space along the northernmost sections of the Parkside Drive extension, it is roughly 400 metres from the future station.

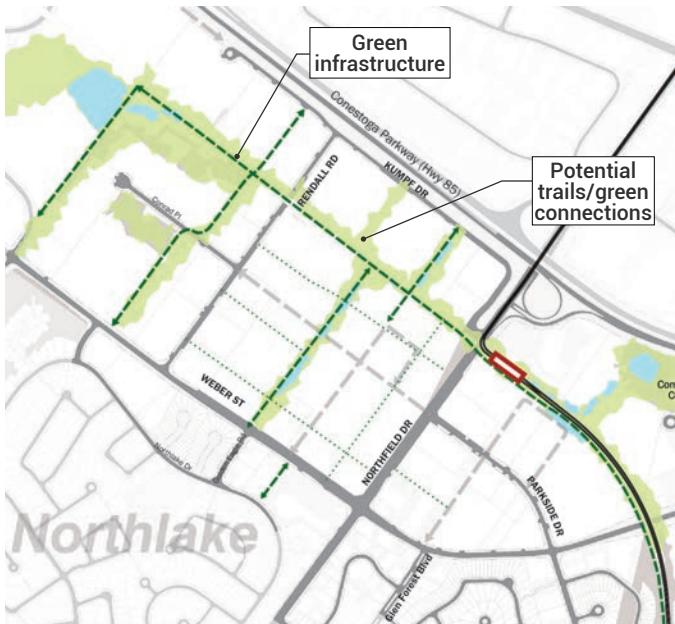
There is the potential to **support the creation of a mixed-use node by shifting the proposed Waterloo Corporate Campus open space to within 250 metres of the station**. A signature open space located in closer proximity to Northfield Drive would help to create address for a new mixed-use development, including a limited amount of new residential integrated with substantial employment uses. The approach would help to support a greater mix of uses in closer proximity to the station while allowing for larger areas of land farther away from the station to be used for parking or other uses over time.

In addition to this signature open space, there are opportunities to **consider other private/public spaces as redevelopment occurs** throughout the station area. Opportunities exist to the south of Northfield Drive, where a new open space could help to support activity next to the station or the RCAFA Rotary Adult Centre, and west of Parkside Drive to act as a focus for new development.

RECOMMENDED GUIDELINES AND STRATEGIES

- Work with the developer of the Waterloo Corporate Campus to explore the potential of shifting the planned open space south where it can better relate to Northfield Drive.
- Plan for new open spaces throughout the station area to enhance amenity for workers, transit users and future residents.
- Ensure that new open spaces provide both hard and soft landscaping, including space for passive recreational uses and new pedestrian pathways that facilitate linkages to surrounding amenities, businesses and Northfield Drive.
- Consider incorporating a central feature within these new open spaces, such as a public art element, to support placemaking.
- Encourage active uses to develop around new open spaces, allowing for spill-out activities that help animate the space.

6.5.3 Integrate sustainable infrastructure throughout the station area to help define a distinct station character



There are natural features and flood plains throughout the Northfield employment district. While these areas create challenges for new development there is the potential to transform them into a distinct asset that can support investments in green infrastructure and help to distinguish the station area as an innovative and environmentally sustainable employment district.

There is the potential to **leverage these natural lands and undeveloped areas straddling properties to support placemaking**, address stormwater management challenges, and create an interconnected network of open spaces. To compliment these investments in the public realm and further reinforce the character of the station area, **innovative green infrastructure can also be integrated into the design of new buildings**. A range of sustainable technologies are available to help manage stormwater flows, including green roofs, greywater capture and reuse, permeable pavement, native landscaping, and other low-impact development strategies.

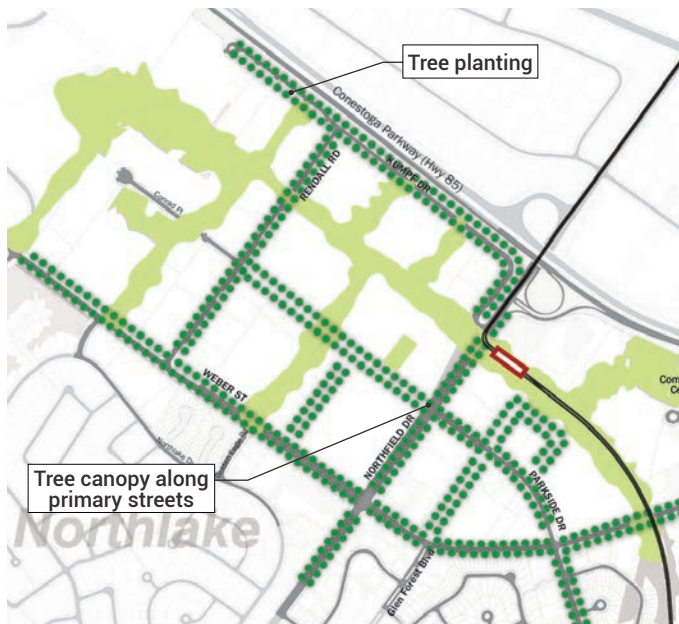
RECOMMENDED GUIDELINES AND STRATEGIES

- Explore opportunities for new green infrastructure that can help distinguish the station area as an innovative and sustainable employment district.
- Link the potential Laurel Trail extension and proposed network of green connections to new stormwater management infrastructure to reinforce a more natural characteristic throughout the station area.
- Support ground-based stormwater management strategies with green building infrastructure such as green roofs or runoff collection.
- Encourage sustainable building designs that incorporate green technologies which can promote environmental sustainability and help to strengthen the identity of the area.
- Consider opportunities for public art along new trails or within open spaces that speaks to issues of environmental sustainability or resource management.



Figure 6-16. Natural lands can be leveraged to create new paths and green connections (such as this example in Mississauga, ON) that can help to distinguish the station area as a more sustainable employment district.

6.5.4 Advance a more robust urban tree canopy to enhance the setting for workers and businesses



RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a consistent street cross section and implement it over time. The section should be composed of street with planted boulevards and bike lanes where identified. (See Figure 6-13 for proposed street typologies within the station area)
- Prioritize improvements to primary streets within the station area, including Northfield Drive, Parkside Drive, Randall Drive and Kumpf Drive.
- Encourage shared driveway access to limit disruptions in the streetscape.
- Consider introducing tree canopy targets to support investments in tree plantings and enhance the setting of the area.

The Northfield station area has developed over time without a consistent approach to streetscape design. The result is a wide variety of landscape treatments and few street trees. This impacts on the character of the station area creating large spaces with little or no street canopy and contributing to the sense that streets are overly-scaled and inhospitable to pedestrians.

There is an opportunity to **enhance the public realm by planting a consistent row of trees along streets** throughout the station area. As development occurs and streets are reconstructed over time, the introduction of a more consistent street cross section with green boulevards and street trees will help to contribute to the character of the area by contributing to the spatial definition of the street and expanding the urban tree canopy. Increasing the street tree canopy could also complement the implementation of sustainable infrastructure such as the green connections, stormwater management and new open spaces to contribute to the overall greening of the employment district.

6.5.5 Break down large areas of surface parking with new landscaping and public realm improvements which support a future block structure



Figure 6-17. Landscaped pedestrian routes across large areas of surface parking can help to support access and contribute to the greening of the station area (Mississauga, ON)

The Northfield employment district is characterized by large areas of surface parking. These detract from the image of the station area and create an unfriendly environment for pedestrians. While there is expected to be a long-term shift toward shared and structured parking as redevelopment takes place in response to the LRT, many existing surface parking lots will remain over the short to medium term.

Measures can be taken in the near term to mitigate the impacts of existing surface parking on the pedestrian environment, while setting up a framework for a finer grain street and block structure. The impacts of surface parking lots on the public realm can be minimized through **tree plantings, landscaping initiatives and other design treatments**. It will also be important to facilitate pedestrian movement through the employment district and to the ION station by establishing safe pedestrian connections through parking areas, taking into consideration key pedestrian routes and desire lines. **Parking areas should be organized around a grid pattern that helps establish a framework for redevelopment** in the long term.

RECOMMENDED GUIDELINES AND STRATEGIES

- Work with property owners to introduce trees, landscaping and other design treatments that help conceal surface parking lots from the street and improve the character of the Northfield employment district.
- Improve connectivity to and from area businesses by introducing new landscaped pedestrian routes across large surface parking lots to connect key area destinations.
- Organize surface parking facilities and new pedestrian routes along a grid pattern to help set up a street and block pattern over the long term.



Figure 6-18. Organizing surface parking and new pedestrian routes along a grid pattern can help to define development blocks for intensification over time (Saint Paul, MN)

6.6. Economic Development

The Northfield station area is an important employment node that contributes to the economic vitality of the City and Region. A number of potential investments around the station and within the employment district can support employment growth within the area and help attract new businesses and emerging innovation-based firms. The introduction of additional amenities, green connections and infrastructure, and improved street connections can enhance the setting for continued investment and redevelopment.

1 Support employment growth through the provision of new amenities and public realm enhancements

The Northfield station area will continue to play an important role within the Regional economy as a diverse employment node for traditional industrial businesses and higher value-added professional office and technology activities. To support employment growth throughout the area there is a need to encourage a greater range of amenities to serve the needs of workers and ensure that the area remains competitive with more amenity-rich job nodes across the Region. A range of public realm investments can further improve the quality of place for local employees. Streetscape improvements along Northfield Drive can strengthen the street as a key link to the station and as a defining gateway for the employment district. Other investments in the active transportation network can improve connectivity through the area, with a Laurel Trail extension helping to support linkages between the R&T Park, the ION station, the Waterloo Innovation Park, the Waterloo Corporate Campus, and other businesses within the area.

2 Create affordable spaces for small and mid-sized firms, including “makerspaces” that allow for small-scale industrial activities

The Northfield employment district is home to a wide range of employment activities. While the area is experiencing a transition to a more contemporary office and technology-based employment node, the area will continue to function as a diverse employment hub into the long term. The emerging Northfield business district is also distinct from other employment areas in the Region, as it offers more affordable spaces that can attract small and mid-sized firms, as well as more creative industries and emerging businesses that are more sensitive to costs. In keeping with this varied employment character, there is the potential to introduce “makerspaces” – shared spaces where workers can gather, share resources and knowledge, create and innovate. By developing flexible workspaces within the Northfield node, the area can continue to attract a variety of small and mid-sized businesses, while also offering spaces for these firms to grow and thrive.

3 Distinguish Northfield by advancing the employment district as a model for green infrastructure

There is an opportunity to leverage the natural qualities of the station area and transform the Northfield employment node as a model of sustainable development. Incorporating green design features and technologies into new development, and integrating natural landscapes with new trails, open spaces and recreational areas, can help distinguish this employment area from other business districts within the City and Region. The area has the potential to become a successful demonstration area for innovative green infrastructure strategies that helps reinforce its identity and support continued investment.

4 Support access to the St. Jacobs Market through improved street and trail connections

The St. Jacobs Market is located just north of the station area, within close proximity to the Waterloo Innovation Park and other businesses north of Randall Drive. Yet, the various amenities in and around the St. Jacobs Market are difficult to access. Improved street and path connections are needed to promote access for workers and visitors. An extension of Kumpf Drive north to connect with Farmers Market Road and northward extension of the Laurel Trail alongside the rail corridor could provide an important links to the market enhancing access to area amenities for Northfield employees.

Bringing It All Together

The following illustration depicts how the various strategies can work together to create a vibrant, green and connected station area comprised of a mix of employment with retail, restaurants and amenities at street level organized around a more fine grained block structure.

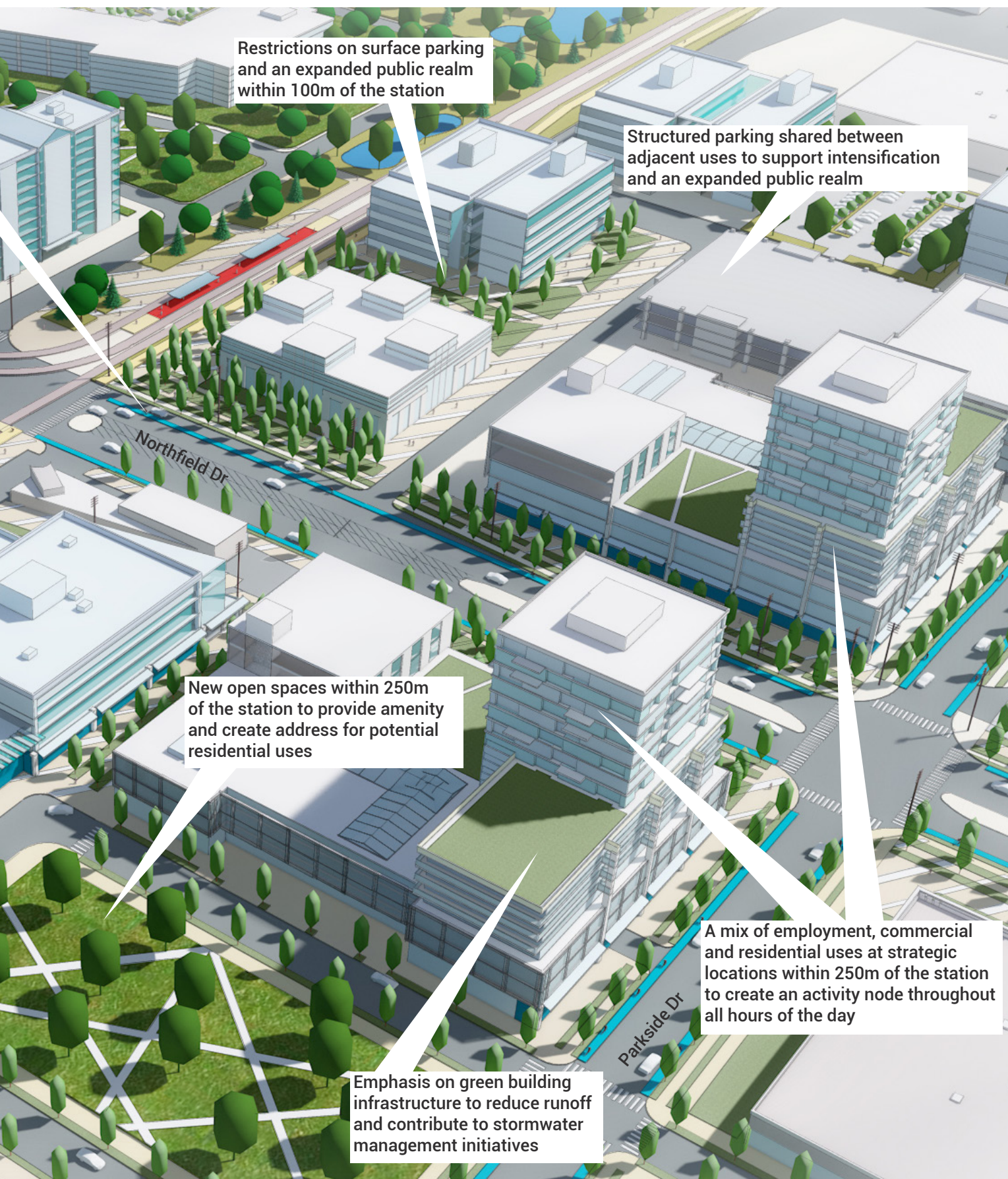
Enhanced pedestrian and cycling environment along Northfield Drive

Shared parking between uses

Extension of the Laurel Trail north to St. Jacobs Market

Network of green connections to improve connectivity throughout the station area

New green infrastructure can be integrated with the network of green connections to share contribute to the greening of the station area



6.7. Implementation and Phasing

The transformation of the Northfield business node into a more contemporary office and high-tech district is already underway, and this change will be accelerated with the arrival of LRT. A number of recommended enhancements have the potential to improve the quality of place within the Northfield employment district, and help strengthen the station area's identity as an evolving employment and innovation cluster. The following table outlines a phasing strategy to

guide the implementation of short, medium and long-term directions, and identifies key stakeholders and partners that will need to be engaged throughout the implementation process. This section also details the key intersection improvements that can support access to the Northfield business district, the ION station, and surrounding neighbourhoods. Opportunities to secure new funding and investment are also identified to help implement the vision for the station area.

SHORT-TERM DIRECTIONS (0-5 Years)

Lead(s)	Partner(s)
City of Waterloo (IPPW)	Region (RT) Grand River Transit
Region (RT) City of Waterloo (IPPW)	Region (Transportation Services)
Region (Transportation Services)	City of Waterloo (IPPW)
Grand River Transit	Local Residents Local Businesses
City of Waterloo (IPPW)	Private Developers Local Businesses TravelWise
City of Waterloo (IPPW)	Private Developers Local Businesses
City of Waterloo (IPPW)	Private Developers Businesses Community

MEDIUM-TERM DIRECTIONS (5-15 Years)

Lead(s)	Partner(s)
City of Waterloo (IPPW)	Township of Woolwich Region (Transportation Services)
City of Waterloo (IPPW)	Township of Woolwich

MEDIUM-TERM DIRECTIONS (5-15 Years)	Lead(s)	Partner(s)
Support access to the St. Jacobs Market through improved street and trail connections (Direction 6.6.4)	City of Waterloo (IPPW) Township of Woolwich	
Establish a signature open space as a component of the Waterloo Corporate Campus while encouraging other smaller-scale public spaces throughout the area (Direction 6.5.2)	Private Developers	City of Waterloo (Parks)
Integrate sustainable infrastructure throughout the station area to help define a distinct station character (Direction 6.5.3)	City of Waterloo (IPPW)	Business Community Private Developers
Reinforce the transformation of the station area into a destination for high-value employment uses (Direction 6.4.1)	City of Waterloo (IPPW & Economic Development)	Business Community Private Developers
Distinguish Northfield by advancing the employment district as a green hub and model for sustainable infrastructure (Direction 6.6.3)	City of Waterloo (Economic Development)	Business Community Private Developers
Support employment growth through the provision of new amenities and public realm enhancements (Direction 6.6.1)	City of Waterloo (IPPW)	Private Developers Local Businesses
Create affordable spaces for small and mid-sized firms, including “makerspaces” that allow for small-scale industrial activities (Direction 6.6.2)	Private Developers	City of Waterloo (IPPW) Business Community
Break down large areas of surface parking with new landscaping and public realm improvements which support a future block structure (Direction 6.5.5)	Private Developers Local Landowners	City of Waterloo (IPPW)
Advance a more robust urban tree canopy to enhance the setting for workers and businesses (Direction 6.5.3)	City of Waterloo (IPPW)	Private Developers
LONG-TERM DIRECTIONS (15-25 Years)	Lead(s)	Partner(s)
Extend Parkside Drive north to help establish a finer grained street grid, and enhance the sidewalk network to support access to the Northfield employment district (Direction 6.3.3)	City of Waterloo (IPPW)	Private Developers Local Landowners
Encourage the intensification of single-use retail areas to create more mixed-use and transit-supportive commercial destinations around the station (Direction 6.4.4)	City of Waterloo (IPPW)	Private Developers Local Landowners

RECOMMENDED INTERSECTION ENHANCEMENTS

Intersection	Recommended Improvements	Timing	Reference
Northfield Drive / Rail Corridor	• Implement planned streetscape improvements, including new cycling lanes and a signalized pedestrian crossing at the rail corridor • Support transfers to local bus services by creating a comfortable, high-quality link to and from the station • Improve wayfinding and signage to inform motorists of the crossing point and station	Short Term	Direction 6.3.1
Northfield Drive / Parkside Drive	• Proceed with the planned installation of cycling lanes on Northfield Drive • Consider introducing zebra crossings • Consider installing pedestrian signals with timed countdowns on all corners	Short Term	Direction 6.3.1
Northfield Drive / Weber Street	• Proceed with the installation of cycling lanes on Northfield Drive • Extend the Weber Street cycling lanes south • Consider introducing zebra crossings • Consider sidewalk and boulevard widenings to help buffer pedestrians from vehicular traffic • Consider reducing the number of vehicle lanes and reallocate space to the public realm	Short Term	Direction 6.3.1
Weber Street / Golden Eagle Road	• Plan for a new pedestrian/cycling connection along the north side of the Waterloo Corporate Campus • Consider installing a pedestrian-activated crossing and pavement markings to support access	Medium Term	Direction 6.3.5
Parkside Drive Extension / Randall Drive	• Plan for a potential future, non-signalized intersection • Install stop signs along Randall Drive and the new street • Introduce pedestrian pavement markings to support crossings	Long Term	Direction 6.3.3
Parkside Drive Extension / New East-West Street	• Plan for a potential future, non-signalized intersection • Install stop signs along all four corners • Introduce pedestrian pavement markings to support crossings	Long Term	Direction 6.3.3

Funding/Investment

Local Businesses

The many businesses within the Northfield employment area will play an active role in helping to guide change over time. Many local businesses may be interested in contributing towards the creation of an attractive and amenity-rich place in order to foster a positive experience for their employees and support worker retention. The implementation of TDM strategies such as the TravelWise partnership, transit pass incentives, and flexible work arrangements would require close coordination with area businesses. As the area evolves into a higher value-added employment area, there may be an opportunity to engage with local businesses to help shape the station area's identity and help strengthen its presence within the Regional economy.

Development Community

There are a number of redevelopment opportunities around the ION station, including vacant lands, low-density industrial properties, underutilized parking areas, and single-storey retail uses. The development community will have a clear understanding of the office and employment market, and is able to undertake development that meets the needs of future tenants. The City should work closely with active developers in the area to ensure that new buildings support the transformation of the Northfield employment district into a more attractive and competitive place. Through the municipal approvals process, the City can secure more active street frontages, improved mid-block connections, more transit-oriented site design, and a greater level of amenities within new buildings.

Region of Waterloo

The Region of Waterloo will be a supporting partner throughout the implementation of the Station Area Plan. Both Northfield Drive and Weber Street are Regional roads, which requires Regional involvement to undertake streetscape improvements, such as new cycling lanes or enhanced landscaping. In addition, the potential northward extension of the Laurel Trail

would likely be implemented along the Regional-owned railway corridor, and its implementation would require the Region's support. The Region may also have an interest in supporting the Northfield district as a demonstration area for sustainable economic development and green infrastructure, and the area could benefit from additional funding to support these innovative projects and initiatives. Potential adjustments to local bus routes to improve access to the employment district and the surrounding neighbourhood would need to be addressed by Grand River Transit.

Grand River Conservation Authority

Hazardous flood lands and sensitive sites are identified and regulated by the Grand River Conservation Authority (GRCA). Given the number of sensitive lands in the area, potential change and development on these lands and on adjacent lands, will require approval by the GRCA. The potential use of sensitive landscapes for public trails, passive recreational areas, or outdoor patios would also be dependent on GRCA approval.

Township of Woolwich

The northern edge of the station area is bounded by the neighbouring municipality of Woolwich. A number of mobility network initiatives involve improved connections beyond the City of Waterloo border and towards the St. Jacobs Market. A potential extension of Kumpf Drive northward to enhance access to the Waterloo Innovation Park could link with Farmers Market Road. An extension of the Laurel Trail could also connect northward, and a new path connection along the municipal boundary may also require coordination with the Township. A new street or path connection along Benjamin Road would also require coordination with the Township of Woolwich.

An aerial photograph of a city, likely Conestoga, is shown with a semi-transparent yellow overlay. The image features various urban structures, including buildings, streets, and green spaces. The text is overlaid on the right side of the image.

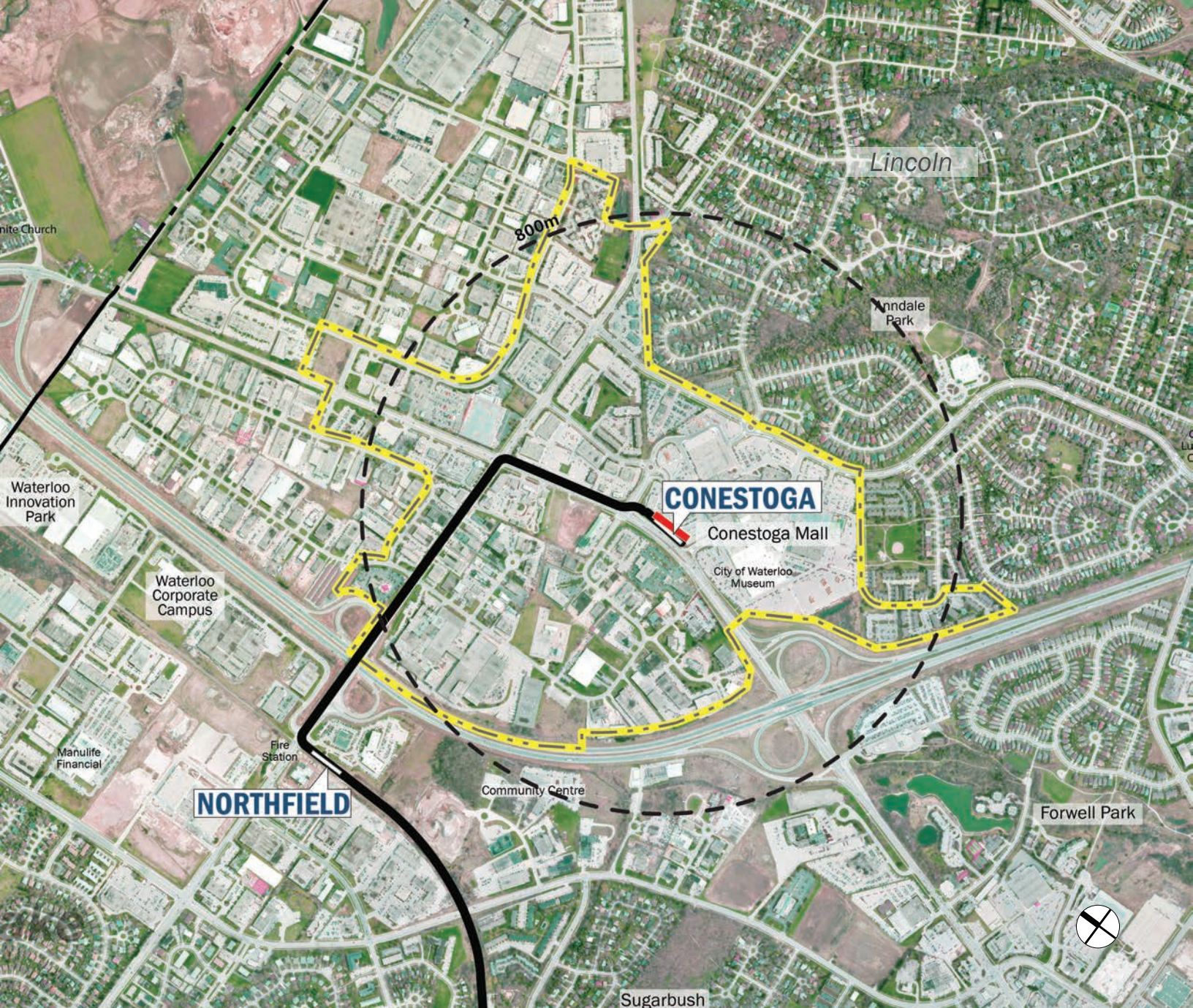
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STATION
AREA PLAN:
CONESTOGA

JUNE 2017

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7.1 The Station Area Today

The Conestoga station area is located along King Street and is centred around Conestoga Mall, a major regional retail destination that also serves as a key transit node for Grand River Transit bus services. The station area includes a significant cluster of employment uses to the east side of the Conestoga Parkway. The station area is bounded by the Conestoga Parkway to the south and west, which is accessible from two highway interchanges at Northfield Drive and King Street. The station area abuts the residential neighbourhood of Lincoln to the south and east. This station is the northern terminus of the LRT corridor, functioning as a

Size of Station Area: 126 hectares

No. of Residents: 3,500 residents (28 people/ha)

No. of Jobs: 7,500 jobs (60 jobs /ha)

Population/Jobs per Hectare: 88 people & jobs/ha

gateway station into the City and a key access point to the ION network for rural communities.

The introduction of LRT will strengthen transit connectivity between Conestoga Mall and destinations to the south, **elevating the role of the station area as the northern gateway to the Tri-Cities**. The large shopping centre offers over 680,000 square

feet of retail and commercial space and attracts approximately 6 million visitors each year. The GRT bus terminal is located on the mall property, immediately adjacent to the future ION station. The terminal consists of ten bus platforms that provide connections for several local bus routes and three iXpress routes.

A number of retail uses are clustered around the King Street and Northfield Drive intersection. These generally include auto-oriented commercial uses, including large-format retail stores, car dealerships, auto service shops, restaurants, and low-density retail pads. **Many of these retail uses have been designed and oriented to primarily support vehicular access**, with drive-through facilities and large areas of surface parking fronting onto the street. These existing commercial uses are generally not supportive of walk-in retail traffic or increased transit use.

The station is an important employment node at the northern end of the City, and it supports a mix of retail, office and industrial activities. The station area features the **highest employment densities among the five station areas**, supporting approximately 64 jobs per hectare. Beyond the jobs associated with Conestoga Mall and the surrounding retail businesses, there is a substantial workforce involved in a variety of industrial, manufacturing, wholesaling and construction service activities.

The Colby Drive employment node, encompassing the relatively dense and stable cluster of industrial and business activities around Colby Drive, is located a



Figure 7-1. Conestoga Mall and the GRT bus terminal

five to ten minute walk from the station at its closest point. The “Conestoga Triangle” employment lands south of Northfield Drive between King Street and the Conestoga Parkway consists of lower-density employment uses, larger parcels and a more limited street network. Its close proximity to the ION station means that this area has significant potential to transform over time. A number of businesses located within this area may be impacted by turning restrictions as a result of the LRT, so improving access will be important to unlocking the area’s potential.

To the east of King Street is **the Lincoln community**, an established neighbourhood that consists of low-density single-family housing, as well as townhouses and apartment buildings around Conestoga Mall. It is within comfortable walking distance to the ION station but separated from the station by the mall and larger areas of surface parking. This neighbourhood includes several parks and community amenities, including Anndale Park, Kingscourt Park and other outdoor sports facilities. While not planned for intensification, providing convenient access from these areas to the station will be important for these neighbourhoods to gain the transit-service benefits of LRT.

Connectivity through the area for pedestrians and cyclists is hindered by large blocks and a limited street network, which creates challenges accessing destinations throughout the area. The active transportation network within the area includes cycling lanes on Davenport Road between Northfield Drive and Lexington Road; local trails through Anndale Park which connect to Davenport Road; and multi-use trails along King Street between the station and Weber Street. Cycling lanes are also planned to be installed along Northfield Drive as part of the LRT construction.

King Street is an important corridor through the station area and a key gateway into the City. The street is designed to accommodate high volumes of vehicular traffic, with four driving lanes and Conestoga Parkway on-and-off-ramps. The existing sidewalk network is fragmented in some sections of the street, and there is limited landscaping or streetscape treatments to enhance amenity for pedestrians. With the arrival of LRT, there is a desire to enhance the public realm along the street to help strengthen its identity and improve the experience for pedestrians, cyclists and transit users.

Market Conditions

The station area is expected to continue to strengthen as a key commercial node and an important employment area within the City. The area features good access to the Conestoga Parkway and major roads such as King Street and Northfield Drive, although traffic and car congestion around the mall and along Northfield Drive occurs during peak hours and key shopping seasons.

Conestoga Mall will remain an important regional destination, offering a mix of retail, restaurant and entertainment amenities that help attract new businesses and residents. The mall property is the largest development parcel within the area. In order for the mall to expand in the long term, additional parking spaces are needed. Redevelopment would require new below-grade or deck parking facilities, which would allow for infill of surface parking areas. The presence of higher-density housing beside the mall provides support for future mixed-use redevelopment and potential residential uses on the site.

Other potential redevelopment opportunities include the low-density, single-tenant retail uses along King Street and Northfield Drive, some of which include large areas of surface parking. Intensification of these properties over time with a mix of transit-supportive office, retail and other employment uses can create a more walkable environment that supports the market for new office growth and residential infill.

Farther away from the station, the lands within the Colby Drive employment node are recognized as stable, relatively dense and unlikely to experience significant change or redevelopment. Similarly, the nearby Lincoln neighbourhood is an established community that will benefit from improved transit access, but will not experience significant redevelopment pressure.

A key challenge for the local market to develop as a mixed-use place is the low-quality pedestrian environment and limited public realm. The auto-oriented character of the area – with wide arterial roads and large surface parking lots – fragments the area and creates an uncomfortable experience for pedestrians. Many commercial and office buildings along key streets in the area are also oriented away from the street and not designed to support walk-on traffic, which further detracts from the public realm.

The Planned ION Station

The station will be located on the boulevard directly adjacent to Conestoga Mall and the existing GRT bus terminal. It will consist of two side platforms for northbound and southbound trains, with access to the platforms from the north and south ends of the station. It will act as a major transit interchange, connecting to iXpress routes and other local bus services which provide access to nearby employment and residential areas. The station will also serve as an access point to the ION system for residents within rural municipalities to the north.

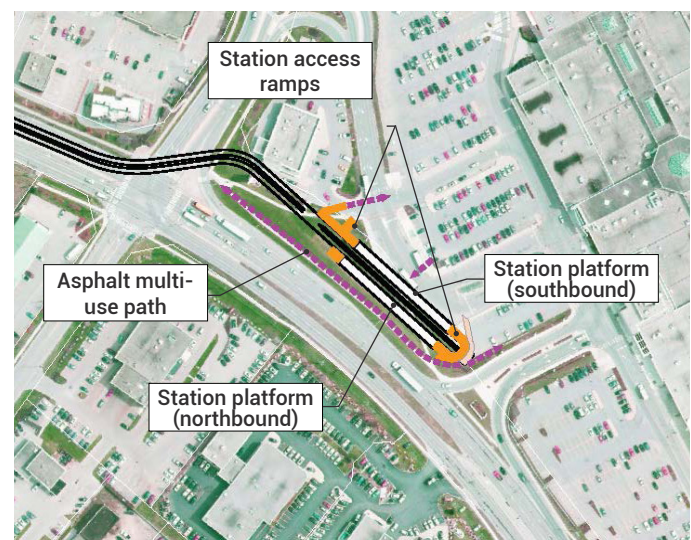


Figure 7-2. Conestoga ION station layout

Current Planning and Policy Framework

Certain lands within the station area are recognized as a node or corridor within Schedule A2 of the City's Official Plan. Immediately around the station, the Conestoga Mall property and abutting apartment lands are designated as a **Major Node**, while the lands along the east and west sides of King Street are designated as a **Major Corridor**. These lands are planned to accommodate a mix of medium to high-density uses. Sections of Northfield Drive that are situated farther east and west of King Street are recognized as a **Minor Corridor** and planned to support medium-density development. Most of the lands beyond Conestoga Mall and away from King Street and Northfield Drive are not designated as either a node or corridor.

The Official Plan anticipates a number of different land use activities within the station area. The **Conestoga Commercial Centre** is a special land use category that recognizes the Conestoga Mall as a key commercial node that can support a range of retail, service,

entertainment, office and residential uses. To the north of the mall is a small pocket of **Mixed-Use High Density Residential**, as well as predominantly **Low Density Residential** lands that encompass the Lincoln neighbourhood.

The surrounding commercial areas along King Street and Northfield Drive are designated as **Corridor Commercial** on Schedule A1 of the Official Plan. Permitted uses include auto-oriented retail activities related to wholesaling, bulk goods, construction materials, restaurants, offices and hotels. Large portions of the station area are designated **Employment** lands, with an emphasis on **Flexible Industrial** uses throughout the Colby Drive employment area and the Conestoga Triangle lands to the south. Some Employment lands abutting Northfield Drive and King Street are **Business Employment** lands, which allow for more contemporary office and business activities.

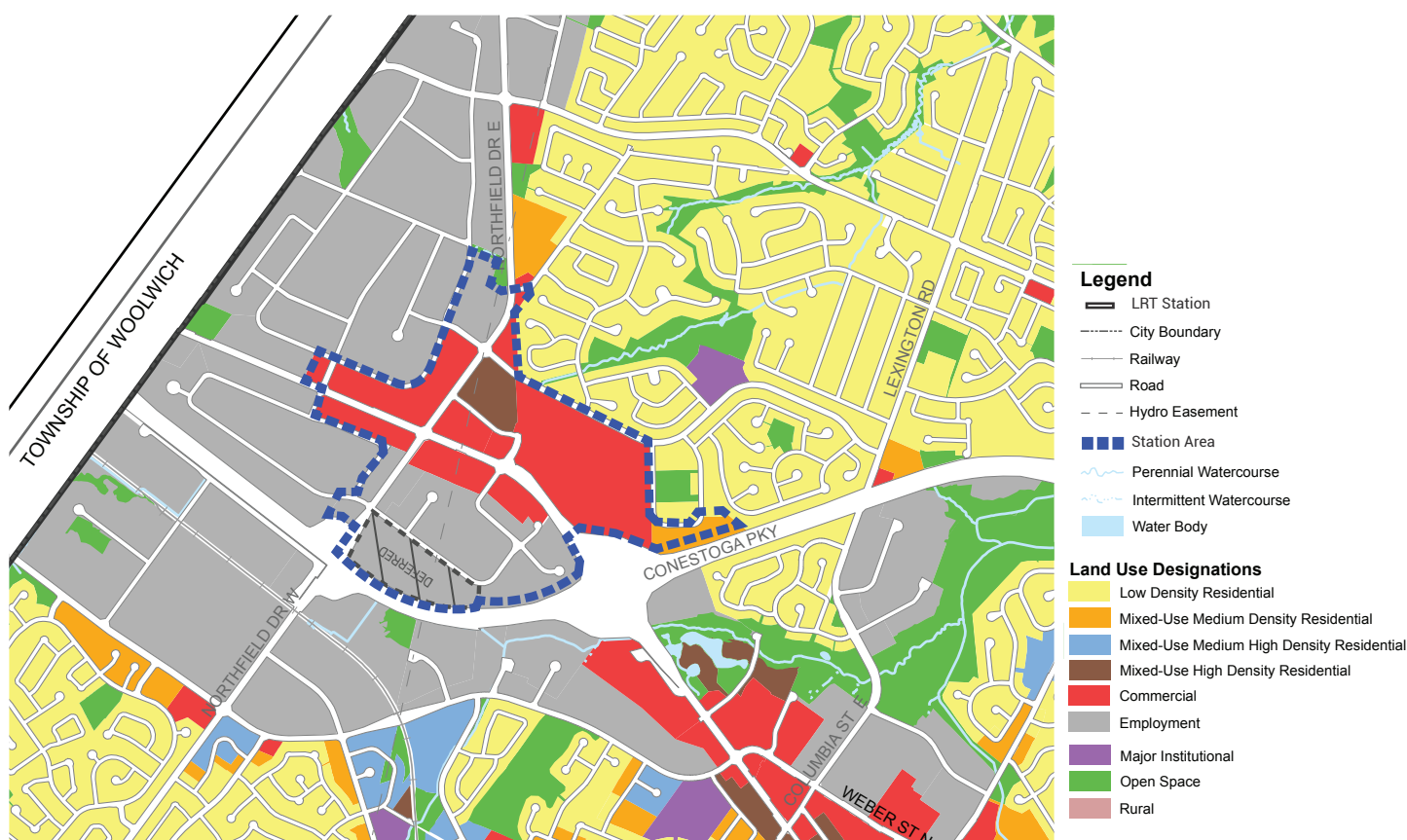


Figure 7-3. The City of Waterloo Land Use Plan

All of the designated Commercial lands around the station, including at Conestoga Mall and along the King Street and Northfield Drive corridors, are planned to accommodate **High Density** development, with heights of up to 81 metres (20 commercial storeys). The apartment lands to the north of the mall are also designated as **High Density**, with heights of up to 81 metres (25 residential storeys). All of the Employment lands within the area are planned to support **Medium Density Employment**, with heights of 27 metres (7 storeys). The Lincoln neighbourhood is intended to be a **Low Density** area, with a maximum height of 10 metres (3 storeys).

There are two Specific Policy Areas (SPAs) within the station area. **SPA 39** applies to the cluster of high-density residential buildings at 605 and 609 Davenport Road, and permits retail uses as part of a mixed-use building. **SPA 44** applies to the Corridor Commercial lands along King Street between Northfield Drive and University Avenue. SPA 44 anticipates that these lands will transition over time from auto-oriented commercial uses to high-density, transit-oriented places through the development of mixed-use buildings which could include residential uses.

Official Plan policies that would apply to the Kraus Carpets manufacturing facility east of the highway have been deferred, subject to a more comprehensive master planning exercise.

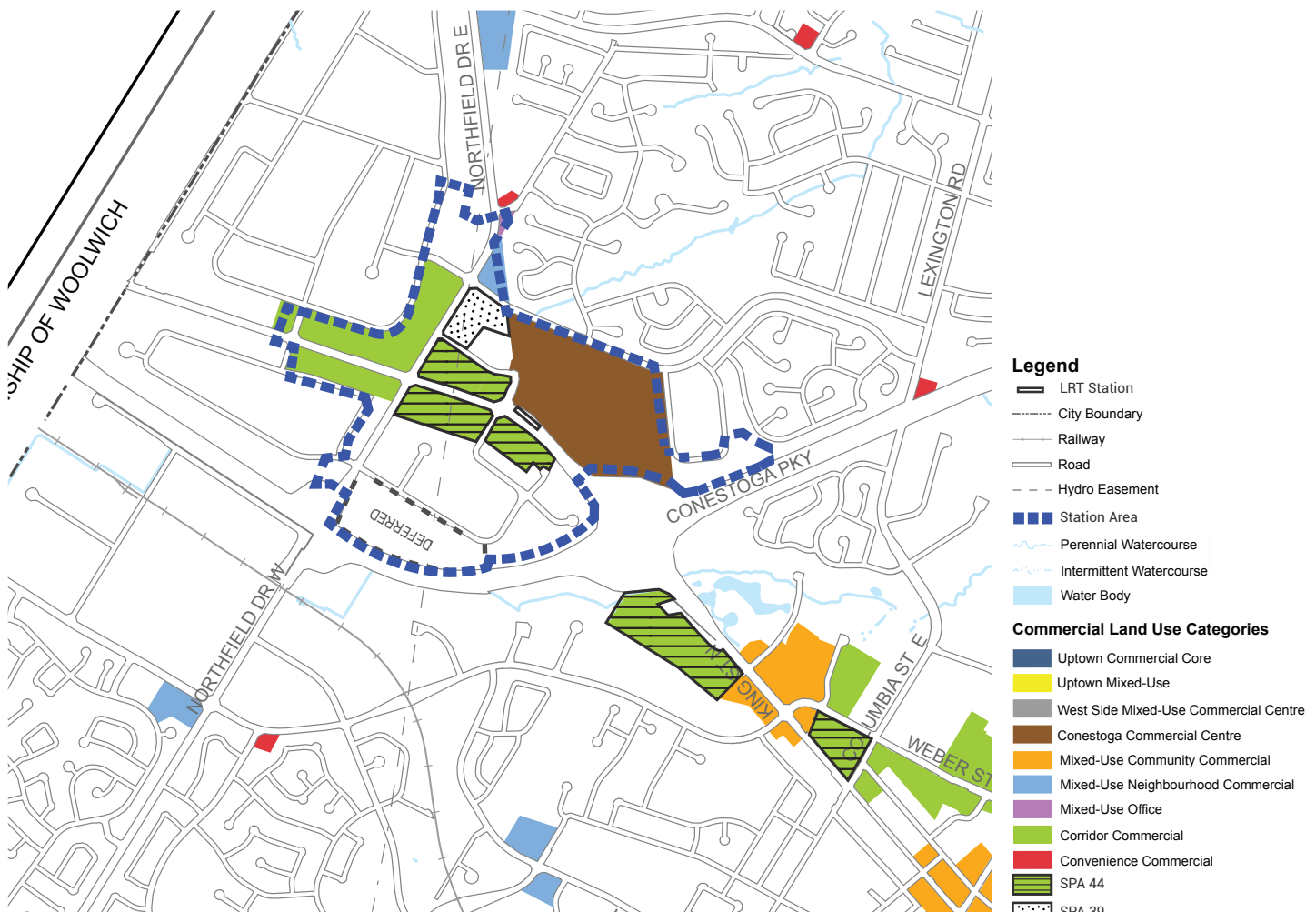


Figure 7-4. SPA 44 includes the Corridor Commercial lands along King Street that are planned to transition over time away from auto-oriented uses to more transit-supportive places.

7.2 Vision for the Station Area

The Conestoga station area will evolve over time into a more transit-oriented commercial and employment centre. **Conestoga Mall and the GRT bus terminal will be key destinations**, serving as an important transfer point to local and regional bus services. The long-term intensification of the mall with a mix of retail, commercial, office and residential uses will help support the **creation of an integrated activity node and transit hub at the station**. Future redevelopment along the King Street corridor will bring more transit-oriented uses and higher-densities to the area, helping to support activity throughout all hours of the day.

The area will benefit from **an improved and interconnected street network** that will strengthen connectivity and spread the benefit of the LRT. A finer grain street and block pattern will support travel for pedestrians, cyclists and drivers, and will establish new access points to the Lincoln neighbourhood and businesses. New streets will also help improve pedestrian and cycling linkages to and from the station, and provide alternative routes through the area for automobile users.

Enhancements to the public realm will help improve the experience for pedestrians, cyclists and transit users while also strengthening the image of the station area. **King Street has the potential to transform into a tree-lined boulevard** with enhanced sidewalks, improved landscaping, and consistent tree planting. The introduction of new public spaces, including an enhanced station plaza and a new open space, can help enhance amenity for transit users and local employees.

Investments in the active transportation network will help **create a setting that is more supportive of pedestrians and cyclists**. The introduction of additional cycling facilities and pedestrian walkways can improve access to surrounding employment areas and residential neighbourhoods. A new green connection extending from the mall, west along the hydro corridor and potentially connecting across the Conestoga Parkway towards Sugarbush Park and the Waterloo Trail is a key improvement that will create a more interconnected station area.

VISION STATEMENT

A VIBRANT AND CONNECTED MIXED-USE RETAIL DESTINATION

Conestoga Station will become a vibrant retail destination with a growing mix of uses, including residential, that will attract a greater number of visitors and support activity throughout the day and evening. As the terminus of the ION LRT line, it will serve as a major transit hub with connections to local and regional bus routes. The area will also function as an important employment node. Local businesses will benefit from improved transit accessibility and enhanced street connections, which in turn will help the area immediately around the station evolve into a higher-value employment node over time.

Big Moves

1

Support the emergence of mixed-use activity node at the station

The station will be located within a retail-focused setting beside Conestoga Mall and along the King Street corridor. The introduction of LRT creates an opportunity to transform the area around the station into a more vibrant, mixed-use, transit-oriented node. The introduction of a broader range of uses, including new residential uses within close proximity to the station, can support activity throughout all hours of the day.

2

Transform King Street as a walkable and transit-supportive gateway into the City

King Street is a key gateway into the City, and functions as an auto-oriented street with uses that are intended to support access for drivers, not for pedestrians or transit users. The potential exists to transform King Street into a more pedestrian-oriented place with improved streetscape and a greater mix of transit-supportive uses designed to support animation along the street.

3

Support the station area as an important intermodal hub

The ION station will be located adjacent to the GRT bus terminal situated within the Conestoga Mall parking lot. The success of the area as an intermodal transit hub will require improved connections between the LRT and bus services; an enhanced public realm to support higher levels of pedestrians and create a comfortable experience for passengers; and a network of high-quality pedestrian and cycling connections leading from the station to local businesses and destinations.

4

Unlock the reurbanization potential of the “Conestoga Triangle” by introducing a finer grained street network

LRT trains will operate on-street along Northfield Drive and King Street, which will result in left-turn restrictions for vehicles. The “Conestoga Triangle” lands located to the south of Northfield Drive, west of King Street and east of the highway, will become more difficult to access by car. There is the need for an improved street network through this area to maintain and support access to existing businesses, improve access for pedestrians arriving by transit, and facilitate higher-density development over time.

5

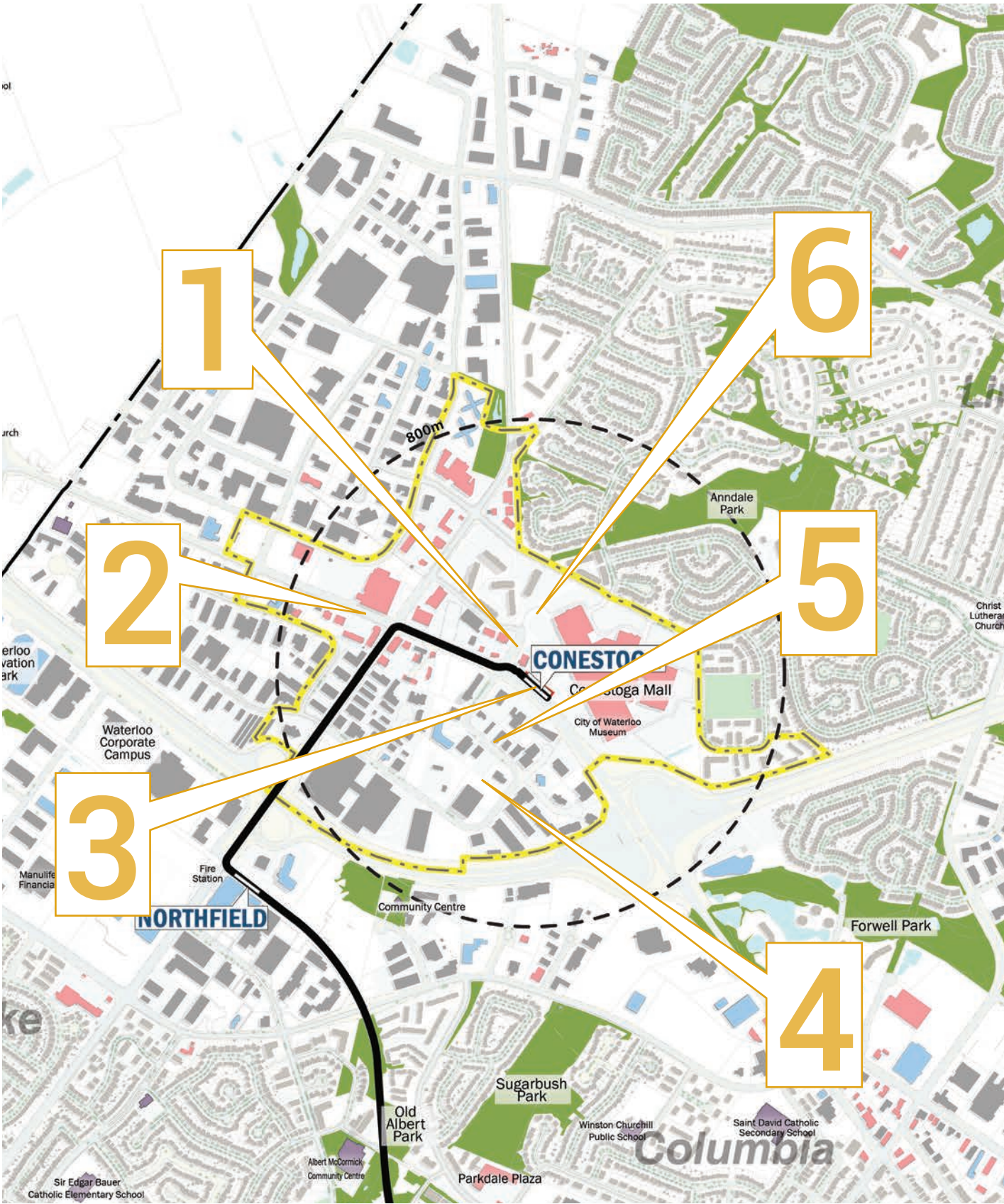
Support higher densities with new open spaces, trails and improved green spaces

While there are several parks within the Lincoln neighbourhood, the more immediate station area features few high-quality open spaces. As the area transforms over time, there is need to enhance and expand the public realm to support activity around the station. The introduction of a new central open space within the Conestoga Triangle would help to provide structure for new development and additional amenity for area employees.

6

Link surrounding neighbourhoods to the station and employment areas

The Lincoln neighbourhood is located at the eastern edge of the station area within a reasonable walk or bike ride to the station. Yet, access to the station is difficult, given the mall which sits in the way and a lack of streets or pedestrian connections. To help connect the neighbourhood to the station, improved pedestrian and cycling connections are needed. A key move will be the realignment and transformation of Conestogo Road as a key link between the community, station and Conestoga Triangle.



Legend

- Station Area
- LRT Station
- Estimated 10 minute walk from Station (800m)
- Residential
- Industrial
- Community/Academic
- Retail
- Commercial/Office

7.3. Local Mobility Strategy

The Conestoga station area has developed as an auto-oriented place, with wide streets and large areas of surface parking. Two Conestoga Parkway interchanges are located less than a kilometre away from the future LRT station. While the area is generally easy to access by car, the travel experience is more challenging for pedestrians, cyclists and transit users. A fragmented sidewalk network, high volumes of vehicular traffic along Northfield Drive and King Street, and a limited cycling and trail system creates an uncomfortable experience for pedestrians and cyclists.

A disconnected street network with few crossing points along King Street means that it is difficult to travel from the station to surrounding businesses. In addition, the Conestoga Mall property functions as a barrier between the Lincoln neighbourhood and the station.

Avenues

Indicates primary streets through the station area that are important transit corridors. Key considerations for Avenues are identified in Section 2.2.4.

Cycling Streets

Indicates streets intended to act as important cycling connections within the station area. Key considerations for Cycling Streets are identified in Section 2.2.4.

Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4.

Proposed Street Network

Illustrates the potential for the establishment of a finer grained street and block network over time.

Pedestrian and Cycling Connections

Indicates existing (solid) and proposed (dashed) off-street pedestrian and cycling connections within the station area.

The introduction of LRT presents an opportunity to transform the station area into a more accessible and interconnected place by enhancing the mobility experience for pedestrians, cyclists and transit users. To improve station access and support connections to nearby retail, employment and residential destinations, a finer grain street network is needed. The development of new streets over the long term can help to maintain and support access to existing businesses while improving travel for pedestrians and cyclists. Improvements to the existing sidewalk network, as well as new crossings along King Street, can support a more comfortable experience for pedestrians. To improve access through the Conestoga Mall site, there is the potential to work with the mall owners to establish more formal pedestrian links from the station, through the mall, and towards the Lincoln neighbourhood.

Signed Cycling Route

Indicates streets where the provision of signed cycling routes is appropriate to support cyclists along lower-traffic streets and local roadways.

Intersection Improvements

Indicates areas where improvements to the existing intersection could help to enhance access and safety for pedestrian and cyclists.

New Intersections

Indicates areas where the introduction of a new intersection requiring enhanced pedestrian crossings or traffic signal are recommended.

Pedestrian Transfer Zone

Indicates areas where improvements should be targeted to support a high number of transfers between pedestrians, cyclists and the transit network.

New Open Space Opportunity

Station Area Boundary

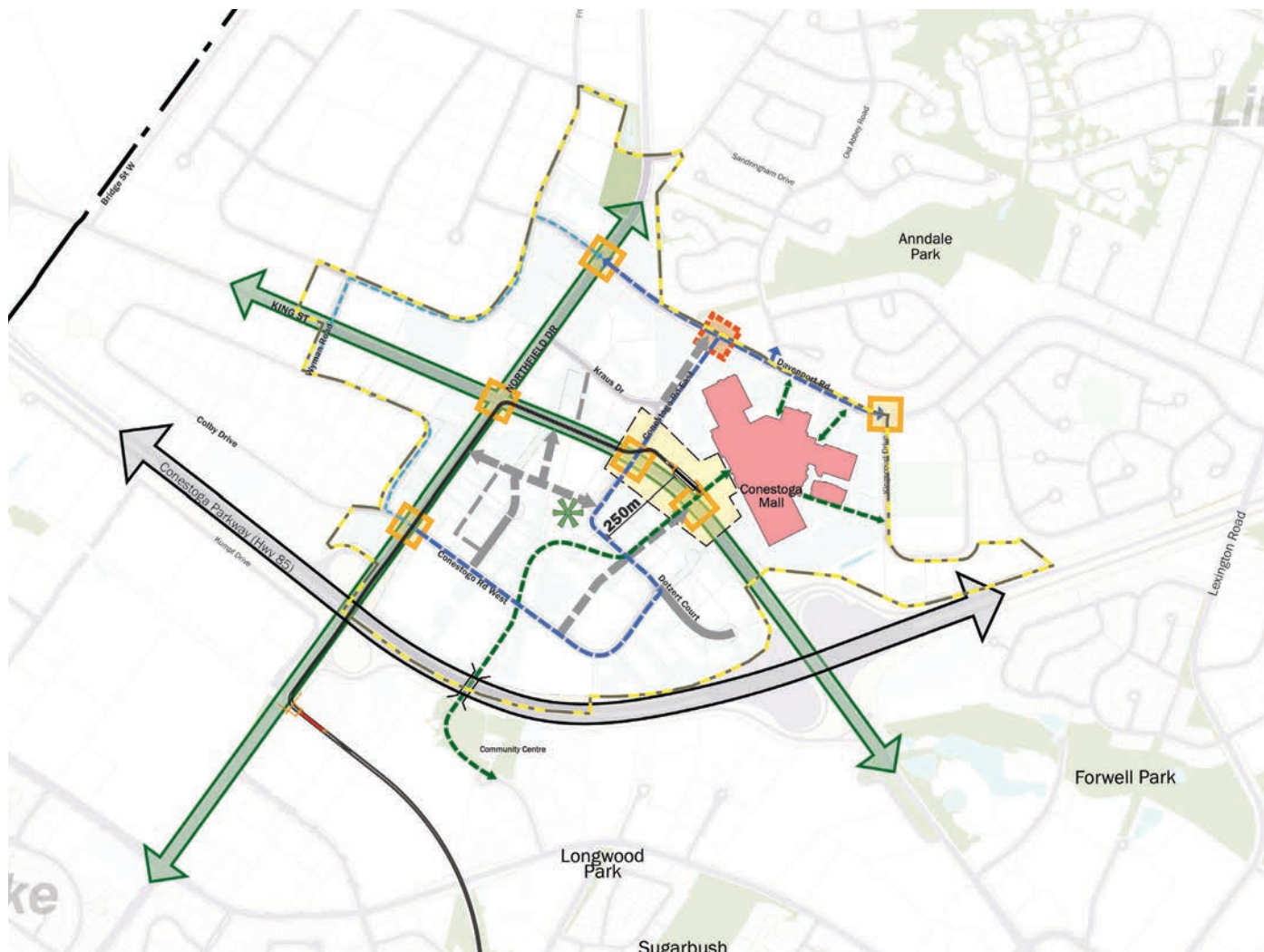
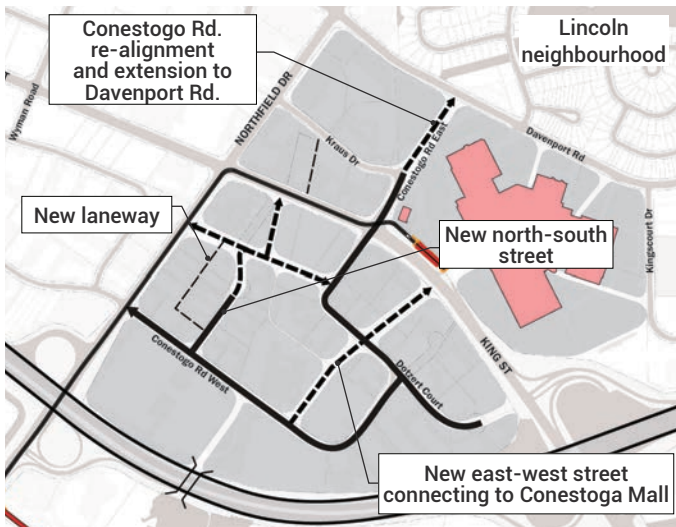


Figure 7-5. Mobility Framework

Key Directions

- 1 Create a finer grained and interconnected street grid pattern with smaller blocks to improve connectivity
- 2 Establish a Pedestrian Transfer Zone at the station to support bus transfers and improve access to surrounding destinations
- 3 Create defined pedestrian routes through the mall property to support connections to the Lincoln community
- 4 Enhance the cycling network to support access between the neighbourhood, employment areas and the station
- 5 Complete the sidewalk network to support pedestrian access to and from the station
- 6 Reconfigure bus routes and ensure frequent and direct service to improve connections to the LRT
- 7 Over the longer term, transition to more urban forms of development by reducing parking requirements and encouraging a shift towards structured parking

7.3.1 Create a finer grained and interconnected street grid pattern with smaller blocks to improve connectivity



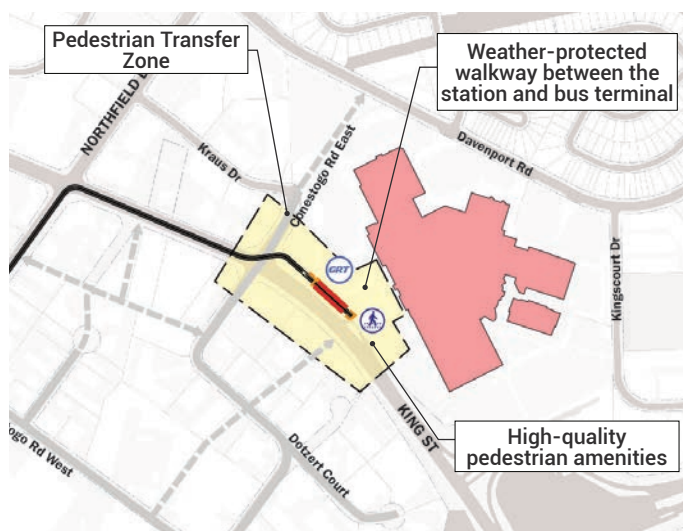
The station area is characterized by a limited street network. This creates challenges accessing nearby employment areas, retail uses or residential neighbourhoods. The Conestoga Mall property is large and acts as a barrier to east-west connectivity. Northfield Drive is the only direct street connection between Davenport Road and King Street, and it is located at the edge of the Lincoln neighbourhood. There are a lack of streets through the Conestoga Triangle block which restricts access to local businesses. This will be compounded by planned left turn restrictions as a result of the LRT. There is also a need to reconsider the design of existing driveways, many of which have been developed to serve individual properties rather than to function as part of a more shared network of accesses.

The **development of an interconnected street network over time** has the potential to support travel to and from the station and enhance access to destinations throughout the area. There are a number of opportunities to create a finer grain street network. An eastward extension of Conestogo Road from Kraus Drive to Davenport would help connect the Lincoln neighbourhood to the station. To the west of the station, the development of a more traditional grid network of streets over time with shared servicing would shorten walking distances from the station and support access to businesses with restricted access.

RECOMMENDED GUIDELINES AND STRATEGIES

- Extend Conestogo Road east from Kraus Drive to Davenport Road to improve access to the station for residents within the Lincoln neighbourhood and support intensification on lands north of the mall property.
- Introduce a new north-south street linking Northfield Drive to Conestogo Road by formalizing and extending the existing drive aisle that serves the retail uses immediately west of King Street. Explore the potential to extend Durward Place to connect with this new north-south street to improve access to businesses from the east.
- Develop a new east-west street from Conestogo Road east to the mall driveway to improve access between the Conestoga Triangle and the station.
- Establish a new lane to the east of Northfield Drive over time to support access to local businesses.
- Avoid the use of roundabouts which prioritize vehicular traffic and create longer walking distances for pedestrians.

7.3.2 Establish a Pedestrian Transfer Zone at the station to support transfers and improve access to surrounding destinations



Conestoga station will serve a key role within the transit network as a terminus station and as a key point of transfer to the GRT bus network. The station will be located adjacent to the Conestoga Mall bus terminal, which offers transfers to several local and regional bus routes. Despite the close proximity of the ION station and bus terminal, grade changes, large areas of surface parking, narrow sidewalks and limited pedestrian infrastructure impact negatively on the user experience. As LRT ridership grows over time, an increasing number of pedestrians will likely need to cross King Street to access nearby amenities and places of work. Current conditions along King Street, including high volumes of vehicular traffic, create an uncomfortable crossing experience for pedestrians.

There is an opportunity to **create more pedestrian and transit-supportive conditions around the station** by establishing a Pedestrian Transfer Zone. The Pedestrian Transfer Zone would capture the area with the greatest level of pedestrian activity. Improvements within the zone would support transfers between the LRT and bus services, while also improving the interface between the station, the bus terminal and King Street.

There is a need to create a comfortable transit user and pedestrian experience by **developing a generous and high-quality link between the station, the GRT terminal and the mall**. Wider sidewalks, enhanced pathways, improved crossings and clear signage will be important. There may also be an opportunity to remove some surface parking and reconfigure driving aisles immediately around the station and bus terminal to create a safer and more comfortable experience for pedestrians.

RECOMMENDED GUIDELINES AND STRATEGIES

- Incorporate a higher level of pedestrian amenity throughout the Pedestrian Transfer Zone, including pedestrian-oriented lighting, wayfinding signage and spacious walkways.
- Consider opportunities to remove parking immediately at the station and along key pedestrian routes to provide space for wider sidewalks and trees which create a more pedestrian-friendly environment.
- Expand existing sidewalks and pathways to ensure a minimum width of 2.1 m, with wider walkways at key pedestrian access points to support transfers.
- Support King Street crossings by ensuring the two adjacent intersections (one existing and one proposed) are designed with zebra crossings, pedestrian signals with countdown timers, and clear signage to inform motorists of the crossing point.
- Explore the potential to establish a weather-protected walkway to support pedestrians traveling between the station, the bus terminal and the mall.
- Consider a distinguishing pattern or streetscape treatment between the mall, the GRT terminal and the station to delineate the area with the greatest number of transfers and to enhance driver awareness.

7.3.3 Improve connections between the Lincoln community and the station



The Lincoln neighbourhood is located within the station area, but separated from the station by the Conestoga Mall. **The mall property is perceived as a physical barrier** that hinders access to the future ION station and the King Street corridor. A key challenge is that there are no direct routes through the mall property that connect the neighbourhood to King Street. In the absence of any through streets, the quickest way for Lincoln residents to get to the station will be to walk through the mall but this will not be possible during early mornings or late evenings when the mall is closed.

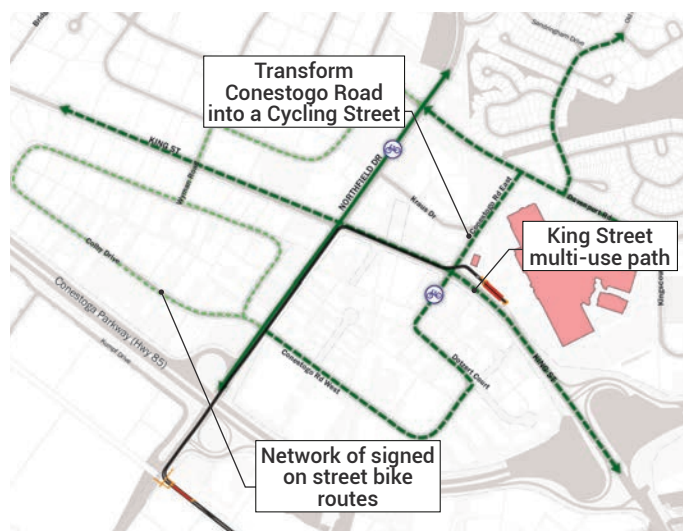
There is therefore a desire to facilitate comfortable and convenient pedestrian access from the Lincoln neighbourhood towards the station. In the short term, there is the potential to **work with the mall owners to improve connectivity between the Lincoln neighbourhood and ION station**. This should include strategies to improve off-peak access through the site. Public realm enhancements such as **improved wayfinding, new sidewalks and marked crossings** through areas of surface parking can further improve access between the neighbourhood and the station.

Over the longer term, depending upon the nature of the mall's growth and/or redevelopment, there may be the potential for the establishment of new direct streets through the site to improve connectivity.

RECOMMENDED GUIDELINES AND STRATEGIES

- Work with Ivanhoe Cambridge to explore opportunities to enhance pedestrian access and wayfinding through the mall property to make it easier to walk between the Lincoln neighbourhood and the station.
- Work with Ivanhoe Cambridge to explore potential strategies for improving off-peak access through the mall property.
- Improve existing intersections and introduce a new pedestrian priority crossing along Davenport Road to align with new sidewalk connections.
- Over the longer term, ensure that redevelopment of the mall creates a more permeable site, with new streets and walkways that support access to and from the station.

7.3.4 Enhance the cycling network to support access between the neighbourhood, employment areas and the station



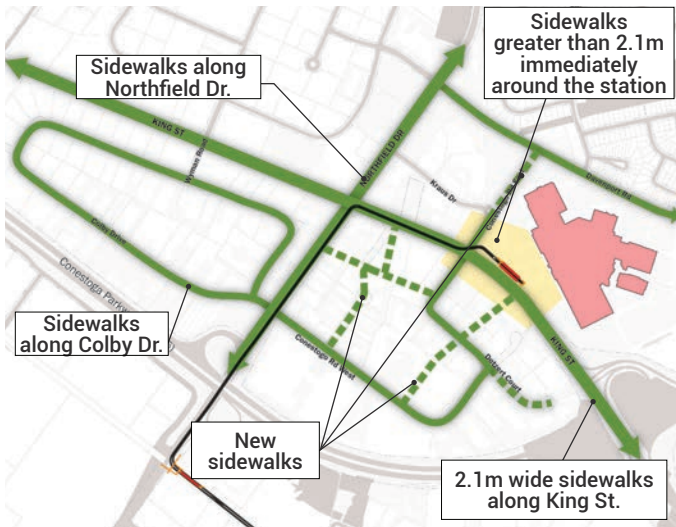
The surrounding area includes a number of employment uses along Colby Drive, as well as residential areas within the Lincoln neighbourhood. In many cases, these destinations are a 15 to 20 minute walk from the station, but only a short bike ride away. While cycling could play a more important role in supporting travel through the area, **the active transportation network within the station area is somewhat limited**, although the installation of new cycling lanes along Northfield Drive will help improve travel for cyclists.

To further enhance access to destinations that are beyond a comfortable walking distance from the station, there is an opportunity to **establish a more complete cycling network** that enhances travel options for workers and residents. The provision of cycling facilities along Conestogo Road, along with a future eastward extension of this street, offers the potential to create a continuous cycling link between the Conestoga Triangle employment area, the station, and the Lincoln neighbourhood. There is also an opportunity to **extend the recently implemented multi-use paths along King Street** to create a stronger north-south pedestrian and cycling spine through the station area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Proceed with the planned installation of cycling lanes on Northfield Drive.
- Develop Conestogo Road as a Cycling Street (see Section 2.4.12) and plan for its extension east to Davenport Road to make it easier to cycle from the Lincoln neighbourhood to the station and west to the Conestoga Triangle.
- Extend the recently installed multi-use path network north along King Street to connect areas north of Northfield Drive with the station.
- Explore the potential to extend the King Street multi-use path network north to the St. Jacobs Market over time.
- Support access to the Colby Drive employment district by introducing a signed cycling route along the street, and extend this signed route east from Wyman Road across King Street, and connecting with Northfield Drive to create a signed cycling circuit to and from the station.

7.3.5 Complete the sidewalk network to support pedestrian access to and from the station



Streets within the station area have historically developed with a focus on providing space for vehicles to move, with much less emphasis on pedestrian infrastructure. As a result, **the sidewalk network within the area is limited or incomplete.** Along most of Conestogo Road, a key connector to and from the station, there are no sidewalks. Similarly, there are no sidewalks along Colby Drive, which hinders pedestrian access to the Colby Drive employment node. Existing sidewalks along King Street are in some cases too narrow, and the sidewalk network ends abruptly near Conestogo Road and again just north of Northfield Drive.

With the introduction of LRT and the anticipated increase in the number of pedestrians, there is a need to **enhance the sidewalk network to support the area's transition to a more pedestrian-supportive place.** The planned reconstruction of Northfield Drive will provide a complete sidewalk network along both sides of the

street, which will improve pedestrian travel through the area. Sidewalks are also required along both sides of Conestogo Road to improve access to employment and retail uses. The sidewalk network along both sides of King Street should also be completed and extended northward towards Bridge Road, with the potential to have it integrated as part of a multi-use path. Consideration should also be given to ensuring that sidewalks immediately around the station are sufficiently wide to support a growing number of transit users getting off at the station.

RECOMMENDED GUIDELINES AND STRATEGIES

- Proceed with the planned reconstruction of Northfield Drive, and ensure that minimum 2.1m sidewalks are provided.
- Install sidewalks along both sides of Conestogo Road, with minimum widths of 1.8m to support pedestrian access to local businesses.
- Complete the sidewalk network along both sides of King Street, and ensure a minimum sidewalk width of 2.1m to support pedestrian travel to and from the station, with greater widths if combined with a multi-use path.
- Consider providing sidewalks greater than 2.1m immediately around the station to support the higher volumes of pedestrians within closest proximity to the station.

7.3.6 Reconfigure bus routes and ensure frequent and direct service to improve connections to the LRT



Figure 7-6. The GRT bus terminal at Conestoga Mall

The existing GRT bus terminal at Conestoga Mall is an important bus transfer hub, with seven local GRT buses and three regional iXpress routes connecting to the terminal. The iXpress routes that operate along Northfield Drive are planned to be reconfigured once the LRT is operational. A key local bus route through the station area is Route #14, which operates one-way through the employment areas north of Northfield Drive, and services both the Conestoga and Northfield station areas. While this route links employment areas along the north end of the City, it does not provide a connection to surrounding residential neighbourhoods. Routes #6 and #12 are two other important local routes that provide connections to the Lincoln neighbourhood.

With the introduction of LRT, there is an opportunity to **reconsider existing bus routes in the area to ensure that surrounding employment areas and neighbourhoods are well connected** and easily

accessible. More specifically, there is an opportunity to consider service enhancements to Route #14 to create a two-way transit connection into the Colby Drive employment area, with the potential to link this route to surrounding neighbourhoods. Service adjustments to Routes #6 and #12 should also be considered to ensure that residents in the Lincoln neighbourhood can quickly access the ION station, Conestoga Mall, and other surrounding destinations.

RECOMMENDED GUIDELINES AND STRATEGIES

- Undertake a review of local transit services to determine if adjustments to bus routes are needed to support access to the ION station, Conestoga Mall, surrounding employment areas and other destinations.
- Consider enhancing Route #14 to provide service in both directions, and coordinate its schedule to coincide with work commuting schedules.
- Consider whether Routes #6 and #12 can be improved through service enhancements or route adjustments which can enhance travel options for Lincoln residents.
- Where possible, coordinate local bus schedules with the LRT to facilitate transfers and help reduce waiting times for commuters.

7.3.7 Over the longer term, transition to more urban forms of development by reducing parking requirements and encouraging a shift towards structured parking

Over 20 hectares of land within the station area is used to provide approximately 6,300 surface parking spaces. Many of these large surface parking areas are located around the future ION station, with approximately 3,000 spaces at Conestoga Mall and several hundred more spaces that serve the retail properties and big box stores along King Street and Northfield Drive. The design and orientation of parking areas reinforces the auto-oriented character of the station area. While there are some medium-density residential clusters within the area, parking is still provided at grade and is often visible from the street.

With the introduction of LRT, the area has the potential to evolve into a more accessible and transit-oriented place. The combination of LRT with the GRT terminal will result in significantly expanded travel options for people not wishing to use their cars. While automobile use will continue to play an important role within the local mobility system, there is the potential to **reduce the need for parking and transition towards more sustainable modes of travel** over time.

There is a need to **shift surface parking away from the station** to support a greater number of transit users and encourage higher levels of pedestrian activity. Where parking is provided, it should be located to the rear of new development to avoid detracting from the public realm. Over the longer term, parking should be provided below grade or within structured parking decks. New parking facilities should also be designed and oriented to facilitate future street and path connections, which are needed to support higher densities and greater levels of pedestrian activity.

A reduction in parking rates around the station can prevent an oversupply of parking, reflect the area's high level of transit access, and help to support higher development densities. Consideration should be given to introducing maximum parking rates to help strategically manage the supply of parking and promote a shift towards higher levels of walking, cycling and transit use. To optimize use of the available supply, **opportunities for shared parking should be explored.**

The **implementation of transportation demand management (TDM) programs and strategies** can support the transition towards a more pedestrian-oriented station area. Given the mix of employment, retail and residential uses within the area, a range of TDM strategies are available. Potential opportunities include: partnerships between local businesses and TravelWise; employee transit pass incentives; bikeshare programs to link residents and workers to the station; and the integration of real-time next vehicle technology at the station, the bus terminal and within the Conestoga Mall.

RECOMMENDED GUIDELINES AND STRATEGIES

- Restrict new or replacement surface parking within 100m of the station.
- Restrict new parking between the face of a building and the street, and ensure that new parking facilities are oriented to support future street and path connections.
- Encourage shared parking between uses to optimize the use of the available supply.
- Over the long term, encourage parking to be provided within a structured deck or below grade to minimize the land area used for parking.
- Provide parking with structured decks or below grade to support future growth of Conestoga Mall. Mall parking should be located away from the station along the south or east sides of the property and placed where they will not preclude future connections leading to and from the station.
- Incorporate active uses at the ground level of new parking decks lining key pedestrian routes to help animate the public realm.



Figure 7-7. The use of parking structures with active uses at street level can help to meet parking demand while facilitating a more active station environment

7.4. Built Form and Land Use

The station area is a key retail node centred around Conestoga Mall, and also an important employment district, supporting a number of industrial, commercial and office activities. Surrounding apartment buildings add to the mixed-use character of the area.

While there are a variety of land uses within the station area, most of these activities are found within low-density, single-use buildings. Commercial and retail buildings are generally sited away from the street and not designed to support pedestrian access. In addition, large areas of land around the station are dedicated to surface parking, which limits pedestrian activity levels and reinforces the auto-oriented character of the area.

Existing Official Plan policies are generally supportive of higher-densities and a greater mix of uses around the station and along key streets. Yet, little intensification has taken place to date. An impediment may be that current zoning regulations are not reflective of the more flexible land uses anticipated in the Official Plan. With

the introduction of LRT, there is an opportunity to realign land use policies and regulations to encourage more transit-oriented development.

Over time, there is an opportunity to transition the area to a more transit-oriented and mixed-use place. Long-term redevelopment of Conestoga Mall would be instrumental to this change and should improve the interface between the mall, the station and King Street. Along King Street, Conestogo Road and other key streets within the area, buildings can be reoriented over time to address the public realm and support increased activity. While residential uses are already permitted or anticipated within most of the lands immediately around the station, strengthening these residential permissions can help support redevelopment. A transition away from single-use buildings to higher density, mixed-use development will help to reinforce the retail and employment function of the area, while also helping to enhance vitality and support transit ridership.

Office Mixed-Use

Indicates areas that will become predominantly office employment in nature, and where a mix of supportive uses within buildings, such as retail or restaurant, will be encouraged to support local employees.

Office Mixed-Use Core

Indicates the lands within approximately 250m of the station and along higher order transit corridors where the highest intensity and mix of uses will be located, including office, supporting commercial/retail amenities, and consideration for new residential.

Commercial Mixed-Use

Indicates areas that will be predominantly commercial in nature but where a mix of uses within buildings or on the block will be encouraged, including office and upper level residential uses.

Corridor Commercial

Indicates commercial areas that will continue to cater to auto users, but where new development will help to frame the street and support walk-on access.

Open Space



New Open Space Opportunity

Residential

Indicates areas of low to medium-density residential development.

Conestoga Commercial Centre

Indicates the Conestoga Mall lands which have a broad range of retail, office and residential permissions.

Residential Mixed-Use

Indicates medium-high to high-density residential areas where some street-related retail or active at-grade uses are permitted at the base of a building to improve amenity for local residents.

Convertible Frontage

Indicates areas which are planned and designed to accommodate mixed commercial, retail, and community/institutional uses at grade, at such time as these uses may be supported.

Active Frontage

Indicates areas where the ground floor is required to accommodate non-residential uses, including commercial, retail and community uses at grade that are designed to animate and activate the street.

Station Area Boundary

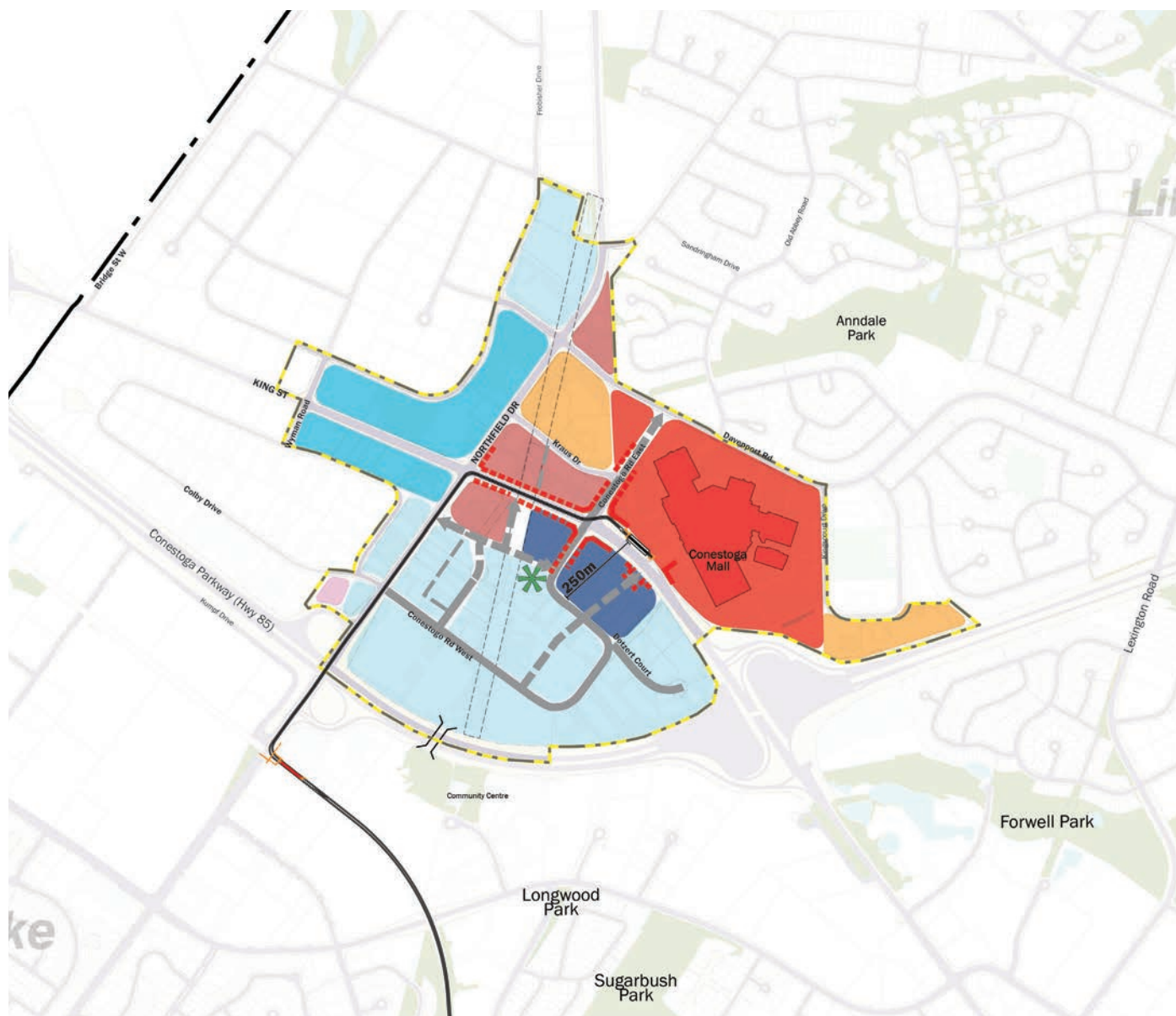


Figure 7-8. Land Use Framework

Key Directions

- 1 Support the continued intensification of Conestoga Mall to create a higher-density and more transit-oriented place
- 2 Plan for a greater mix of uses immediately around the station, including residential uses within 250 metres of the station
- 3 Encourage buildings that actively address the street with uses at grade along King Street
- 4 Transform Conestoga Road as a key link through the area with street-related uses and more transit-oriented development
- 5 Encourage employment growth within the station area

7.4.1 Support the continued intensification of Conestoga Mall to create a higher-density and more transit-oriented place



Figure 7-9. The design of the Rouse Hill retail centre in Sydney, Australia is organized around a key connection leading to and from the station.

The Conestoga station area currently functions as a major regional commercial centre, anchored by the 680,000 square foot Conestoga Mall. The mall is an important regional destination with the potential to drive significant transit ridership. There is an opportunity to improve the design and configuration of the mall in the long-term to strengthen its relationship to King Street and support travel through the property for pedestrians and transit users.

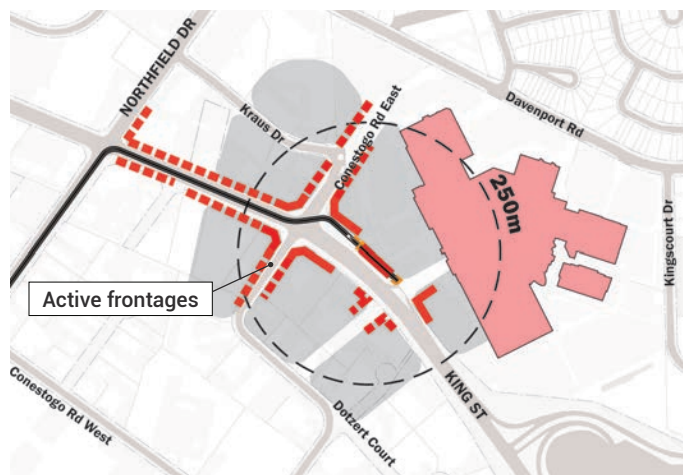
Today, approximately 23% of mall visitors arrive by transit, a figure that has the potential to increase once the LRT is operational. To support increased transit use and pedestrian traffic, careful consideration should be given to the area's transition to a more urban environment, recognizing that many existing land uses will and should exist in the long term. Permissions for a broad range of uses in this area, including residential, already exist. The Conestoga Mall's close proximity to the LRT station presents a **significant opportunity for infill development or redevelopment** that introduces higher densities and a greater mix of uses. Such redevelopment initiatives have the potential to generate more activity around the station, enhance the relationship between the mall with the station, and provide transit users with a more direct connection to the shopping centre.

This development **would require new ways of accommodating parking**, including within structures, to the rear of the mall, or integrated with new development.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Explore opportunities to redevelop Conestoga Mall into a more urban shopping centre in the long term, with higher-density mixed-use development that could include new residential uses.
- b. Design and organize new development or redevelopment to support a network of interior or exterior connections leading to and from the station area.
- c. Prioritize development between the mall and King Street and along the proposed realignment of Conestogo Road that can help to link the mall and the station and support higher levels of activity at the station.
- d. Explore the potential to integrate the GRT terminal and the station within new development to create a seamless connection between the station and mall.
- e. Encourage the use of retail liners on mall extensions adjacent to the station and along Conestogo Road to increase activity levels around the station and GRT terminal.
- f. Shift toward structured or underground parking in the long term, and locate new parking away from King Street.

7.4.2 Plan for a greater mix of uses immediately around the station, including residential uses within 250 metres of the station



The area around the station features **a number of low-density commercial and industrial properties** that are surrounded by large surface parking lots. This existing character is not supportive of walk-on traffic or pedestrian access, and it hinders activity levels around the LRT station. At the same time, the station is in close proximity to medium-density apartments along King Street and north of the mall, as well as the surrounding residential neighbourhood of Lincoln.

There is the potential to **introduce more transit-oriented uses and higher densities around the station to help create a vibrant activity node** throughout all hours of the day. The Conestoga Mall is a key opportunity site, with existing permissions for a range of retail, commercial and office uses. Additional opportunities for mixed-use redevelopment exist within the Corridor Commercial lands abutting King Street between Northfield Drive and Bauer Place. These lands are anticipated to transition over time with higher-density, transit-supportive uses, including residential uses that are integrated into mixed-use buildings. The existing apartment cluster immediately north of the mall, as well as a future extension of Conestogo Road, also have potential to accommodate new residential uses that can enhance activity around the station and help to better define the surrounding street network.

While most of the lands within close proximity of the station already planned to accommodate residential development, there is an opportunity to **extend these permissions so that all lands within 250 metres of the station have the potential to redevelop with residential**

uses. New residential uses on lands that are currently designated Employment would need to be strategically introduced as part of an employment-focused development, and would need to ensure compatibility with existing and planned employment activities.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Encourage a greater mix of uses, including residential uses as part of mixed-use developments, on the Conestoga Mall site and along King Street between Northfield Drive and Bauer Place.
- b. Concentrate the highest densities and greatest mix of uses within 250 metres of the ION station.
- c. Prohibit new auto-oriented uses within 400m of the station to support the shift towards more transit-oriented development.
- d. Support activity levels along the street and at the station by ensuring that new development provides active uses at grade.
- e. Through a forthcoming Municipal Comprehensive Review, explore opportunities for allowing limited residential development at strategic locations.
 - i) Priority will be given to lands within 250 metres of the station and where residential is:
 - a component of a mixed-use building or development with a substantial employment component; and
 - oriented to front onto the station and/or have direct access from active or convertible frontage areas.
 - ii) The City may also consider allowing for limited residential development at other strategic locations that are within 250 to 400 metres of the station where residential is:
 - a component of a mixed-use building or development with a substantial employment component;
 - oriented to front onto and/or have direct access to higher order transit service.
- f. Consider designating certain Employment lands as Class 4 areas to provide flexibility for more noise-sensitive residential uses to be located near existing industrial or commercial uses (refer to NPC-300 Guidelines).

7.4.3 Encourage buildings that actively address the street with uses at grade along King Street



Figure 7-10. Large format retail uses with residential above help to actively address the street (Vancouver, BC).

Buildings within the station area generally exhibit **large setbacks, surface parking areas and sites designed primarily to facilitate car access**. While industrial and large-format retail uses will continue to exist within the station area, opportunities exist to frame key streets and pathways with new buildings and uses that actively address the street and public realm to improve access for pedestrians and transit users.

The policies of **SPA 44 already anticipate the transition towards more transit-oriented uses and building forms** on the Corridor Commercial lands along King Street and south of Northfield Drive. The arrival of LRT serves as an impetus to move forward with this transformation. It will be important to ensure that the development of new commercial uses and mixed-use buildings along King Street helps **create a more pedestrian and transit-oriented character along the street**. There is also an opportunity to promote high-quality design for commercial, industrial or office developments within high visibility areas, such as along King Street north of Northfield Drive.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Concentrate active commercial uses, services, and other amenities at ground level where they should be oriented to activate the street.
- b. Establish a consistent building setback to facilitate a curb to building face distance of 8m, sufficient for a generous pedestrian and cycling boulevard with street trees.
- c. Design the ground floor of buildings to be located flush with the street and incorporate extensive use of transparent glazing and doors to street level uses to promote street life and provide visual interest for pedestrians.
- d. Relocate parking to the rear of buildings and reduce its visibility from pedestrian routes.
- e. Consider reducing parking supply requirements for street-oriented, mixed-use buildings.
- f. Discourage single-use access drives in exchange for shared access and servicing routes that serve multiple developments.
- g. Encourage compliance with Chapter 2, Section 2.4.3 to ensure that the design of buildings supports pedestrian comfort and increase street level activity.



Figure 7-11. To create a comfortable pedestrian environment along Cambie Street in Vancouver, new retail development establishes a consistent 8m setback which creates space for street tree planting and spill-out activities, and buffers pedestrians from the street.

7.4.4 Transform Conestogo Road as an important link through the area with street-related uses and more transit-oriented development



Figure 7-12. Conestogo Road has the potential to be transformed into a more intimate, pedestrian oriented environment that distinguishes it from King Street. (Portland, OR)

Conestogo Road is an important street located immediately north of the ION station. While the road today is configured primarily as an access drive to the mall, **an opportunity exists to re-imagine the street as a more pedestrian and cycling supportive main street through the area that provides a counter to the much wider and busier King Street Corridor.** The realignment and extension of the street east to Davenport Road (See Key Direction 7.3.1) would establish a direct link between the Lincoln neighbourhood, ION station, King Street and the Conestoga Triangle employment area. In this condition it would form the primary public link between the four defining elements of the station area.

To support the transformation of Conestogo Road into a more active and complete street, there is a need to encourage transit-oriented buildings and uses. The development of compact, mixed-use buildings can help **establish a vibrant, pedestrian-oriented gateway to and from the station**, with the street serving as a focal point for new residential and retail development immediately around the station.

RECOMMENDED GUIDELINES AND STRATEGIES

- a. Support the transformation of Conestogo Road into a pedestrian-oriented and mixed-use destination.
- b. Establish a consistent building setback to facilitate a curb-to-building face distance of 5m capable of accommodating a row of street trees and generous sidewalks.
- c. Provide active uses at grade, integrate high levels of transparent glazing, and incorporate other building design best practices, as identified in Section 2.4.3 to support a more pedestrian friendly environment.
- d. Plan for new street-oriented uses and high-density development, including new residential, along a potential future eastward extension of Conestogo Road to Davenport Road.
- e. In areas where grade differences do not allow for the provision of active frontages, require new developments to put forward building design and site plan strategies that address grading challenges and support street-related active uses in the longer term.
- f. Ensure that redevelopment of the street supports the creation of new cycling facilities (see Key Direction 7.5.2)

7.4.5 Encourage employment growth within the station area



Figure 7-13. Stable employment areas on Colby Drive

Much of the Conestoga station area **will continue to serve as an important industrial and employment node over the long term**. The employment lands around Colby Drive are highly stable and relatively dense, whereas the Conestoga Triangle employment area immediately west of the station presents opportunities for intensification and the introduction of a greater but complementary mix of uses.

As the station area evolves, these valuable employment lands should be protected. At the same time, there are opportunities to **encourage a shift toward more transit-oriented and higher-density employment uses**. As redevelopment occurs, it should contribute toward the establishment of a consistent and legible street and block pattern that enhances access to the employment uses and supports active transportation. Over time, the introduction of higher-density office and employment uses should be encouraged in the Conestoga Triangle along with a mix of amenities for workers. There may also be the potential to introduce limited residential uses within

250 metres of the station, to support transit ridership and **create a more vibrant and active employment node** (see Key Direction 7.4.2). Highly visible areas such as along King Street, Northfield Drive, Conestoga Parkway, and Conestogo Road present opportunities to introduce high-quality building and landscape design to enhance the profile of the area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Maintain the role of the Colby Drive area as a stable employment district, and encourage the introduction of intensified employment uses along its edges.
- Within the Conestoga Triangle, encourage the redevelopment of light industrial and low-density uses over time with higher-density office and employment uses that generate demand for transit services.
- Strategically introduce commercial uses and services within the Conestoga Triangle to provide amenities for workers, and complement the mixed-use commercial character of the mall. This could be achieved by applying the Office Mixed-Use Core designation on the west side of King Street.
- Encourage high-quality design for any new development or redevelopment along King Street, Northfield Drive, and Conestogo Road to improve the setting for new office uses.
- Ensure that any new development or redevelopment contributes toward the establishment of the planned street and pathway network that supports access to area businesses.

7.5. Public Realm Plan

The station area can be characterized as highly auto-oriented. This has come at the expense of creating a comfortable public realm for pedestrians, transit users or cyclists. The prevalence of low-density, large-format retail and industrial uses has resulted in a high degree of hardscaping, surface parking and pavement. There is limited landscaping or tree planting within the area, which impacts negatively on the character of the station area. The area is characterized by an inconsistent street design with varying sidewalk widths and fragmented sidewalks and cycling networks. Existing park spaces are generally located outside of the station area and disconnected from nearby employment areas or commercial destinations.

The LRT will help to encourage a shift toward greater levels of walking, cycling and transit use. With this shift, there is the need to improve the public realm across the station area to support placemaking and enhance amenity for employees, residents and visitors. King

Street is a key gateway into the City and important connection to the station, and it has the potential to transform into a greener and more attractive corridor. Investments to surrounding cycling and trail network, including a new, continuous green link between Anndale Park and Sugarbush Park, will help to connect disparate open spaces throughout the area, while also supporting connections to adjacent station areas. To enhance amenity and support intensification around the station, there is an opportunity to introduce a new public open space within the Conestoga Triangle that helps frame future retail, office and residential uses, and offers a place for people to sit, recreate and socialize. A comprehensive tree planting program can help to enhance the character of the station area as a higher-value retail and employment destination.

The following section outlines a series of directions to improve the public realm throughout the station area.



Avenues

Indicates primary streets through the station area that are also important transit corridors. Key considerations for Avenues are identified in Section 2.2.4



Cycling Streets

Indicates streets intended to also act as important cycling connections within the station area. Key considerations for Cycling Streets are identified in Section 2.2.4



Standard Streets

Indicates typical streets within the station area. Key considerations for Standard Streets are identified in Section 2.2.4



Proposed Street Network

Illustrates the potential for the establishment of a finer grained street and block network over time.



Station-Related Plaza Space

Indicates an area immediately around the station that could benefit from high-quality hardscaped plaza space geared to support pedestrian movement.



New Open Space Opportunity

Indicates the general location of a proposed new open space within 250m of the station to act as a focal point for new mixed use development.



Pedestrian/Cycling Connections

Indicates proposed pedestrian and cycling connections that are intended to support access through the area.



Existing Open Space



Station Area Boundary

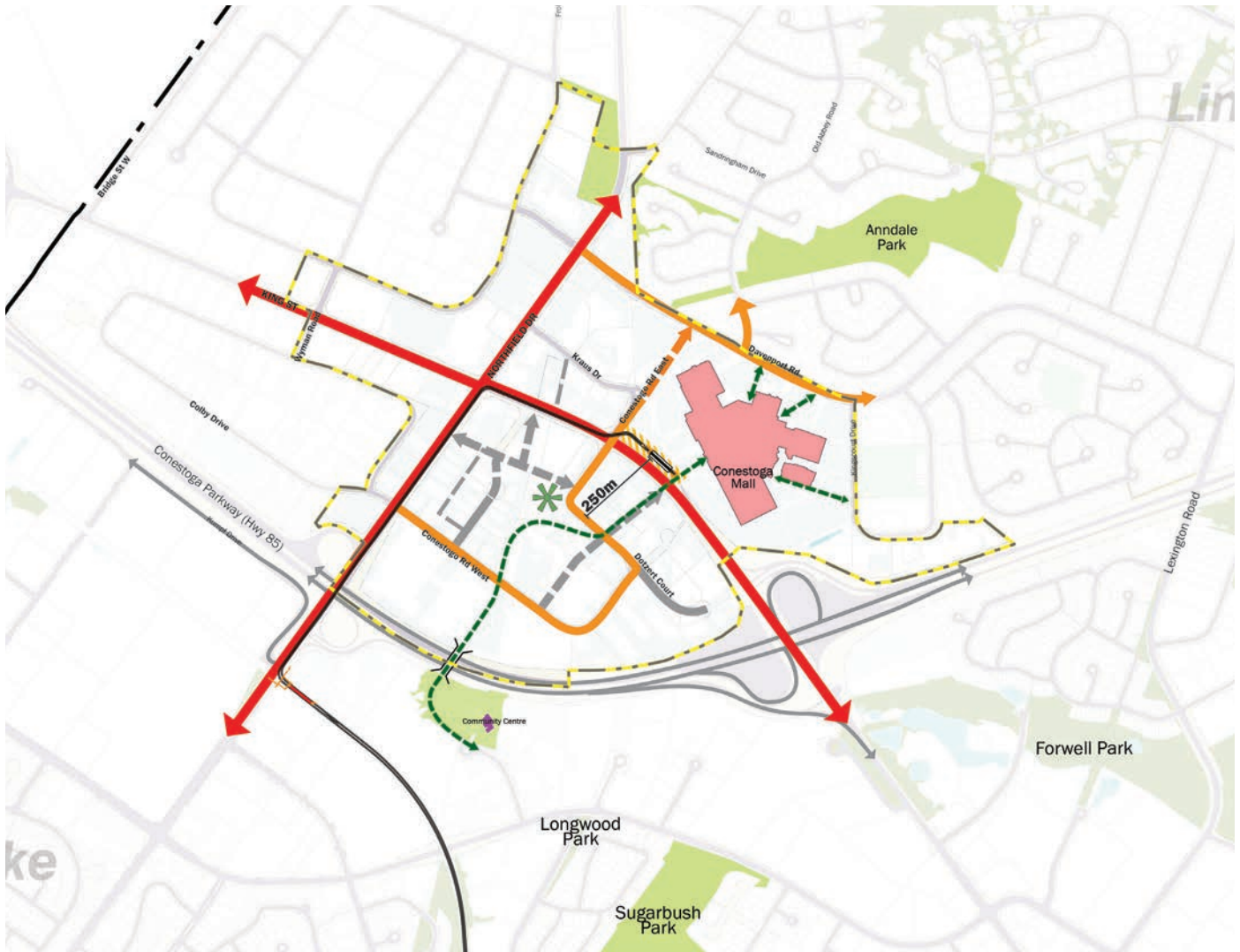


Figure 7-14. Public Realm Framework

Key Directions

- 1 Establish a signature open space within the Conestoga Triangle while encouraging other smaller-scale public spaces throughout the area
- 2 Establish an Anndale Park to Sugarbush Park green connection via a redefined Conestoga Road and hydro corridor
- 3 Create a gateway experience along King Street through public realm improvements and wayfinding
- 4 Advance a more robust urban tree canopy to enhance the setting for workers and businesses

7.5.1 Establish a signature open space within the Conestoga Triangle while encouraging other smaller-scale public spaces throughout the area



Figure 7-15. A new open space can create amenity and address for higher-value employment, residential and retail uses (Potters Field, London)

There are several parks and green spaces within the area, although they are located away from the station and within the Lincoln neighbourhood. The lands immediately around the station and within the Conestoga Triangle employment district feature minimal public or recreational amenity. Over time, as the area evolves with a greater mix of uses and higher-value employment activities, there is an opportunity to enhance the quality of place by introducing new open space amenities around the station.

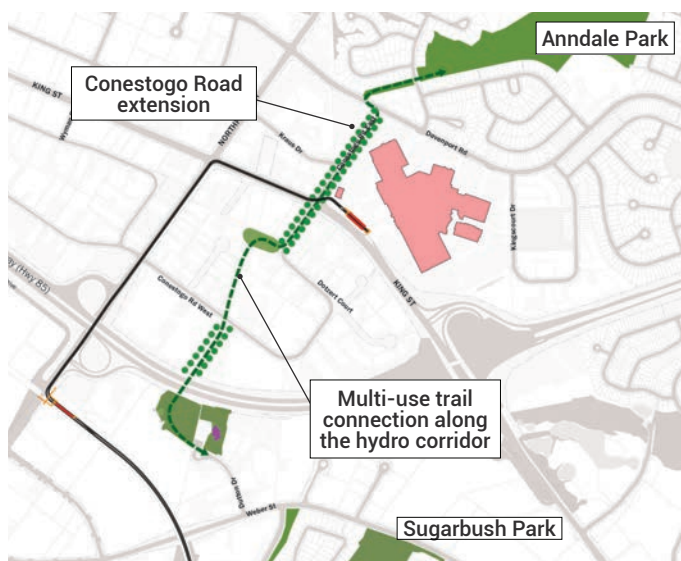
Future redevelopment around the station can be leveraged to **establish a signature open space within the Conestoga Triangle** that can enhance amenity for workers and residents of the area. This open space should be located and designed to act as a buffer between the more traditional employment activities located internally within the block and future mixed-use development along King Street and closer to the station. This new space can be integrated with the existing hydro corridor and proposed green connection through the area (see Key Direction 7.5.2).

There are also opportunities to **work with developers and property owners to secure new privately-owned publicly accessible spaces (POPs)** throughout the station area as redevelopment occurs to provide amenity and enhance the character of the station area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Work with local landowners and developers to establish a signature public open space within the Conestoga Triangle to help frame redevelopment and provide amenity for workers and residents.
- Ensure that the new open space provides both hard and soft landscaping, including space for passive recreational uses and new pedestrian pathways that facilitate linkages to surrounding businesses, amenities and streets.
- Explore opportunities to integrate the existing hydro corridor into the design of the park to optimize use of the right-of-way lands.
- Consider incorporating a central feature within the space, such as a public art element, to support placemaking.
- Encourage active uses to develop around this open space, allowing for spill-out activities that help animate the space.
- Work with developers to secure additional private or public open spaces as part of the development approvals process.

7.5.2 Establish an Anndale Park to Sugarbush Park green connection via a redefined Conestogo Road and/or hydro corridor



The trail network within the station area is very limited, which hinders connectivity through the area and restricts opportunities for recreational travel. The station area does not connect to surrounding trails or parks, including Sugarbush Park and the Waterloop Trail to the south of the Conestogo Parkway. There is an opportunity to establish a more interconnected system of trails and paths to enhance travel for residents, workers and visitors in the area.

An opportunity exists to **create a new green connection between Anndale Park and Sugarbush Park that extends along Conestogo Road and the hydro corridor**. This new route would function as a link between the Lincoln neighbourhood, the ION station, nearby employment uses, and surrounding parks. In the near-term, this connection could be implemented along the existing Conestogo Road and the hydro corridor. Over the longer-term, the green trail connection could continue along a future eastward extension of Conestogo Road to link directly with Davenport Road and the Lincoln neighbourhood.

A new Anndale-Sugarbush greenway has the potential to provide significant recreational amenity to surrounding residents, while also strengthening the relationship with open space assets beyond the station area.

RECOMMENDED GUIDELINES AND STRATEGIES

- Plan for a new green connection extending from Anndale Park to Sugarbush Park.
- Establish a strong pedestrian and cycling connection between the Lincoln neighbourhood and the station by extending Conestogo Road and introducing a multi-use trail along the street.
- Consider establishing a new pedestrian/cycling bridge over Conestogo Parkway to support connections across the highway towards Sugarbush Park.
- Incorporate branding and wayfinding initiatives into the design of the trail to enhance its visibility and character.
- Achieve a consistent green connection with ample trees and other plantings.

7.5.3 Create a gateway experience along King Street through public realm improvements and wayfinding



King Street is an important Regional corridor and a gateway into the city from St. Jacobs and other municipalities to the north. The northern end of King Street has evolved as a corridor that primarily supports vehicular traffic, with less emphasis on public realm investments that enhance the experience for pedestrians and cyclists. The introduction of an LRT station along King Street will reinforce the street as a key gateway into the city that has potential to carry significant pedestrian and cycling traffic.

To support King Street's transformation into a more transit-oriented place, there is a need to **establish a more balanced and pedestrian-scaled street design** that promotes comfortable access to and from the station for non-automobile users. Consideration should be given to extending the recent streetscape improvements at the southern end of King Street north to the city limits. This would help **create a consistent street design and identity along the length of the corridor** to establish a clear visual connection between the station and important destinations such as Uptown Waterloo. While King Street will continue to carry significant vehicle traffic, design features such as street trees and wider sidewalks can help to mitigate the impacts of traffic on the pedestrian realm.

RECOMMENDED GUIDELINES AND STRATEGIES

- Transform King Street into a green gateway with wider sidewalks, generous tree-lined boulevards, and bike facilities on both sides of the street.
- Consider extending the streetscape improvements along the southern end of King Street to create a consistent identity and design character for the street.
- Provide safe, attractive and highly visible pedestrian crossing points at all intersections along King Street.
- Orient parking away from the street to enhance the visual character of the street and encourage more active and walkable spaces.

7.5.4 Initiate a program of tree planting and street greening to enhance the image of the area

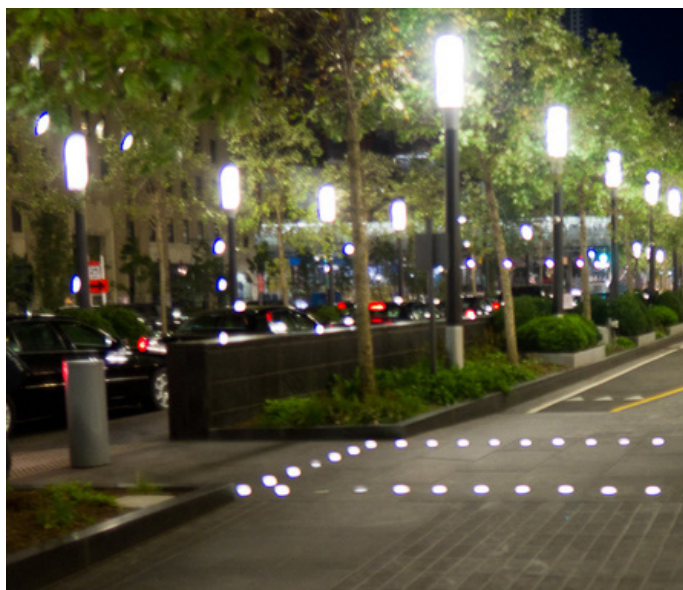


Figure 7-16. A consistent approach to street tree planting can help to enhance the image of an area even when there are areas of surface parking. (Hudson River Greenway, NY)

The station area serves as a gateway into the City and as a terminus station for the ION corridor. Yet, **the area is perceived as a place that is not inviting to pedestrians and lacking in landscaping** that can enhance its aesthetic quality. The prevalence of auto-oriented industrial and commercial uses has led to a high degree of hardscaping, with surface parking and wide drive aisles situated along the street edge. There is the potential to soften the image of the area through a renewed focus on tree planting and landscaping across the station area.

The implementation of **a tree planting and street greening strategy can help to enhance and unify the image of the area**, while also supporting a transition to higher-value uses over time. As redevelopment occurs, there will be opportunities to secure a consistent row of trees along new and existing streets, and break up large areas of surface parking with new landscaping. **Intensification of the mall lands in the long term also presents an opportunity to green the site with new landscaping.** Planting can be used strategically to help define and highlight new pedestrian and cycling connections, specifically those leading to and from Conestoga Mall entrances to minimize vehicle conflicts.

RECOMMENDED GUIDELINES AND STRATEGIES

- Establish a consistent street cross section reflective of the street typologies Section 2.2.4 to be implemented over time for existing and new street connections throughout the area.
- Enhance the image of the area with more generous planting, and use tree plantings to emphasize key pedestrian paths to and from the station and through the site.
- Strategically use planting and landscaping to mitigate the visual impact of any surface parking areas.
- Prioritize improvements to primary streets within the station area, including Conestogo Road and Colby Drive.
- Consider introducing tree canopy targets to support investments in tree plantings and enhance the setting of the area.

7.6. Economic Development

The Conestoga station area is an important retail and employment destination that contributes to the economic vitality of the City and the Region. The LRT can be leveraged to support a range of infrastructure and public realm investments throughout the area that have the potential to enhance the quality of place for workers, shoppers, and residents. As the terminus station and a gateway into the City, there is an opportunity to strategically market the station area to bolster its presence within the Region.

1 Strengthen the King Street retail district and market the area as a major regional retail destination

The station area is already defined by the Conestoga Mall, an important regional landmark and destination. Yet, there are also a significant number of complementary retail and commercial uses situated along King Street. There is an opportunity to strengthen the relationship between local retailers to reinforce the retail gateway around the ION station. The introduction of a greater range of uses and more active at-grade uses will help create a continuous and integrated regional retail district. Improved pedestrian and cycling connections and a finer grain street network will also enhance access to these businesses, allowing them to benefit from the LRT investment. There may also be an opportunity to cooperatively market this retail node through new signage, wayfinding and branding.

2 Support employment growth with new amenities, an improved setting and enhanced connectivity.

The station area will continue to play an important role as an industrial and employment node within the City. A number of lower-density employment uses close to the station are likely to redevelop over time, while the Colby Drive employment district will remain relatively stable. In the long term, as the nature of industry and employment changes, these lands should continue to serve a primarily employment function. Employment activities within this area will benefit from improved transit access, enhanced connections and a greater range of commercial amenities along King Street and Northfield Drive. The creation of a more attractive setting can encourage businesses to locate in the area, helping to bolster employment growth and contribute towards the vitality of the City's economy. A key challenge for businesses facing onto King Street and Northfield Drive will be adapting to new access restrictions. A key strategy to assisting with this transition will be the establishment of a new street and block network through the Conestoga Triangle and the development of a shared access lane along the south side of Northfield Drive.

3 Encourage prestige employment and commercial uses to locate on highly visible sites along King Street and around the station

As the area evolves over time into with new commercial and employment uses, there is an opportunity to optimize development on highly visible sites to attract higher-value employment uses and prestige commercial businesses that can help strengthen the image of the area. King Street and Northfield Drive both function as important corridors into the City. Encouraging the development of high-quality buildings, innovative architecture, and taller building forms can help to draw prestige businesses and retailers to the area. Higher-value commercial, office and employment uses could be focused around the station, along Northfield Drive, and along King Street between Northfield Drive Road and Bauer Place to help raise the profile of the area and establish a vibrant retail hub.

4 Reinforce King Street as a gateway into the City through streetscape, signage and branding improvements

King Street near Northfield Drive is not only the terminus of the LRT line, it is also a regional gateway that connects directly to Uptown Waterloo. The introduction of an ION station on King Street presents an opportunity to move forward with investments along this key spine through the City. A number of recommended infrastructure and public realm enhancements are focused on improving the condition of King Street to create a setting that supports visitors, workers and residents accessing the area. Through streetscape and signage improvements, the street can become more legible as a gateway into the City. A more consistent landscaping and tree planting program, with more space dedicated to pedestrians and cyclists, can help create a more walkable street. Over time, new development should relate more closely to the street, with new active uses to support activity along the street, and particularly south of Northfield Drive. There is also the potential to consider branding, marketing or public art strategies that can reinforce King Street as a key gateway into the City.

Bringing It All Together

The following illustration depicts how the various strategies can work together to create a more vibrant node at the station with improved connectivity between the Lincoln Neighbourhood and Conestoga Triangle and higher value employment uses.

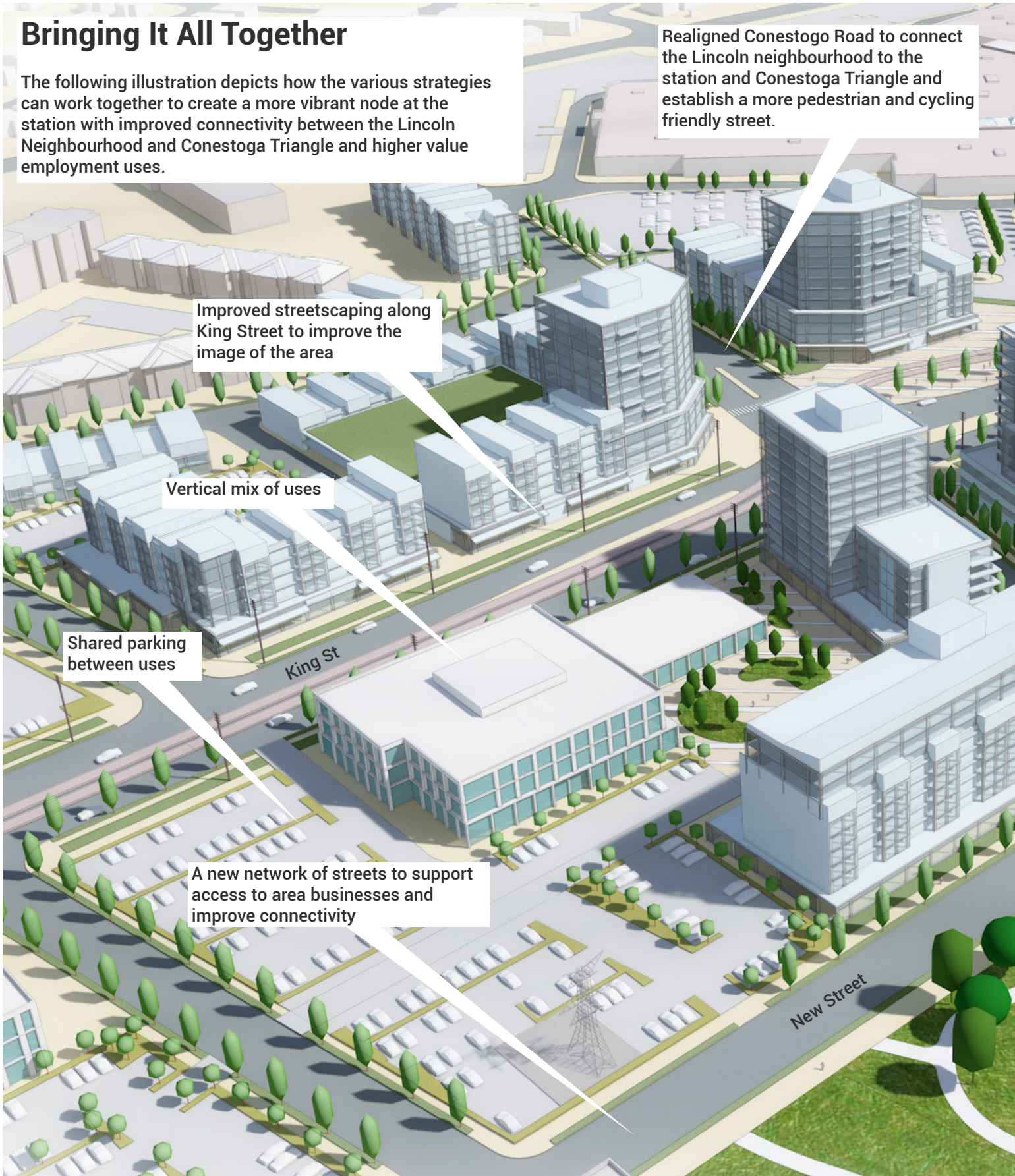
Realigned Conestoga Road to connect the Lincoln neighbourhood to the station and Conestoga Triangle and establish a more pedestrian and cycling friendly street.

Improved streetscaping along King Street to improve the image of the area

Vertical mix of uses

Shared parking between uses

A new network of streets to support access to area businesses and improve connectivity





7.7. Implementation and Phasing

The transformation of the Conestoga station area into a more transit-oriented and pedestrian-supportive place will take time. While some of the recommended Key Directions can be acted on in the short term to bring immediate benefit to the area, other infrastructure investments and strategic initiatives will be implemented over the longer term.

The following table outlines a phasing strategy to guide these short, medium and long-term actions, and

identifies key partners that will need to be engaged in the process. This section also details a number of intersection improvements that can support access to and from the station, the King Street corridor, nearby businesses and retailers, and the Lincoln neighbourhood. Opportunities to secure new funding and investment are also identified to help implement the vision for the station area.

SHORT-TERM DIRECTIONS (0-5 Years)	Lead(s)	Partner(s)
Establish a Pedestrian Transfer Zone at the station to support transfers and improve access to surrounding destinations (Direction 7.3.2)	City of Waterloo (IPPW)	Region (RT) Conestoga Mall Grand River Transit
Improve connections between the Lincoln community and the station (Direction 7.3.3)	City of Waterloo (IPPW)	Conestoga Mall Local Residents
Complete the sidewalk network to support pedestrian access to and from the station (Direction 7.3.5)	City of Waterloo (IPPW)	Region (Transportation Services)
Enhance the cycling network to support access between the neighbourhood, employment areas and the station (Direction 7.3.4)	City of Waterloo (IPPW)	Local Residents
Reconfigure bus routes and ensure frequent and direct service to improve connections to the LRT (Direction 7.3.6)	Grand River Transit	
Plan for a greater mix of uses immediately around the station, including residential uses within 250 metres of the station (Direction 7.4.2)	City of Waterloo (IPPW)	Private Developers Local Landowners
Encourage employment growth within the station area (Direction 7.4.5)	City of Waterloo (IPPW)	Business Community Private Developers
MEDIUM-TERM DIRECTIONS (5-15 Years)	Lead(s)	Partner(s)
Initiate a program of tree planting and street greening to enhance the image of the area (Direction 7.5.4)	City of Waterloo (IPPW)	
Create a gateway experience along King Street through public realm improvements and wayfinding (Direction 7.5.3)	Region (Transportation Services)	City of Waterloo (IPPW) Private Developers

MEDIUM-TERM DIRECTIONS (5-15 Years)

	Lead(s)	Partner(s)
Strengthen the King Street retail district and market the area as a major regional retail destination (Direction 6.6.1)	City of Waterloo (Economic Development)	Local Retailers Region (Economic Development)
Reinforce King Street as a gateway into the City through streetscape, signage and branding improvements (Direction 6.6.4)	Region (Transportation Services)	City of Waterloo (IPPW & Economic Development)
Encourage prestige employment and commercial uses to locate on highly visible sites along King Street and around the station (Direction 6.6.3)	City of Waterloo (IPPW)	Business Community
Encourage buildings that actively address the street with uses at grade along King Street (Direction 7.4.3)	City of Waterloo (IPPW)	Private Developers
Support employment growth with new amenities, an improved setting and enhanced connectivity (Direction 6.6.2)	City of Waterloo (IPPW)	Private Developers
Create a finer grained and interconnected street grid pattern with smaller blocks to improve connectivity (Direction 7.3.1)	City of Waterloo (IPPW)	Private Developers Local Landowners Region (Transportation Services)
Transform Conestogo Road as an important link through the area with street-related uses and more transit-oriented development (Direction 7.4.4)	City of Waterloo (IPPW)	Region (Transportation Services) Local Landowners

LONG-TERM DIRECTIONS (15-25 Years)

	Lead(s)	Partner(s)
Support the continued intensification of Conestoga Mall to create a higher-density and more transit-oriented place (Direction 7.4.1)	Conestoga Mall	City of Waterloo (IPPW)
Over the longer term, transition to more urban forms of development by reducing parking requirements and encouraging a shift towards structured parking (Direction 7.3.7)	City of Waterloo (IPPW)	Private Developers Local Businesses TravelWise
Establish a signature open space within the Conestoga Triangle while encouraging other smaller-scale public spaces throughout the area (Direction 7.5.1)	City of Waterloo (Parks)	Private Developers Local Landowners Waterloo North Hydro
Establish an Anndale Park to Sugarbush Park green connection via a redefined Conestogo Road and/or hydro corridor (Direction 7.5.2)	City of Waterloo (IPPW)	Ministry of Transportation (MTO) Waterloo North Hydro

RECOMMENDED INTERSECTION ENHANCEMENTS

Intersection	Recommended Improvements	Timing	Reference
King Street / Conestogo Road	- Complete the sidewalk network along both sides of Conestogo Road and King Street - Consider installing pedestrian signals with countdown timers - Improve wayfinding and signage to inform motorists of the crossing point and the station - Install cycling lanes along Conestogo Road - Consider removing the right-turn driving lane to eliminate the additional crossing lane for pedestrians	Short Term	Direction 7.3.4 / 7.3.5
King Street / Northfield Drive	- Proceed with the planned installation of cycling lanes and improved sidewalks on Northfield Drive - Consider introducing zebra crossings - Consider installing pedestrian signals with timed countdowns	Short Term	Direction 7.3.4 / 7.3.5
Northfield Drive / Conestogo Road	- Proceed with the planned installation of cycling lanes and improved sidewalks on Northfield Drive - Install sidewalks along Conestogo Road and Colby Drive - Consider introducing zebra crossings - Consider installing pedestrian signals with timed countdowns	Short Term	Direction 7.3.4 / 7.3.5
Northfield Drive / Davenport Road	- Proceed with the planned installation of cycling lanes and improved sidewalks on Northfield Drive - Install cycling lanes along Davenport Road - Consider introducing zebra crossings	Medium Term	Direction 7.3.4
Davenport Road / Kingscourt Drive	- Consider introducing a pedestrian-activated signalized crossing with zebra markings to support Davenport Road crossings - Consider opportunities to introduce signage that is integrated with a broader wayfinding strategy that supports access through the mall property and to the station	Medium Term	Direction 7.3.3
Davenport Road / Conestogo Road East Extension	- Realign Conestogo Road and extend the street east to Davenport Road - Establish a new intersection by extending Conestogo Road east from Kraus Drive to Davenport Road - Consider installing a pedestrian-activated crossing and pavement markings	Long Term	Direction 7.3.1
King Street / Conestoga Mall Driveway	- Consider establishing a formalized crossing at the Conestoga Mall driveway that links to a new east-west extending from Conestogo Road - Provide pedestrian-oriented signage to support access through the mall property - Link the intersection with a future trail connection	Long Term	Direction 7.3.1

Funding/Investment

Conestoga Mall

Conestoga Mall is a major property within the station area and a key Regional destination. The mall is located immediately adjacent to the ION station, and the GRT bus terminal is situated on the mall property. In the short term, discussions with the mall owners will be needed to secure more formal movements through the mall that would support travel between the Lincoln neighbourhood and the station. The implementation of improved signage or wayfinding would also require coordination with the mall owners. If the mall redevelops over the longer term, there is a critical opportunity to break down the large property, introduce new streets and walkways, locate parking below grade or within structured parking decks, and reorient the mall to better respond to the station.

Region of Waterloo

The Region will play an important role in helping to implement station area enhancements and infrastructure investments. Through Grand River Transit, the Region will be responsible for evaluating existing transit services and adjusting or improving service, as necessary. Any improvements within the Pedestrian Enhancement Zone that are needed to facilitate more seamless transfers between the LRT and the GRT terminal will also need to be coordinate with the Region. In addition, two key streets within the station area – King Street and Northfield Drive – are Regional roads. The provision of cycling lanes, wider sidewalks, tree planting and other streetscape improvements on these streets would also fall under the Region's jurisdiction. The Region may also have an interest in other station area initiatives or pilot projects, such as the proposed active transportation connection across the Conestoga Parkway or potential intersection improvements at the Conestoga Parkway off-ramp.

Development Community

There are a number of properties around the station that offer significant redevelopment potential in the medium to long term. These include low-density retail sites and employment uses within the Conestoga Triangle, along King Street and Northfield Drive, as well as the Conestoga Mall property. The introduction of LRT could serve as a key impetus for future development interest. As development proposals come forward over time, there is an opportunity for the City to work closely with proponents to ensure that new developments support the implementation of the desired vision for change. Through the municipal approvals process, the City can secure more transit-oriented buildings, new streets and pedestrian connections, improved landscaping along the street, and new public plazas and open spaces.

Local Businesses and Retailers

There are a number of employers, retailers and commercial businesses within the area, and the area is expected to continue to function as a key employment and retail district within the City. These businesses may have an interest in supporting the implementation of the station area enhancements that could benefit their employers or retail customers. Potential initiatives that private businesses and employers may be interested in undertaking include: improved walkways to support business access; new plazas or gathering spaces to provide amenity for workers and visitors; enhanced landscaping and the relocation of parking away from the front of the building to support the image of the area; and building retrofits that bring active uses closer to the street. Coordination between businesses will also be required, given the fragmented land ownership pattern throughout much of the employment lands within the area.

8

IMPLEMENTATION

JUNE 2017

IMPLEMENTATION

Achieving the ambitious vision for city-building presented in the Station Area Plans will take place incrementally over the long term. Implementation will require updates to the City's planning and regulatory framework, strategic infrastructure investments, an innovative approach to parking and transportation demand management, and close coordination with local landowners, businesses, developers, residents, the Region of Waterloo, and other community partners. A number of City-directed capital works will also be heavily dependent on funding commitments.

A strategic approach to implementation is needed to guide future change and facilitate the evolution of the station areas into vibrant, connected and attractive places. The five station areas are each distinct, and the pace of change within these areas will vary depending on market conditions, land availability, property ownership, infrastructure requirements, and the opportunities for transformative improvement around the stations.

A number of priority projects and quick-win initiatives can help build momentum and demonstrate the city-

building potential of the Station Area Plans. At the same time, a long-term commitment to implementing the Plans is needed to achieve the ambitious vision for redevelopment and economic growth along the ION corridor.

This chapter identifies a range of city-building initiatives that can help spur new investment, and outlines potential parking and TDM strategies, recommended regulatory changes, and critical next steps to help achieve the vision for change around the ION stations.

8.1 Strategic City-Building to Leverage New Investment

The lands along the corridor have historically developed as a series of disparate places, with limited relationship to each other or to the corridor. The introduction of LRT involves a reorientation of the lands around the stations into vibrant and connected destinations that serve as focal points for growth, community-building and reinvestment.

To best leverage the growth, community-building and reinvestment opportunity, the following actions should be considered:

- Address the infrastructure deficit created by a lack of streets, connections and open spaces.
- Encourage a more vibrant mix of uses at densities capable of supporting transit ridership
- Facilitate high-quality design that is sustainable and contributes to the sense of place.

By undertaking a series of strategic city-building initiatives, the City of Waterloo, in conjunction with various private and public sector partners, can address these needs, re-orient the stations to the LRT and support new investment.

► Creating a Development Framework for Urban Reinvestment

A key challenge to achieving more vibrant, transit-oriented places around the ION stations is the lack of street and block infrastructure. Many of the station areas contain large blocks with relatively few streets. This creates a challenge for people traveling to and from the stations, and discourages a vertical mix of uses by enabling uses to spread out across the block. Introducing a finer grain street and block network can help to create address for redevelopment and improve access to local businesses and neighbourhoods.

Many of the new streets that have been recommended in the Station Area Plans are located on privately owned properties. As a result, close **coordination with local landowners** will be needed to establish a finer grain street and block pattern that supports access to and from the ION stations. The introduction of new streets can occur opportunistically as redevelopment applications come forward, and can be secured through the City's **site plan approvals processes**. Streets can be either private or public.

On larger redevelopment parcels, the preparation of a **block master plan** can identify new street and path connections that improve permeability and contribute towards an integrated grid network. On smaller redevelopment sites that do not necessarily require new street infrastructure to function, new buildings and parking areas can be oriented and sited where they will not preclude future street connections identified within the Station Area Plans over time. The City could also encourage new internal streets to be developed to municipal or alternate standards in anticipation of a formalized street being developed in the longer term.

In some cases, the City may need to initiate or more proactively introduce critical street infrastructure investments. For example, in the Conestoga Station Area, the establishment of a new street and lane network will be critical to supporting access to businesses impacted by the LRT and integral to achieving more urban, mixed-use redevelopment.

➤ Enhancing the Mobility Network to Support Access

Improving the mobility experience for all users is critical to supporting convenient access to businesses and destinations. Securing wider sidewalks, new cycling lanes and multi-use trails will in many cases require a rebalancing of existing streets to reallocate space to the public realm. To ensure the design of new or reconstructed streets meets the needs of all users, streetscape improvements can be guided by the **Complete Streets** policy framework established in the City's Transportation Master Plan.

The recommended right-of-way reconstructions and streetscape improvements could be funded through the City's **capital budgeting process**. In the case of regional roads, such as King Street, Northfield Drive and University Avenue, streetscape and intersection improvements will be directed and funded by the **Region**. The **Ontario Ministry of Transportation** will also be involved as a reviewing and commenting authority on transportation master plans, major redevelopment projects, and improvements in close proximity to major highway interchanges.

A variety of cycling and trail improvements have been recommended in the Station Area Plans to optimize the mobility experience and encourage a shift towards more sustainable modes of travel. The **City of Waterloo's Advisory Committee on Active Transportation** will play an important role in planning and identifying funding for future cycling and trail improvements around the stations. The Region of Waterloo will be an important planning and investment partner and recently developed a new **Active Transportation Master Plan** to guide infrastructure improvements. A number of proposed enhancements to regional trails, including a northward extension of the Laurel Trail, have been recommended in the Station Area Plans, and these will require support and funding from the Region.

The Station Area plans have highlighted the need to reconsider local bus routes once the LRT is operational to optimize access to nearby employment areas and neighbourhoods. **Grand River Transit** will be responsible for undertaking this review, although the City can be an active partner throughout this process..

➤ Encouraging Investment with New Public Amenities

In anticipation of higher-density redevelopment around the stations, there is a need to ensure that a growing number of workers, visitors and residents have access to new public spaces and a high-quality public realm that can provide amenity and act as a focus for new development. While the City does not currently have a comprehensive park strategy, capital funding within the 2016-2018 budget has been committed to **develop a city-wide parks strategy**.

The station area planning process has helped identify gaps in the public space network, and has put forward recommendations for the provision of new open spaces. Establishing these new open spaces will require funding from the **City's capital budget**, but can also be achieved by leveraging private sector development. New development is currently subject to a **parkland dedication requirement** ranging from 2% for commercial uses and up to 5% for residential development. In the case where **cash-in-lieu of parkland** is provided, the funds collected through new

development within any particular station area should be directed to new public spaces in that specific area.

Alternatively, **privately owned publicly-accessible spaces (POPS)** can be secured through the development approvals process. POPS can complement the City's public park network by creating new courtyards, plazas, walkways, or mid-block connections that the public can access, but that are owned and maintained by the property owner. While these spaces may differ from more traditional parks, they can play an important role in higher-density, mixed use environments where there is increased emphasis on the public realm, improved connectivity and placemaking.

➤ Supporting Economic Growth with a Transit-Oriented Mix of Uses

A key objective of the LRT investment in the City of Waterloo is to stimulate economic development. While a number of important Employment lands are situated along the ION corridor, the current lack of amenities within these areas creates a competitive disadvantage that prevents these areas from achieving their full potential as higher-value employment uses.

Introducing **more flexible land use and zoning permissions** at strategic locations can encourage a greater mix of transit-supportive uses around the stations. While the City's existing Employment lands will continue to function as employment-focused areas over the long term, permitting a greater range of retail uses and amenities for lands close to the station can create more vibrant employment districts that can attract higher-value businesses. More flexible zoning permissions can be introduced to allow for a broad range of retail and commercial amenities that are integrated into the ground floor of employment developments.

In a limited number of locations, specifically within 250 metres of the ION stations or along major transit corridors, there is the potential to strategically introduce residential uses as part of an employment-focused development. This change in land use permissions can be advanced by recognizing the Employment lands within 250 metres of the stations or along major transit corridors as **regeneration**

areas. The Provincial Policy Statement (PPS) allows for the conversion of lands within employment areas to non-employment uses through a comprehensive review that could involve an Official Plan Amendment. By recognizing certain employment areas around the station as regeneration areas, these lands would be subject to the **comprehensive review policies of the PPS**, rather than the more onerous municipal comprehensive review policies of the Growth Plan.

For projects that contemplate residential uses on Employment lands, developers should be required to **submit a master plan** that demonstrates:

- Compatibility with existing and planned employment uses;
- A commitment to developing new employment space on the site and increasing the overall number of jobs;
- How the design of residential uses supports area employees and employers; and
- A phasing plan that ensures new employment uses are established prior to construction of residential uses.

➤ Encouraging a TOD Scale of Development

Transit-oriented development is most successful when it brings increasing numbers of people and jobs close to transit. The creation of urban transit-oriented nodes around the ION stations requires higher densities and a greater mix of uses.

A number of transit-oriented development standards and key building design requirements can be articulated within the **City's Official Plan and zoning by-law**. These could include standards relating to minimum heights and densities, building setbacks, requirements for active at-grade uses, minimum floor-to-ceiling heights, and parking requirements. The introduction of a **Transit Overlay Zone** into the City's zoning by-law can be used to reflect the distinct character and desired development pattern for the lands around the ION stations. Use of the City's **cash-in-lieu of parking policy**, as set out in Section 12.3.3 of the City's Official Plan, can also be used to promote a reduction in parking and achieve more compact, transit-oriented urban forms.

► Raising the Bar on Urban Design to Support Placemaking

A focus on high-quality placemaking can support employment growth and encourage reinvestment around the stations. A number of opportunities for enhanced landscaping and tree planting have been identified. Some of these initiatives will be directed by the City of Waterloo or, in the case of Regional roads, by the **Region of Waterloo**. Other streetscape and public realm enhancements can be secured through the **development approvals process**, with new landscaping and sidewalk enhancements secured as part of new development.

Achieving design excellence in architecture and building design that raises the profile of the station areas will require close coordination with local developers through the municipal approvals process. Similarly, retrofits to existing buildings, which could include concealing back-of-house activities from the street, will require **partnerships with local landowners and businesses**. Chapter 2 of the Station Area Plans identifies a range of best practice design principles for achieving higher-quality transit-oriented design. Embedding these principles within the planned update of the City's **Urban Design Manual and Site Plan Review Guidelines** can help to encourage and support higher-quality urban design and placemaking.

The provision of new public art around the stations can be achieved through both public and private sector investment. The City's new **Public Art Policy** and **Public Art Reserve Fund**, which allocates one percent of qualifying civic capital project budgets to public art investments, can be leveraged as a resource for public art investments. Consideration should also be given to allocating **Sections 37** funds to the Public Art Reserve Fund to pool both public and private resources. The City is in the process of developing a **Public Art Master Plan**, which could explicitly address the provision of public art within the station areas. Finally, the **Region of Waterloo's ION Public Art Project** has identified opportunities for new artwork at the Research and Technology and Conestoga stations, which can further support placemaking around these transit nodes.

► Supporting Investments in Green Infrastructure

The implementation of sustainable infrastructure has the potential to support placemaking and reinforce the City as a place of innovation. The development of green infrastructure will involve coordination with a range of stakeholders and environmental agencies.

The City should work closely with the **Waterloo Citizens' Environmental Advisory Committee**, which provides recommendations on watershed studies and environmental stewardship. Working together with the Citizens' Environmental Advisory Committee, the **Grand River Conservation Authority** and local property owners, the City could consider opportunities to address issues of flood risk management within areas, such as the Northfield station area.

Initiating a **comprehensive tree planting program** can enhance the tree canopy around the stations and create a setting for investment and employment growth. Funding for landscaping enhancements can be allocated through the City's capital budget, but can also be secured through **site plan approval** process or **Section 37 agreements**. As part of major street reconstruction projects, the City should consider whether there are any priority areas to bury hydro in order to further facilitate intensification and more robust tree growth along the street. The City could also consider introducing **tree canopy targets** around the station areas to promote investments in tree plantings and enhance the setting of the areas.

The City could also consider integrating sustainable design solutions as part of municipal infrastructure projects, such as new parks, streets or buildings.

8.2 Focusing on Mobility

Much of the lands around the stations are oriented towards supporting automobile use, with large areas of free surface parking and wide arterial roadways that encourage driving. The LRT, along with supporting investments in the active transportation network, has the potential to enhance mobility choice and improve access to nearby employment areas, universities, parks, shopping centres, and other destinations along the corridor.

The Station Area Plans identify a range of strategies and initiatives that can help create more transit-supportive places. One of the greatest obstacles to achieving a more transit-supportive development pattern is the need to accommodate parking for residents and businesses. While new higher-density residential developments have the ability to pass on the costs of more expensive below grade or structured parking to buyers, employment-based developments must compete for tenants against more suburban locations that offer ample free parking, or with more urban areas that offer higher levels of amenity. This poses a significant challenge for the primarily

employment-focused station areas in northern Waterloo, stations that require greater density to create a sense of place but that still have high demand for free parking. The solution will be to incentivize a shift towards more sustainable modes of transportation; walking, cycling and transit, and reinforce those measures through reduced parking standards and shared parking that can address oversupply and support more transit-supportive forms of development. The following section provides recommendations for facilitating a shift towards more sustainable modes of travel and ensuring a more strategic approach to parking.

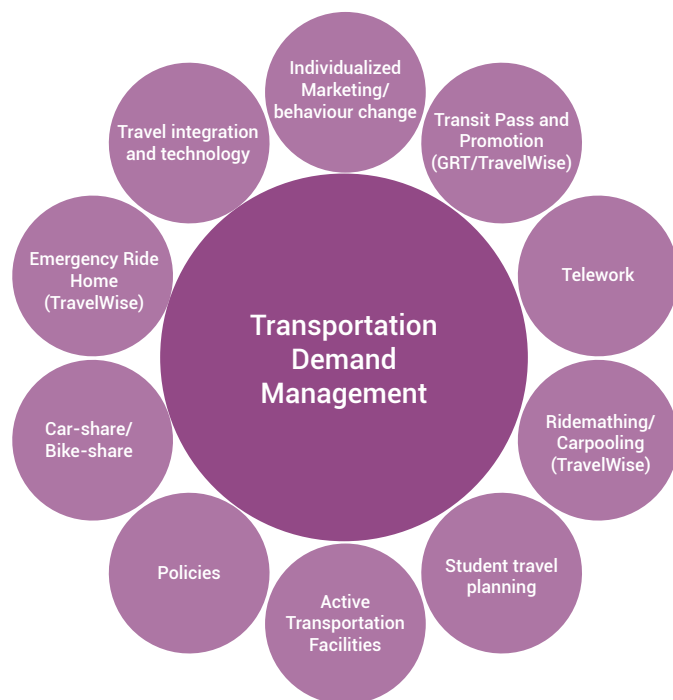


Figure 8-1. There are a range of TDM measures that can be used to promote a shift to greater levels of walking, cycling and transit use.

➤ Transportation Demand Management

Transportation demand management (TDM) measures are intended to **facilitate an increase in walking, cycling and transit use**, while reducing the reliance on personal vehicles. A strong TDM policy and commitment to TDM measures can also help free up areas of surface parking for new development.

There are numerous TDM strategies that can be developed and implemented throughout the station areas, as shown in Figure 8-1. Many of these are identified in the Regional Transportation Master Plan, and a number of these programs have already been implemented through TravelWise, the Region's TDM program. New TDM initiatives should be complementary to those already being implemented through the TravelWise program. However, the City should implement its own TDM measures to meet its needs and address issues that may arise through the development approvals process.

The following is a list of key TDM strategies that the City could consider leveraging to promote a shift towards higher levels of transit use, walking and cycling.

TravelWise

As the Region's TDM program, TravelWise provides tools and services to expand commuting options for local employees while also encouraging them to commute using sustainable modes of travel. A number of services are available through TravelWise, including discounted GRT passes, online trip planning, ride-matching, and emergency ride home programs. TravelWise is managed by Sustainable Waterloo on behalf of the Region of Waterloo.

Car and Bike Share Programs

Increasing use of car and bike sharing services, particularly among millennials and young professionals, can reduce automobile dependence and support alternative modes of travel. Providing dedicated bikeshare facilities at the ION stations can promote transit use by supporting first and last mile travel to and from the station. Autosshare programs can improve access to workplaces, retail areas, post-secondary institutions and other destinations, and offers a viable alternative to car ownership. Autosshare services can support transit use and reduce the number of single-occupant vehicle trips by allowing for vehicular use on an as-needed basis.

End of Trip Facilities

Accommodating the needs of those who choose to use active modes of transportation such as walking, cycling and running is important. For example, providing locker rooms, shower facilities, and secure bicycle parking facilities can enhance the appeal of active modes of travel. Wayfinding signage can also be provided to ensure that these facilities are easy to find.

Transit Pass Incentives

The provision of a transit pass that is partially paid for by an employer or is part of fees for school or new condominiums can encourage use of transit for daily travel. As redevelopment around the ION stations occurs over time, there is an opportunity to provide transit passes for new condominium owners and at new workplaces.

Online Ridematching

TravelWise already provides member workplaces with access to an online ridematching service. It is important to promote use of this service, potentially through workplace training sessions that describe how to use the program. Providing the opportunity for hands-on learning sessions can increase use of ridematching services, which can further reduce reliance on personal vehicles.

Use of Technology

Technology is increasingly becoming a tool that provides the public with access to customized and real-time travel information. Smartphone applications, online trip planners, and GPS-enable bikeshare programs have revolutionized the mobility experience, and enabled access to new and innovative transportation options. The City should explore ways of leveraging technology to enhance the commuter experience and advance the implementation of TDM initiatives throughout the station areas.

Individual Travel Planning

The City can develop personalized travel planning programs for residents and employees around the stations. These individuals can benefit from their proximity to the stations and should be provided with opportunities to understand the options available to them. As well, when personalized programs are developed in association with the launch of a new transit service, use of the new transit service is higher. For example, the Region of Waterloo incorporated personal travel planning into the launch of the iXpress service in 2005, which has proven to be a successful program.

Priority Parking for Sustainable Modes

Providing parking in accessible locations for carpools, carshare vehicles and bicycle sharing stations can increase use of these modes. Dedicated parking areas near building entrances and in other highly visible locations allows for more convenient access, and can incentivize more sustainable travel alternatives.

In instances where pay parking is enforced, rates for carpools should either be reduced or eliminated to help discourage personal automobile use.

Guaranteed Ride Home Program (GRH)

A guaranteed ride home program provides employees with a limited number of taxi or car rental rides per year to return home in the event of an emergency. This program addresses the concern about not being able to commute home in a timely manner using transit or non-vehicular modes of travel.

Community-Based Social Marketing (CBSM)

Community-Based Social Marketing is an approach to creating more sustainable communities. It involves identifying barriers to behaviour change, and providing the community with tools, incentives and programs that can help overcome these barriers. From a TDM perspective, CBSM can be used to encourage a shift towards more sustainable travel patterns and help engrain this culture into the community.

Surveys / Feedback

Surveys are important for monitoring the effectiveness of TDM programs. In order for the programs to be successful and for behaviour change to occur, information on how people feel about the programs, why they are using them, and what could be done differently is needed. Discussing these issues with people directly is a useful strategy, as is the distribution of online surveys and other methods of gathering feedback.

TDM Strategies by Land Use Activity

While a range of TDM initiatives are available, they cannot be introduced on a one-size-fits-all basis. Instead, it will be important to work with employers and residents to develop appropriate TDM options that can best meet the specific needs of local stakeholders. Not all strategies will work for all types of uses, so matching the suite of TDM initiatives to the specific use characteristics of each station area will be required.

Employment Uses

In the Region of Waterloo, employer TDM services and programs are provided by TravelWise to member workplaces. They also offer a number of outreach events each year to provide information and incentives to member workplaces in order to encourage the use of sustainable modes. Information collected through employee surveys provides the data needed to enhance the programs and evaluate the overall success of the TravelWise program.

Employers, whether they belong to TravelWise or not, can provide a number of other programs and services. These include: bicycle parking, shower and locker room facilities, private carshare (fleet vehicles), and telework/flexible working arrangements.

Residential

The long term application of a residential-based TDM program can lead to a decrease in the need to provide more road and car-related infrastructure over time. Delivering TDM programs within residential areas can be challenging. While there is one origin (home), there are many destinations and reasons for travel. Therefore a different approach to workplace programs (where there is only one destination and the goal is to travel to work) needs to be taken.

Online carpool programs are not effective for helping residents undertake shopping trips or appointments, as they are often not scheduled regularly. Transit passes provide benefit, however only if transit service is reliable and similar levels of service are provided at both ends of the trip. Many residential areas therefore require a different approach, known as community-based social marketing. This can be conducted through the implementation of Individualized Travel Planning programs. These programs will allow individuals and households to work with “travel ambassadors” to develop plans aimed at reducing reliance upon the single-occupant vehicle and encourage the use of more sustainable modes. These programs have been shown to be effective in areas where new services have been proposed and implemented.

The Station Area Plans identify a range of new infrastructure and services to serve adjacent neighbourhoods and encourage more people to walk, cycle or take transit. However, the availability of infrastructure and services should be promoted and information supplied about new or existing infrastructure and services to engage the community and increase use and awareness.

Retail / Commercial

Programs that encourage the use of sustainable modes to and from commercial areas are limited. Promoting transit use, providing car and bike share parking, and offering incentives for sustainable travel, such as discounts at participating retailers, are all possible ways to increase the levels of sustainable travel. Large shopping centres with good transit accessibility could consider innovative ways to encourage shoppers to travel by sustainable modes, including applying marketing techniques that encourage shoppers to visit their location through promotional materials or contests. This “retail” approach to encouraging transit has been shown to be successful at shifting transportation behaviour.

Institutional – University

The corridor is home to several universities. While University staff and faculty can be served by programs such as TravelWise and have access to programs such as carpool matching or guaranteed ride home, students often do not have access to workplace programs despite being part of the same campus community.

Students are technologically savvy, and therefore information on cycling, walking, transit can be provided via a range of digital mediums, including school websites, social media or dedicated smart phone applications. The universities can also provide information to new students as part of their acceptance packages, outlining the options available to them.

Bicycle parking, repair rooms and bicycle clubs are important incentives to encourage use of cycling as a mode of travel to and from the campus. Many universities have initiated these programs and they have been well-received.

Student Carshare, which is operated on campuses across Canada, has several locations in the Waterloo area. The Student Carshare program provides carshare opportunities for students who may not qualify for other programs due to age restrictions. The availability of carshare programs can reduce the need for students to use personal vehicles on the campus.

Finally, having access to someone who can assist them with their travel options will also help students make choices that meet their needs. A sustainable transportation coordinator role could be introduced to provide guidance to students and staff on alternative modes of travel.

Open Space and Special Event Spaces

Events that attract people from across the region, such as those planned for the Waterloo Park Festival Heart, will require the promotion of transit, walking and cycling to reduce the impact of traffic on surrounding neighbourhoods. Promotion of walking, cycling, transit and carpooling should be included in event promotional materials and on the City's website.

Walking and cycling to and from the park for special events can be promoted as an alternative to driving, particularly for those within a 3 to 5 kilometre radius (for walking) and 5 to 10 kilometre radius (for cycling). Directing efforts to those within close proximity to the site will lower vehicular travel and traffic impacts in the area.

On-site park infrastructure should be designed to support circulation and minimize conflicts with other modes. The Laurier-Waterloo Park Station Area Plan identifies a range of connectivity and access improvements to support travel through the park.

Based on the suite of TDM strategies that are available, **the Figure 8-2 below provides a series of recommendations for the implementation of TDM programs by type of land use.** The City of Waterloo should consider these various opportunities and strive to implement these initiatives where appropriate through changes in zoning requirements, reduced parking requirements, and site plan agreements.

Land Use	Transit Pass	End of Trip Facilities	Online Ridematching	Individual Travel Planning	Incentives	GRH	CBSM	Priority Parking	Survey	Car and Bike Share
Residential	●	●		●	●		●		●	●
Employment	●	●	●	●	●	●	●	●	●	●
Institutional (University)	●	●	●	●	●	●	●	●	●	●
Retail/Commercial		●					●	●	●	●
Open Space		●						●	●	●
Event Space		●						●	●	●

Figure 8-2. The following table identifies recommendations for the implementation of TDM programs by land use.

► Parking Strategies

While the implementation of TDM strategies can help to promote a shift towards more sustainable forms of mobility, there is an opportunity to **encourage a more significant shift away from the automobile through an adjustment in the parking supply itself.**

While surface parking will continue to be required, the design and orientation of new parking facilities should support the long-term transformation of the station areas into more compact pedestrian and transit-supportive places.

As discussed throughout the Station Area Plans, there is a substantial supply of surface parking around the ION stations. This oversupply of parking is largely a result of high parking supply rates, zone-based parking standards, and a lack of shared parking between properties.

In the short term, there is an opportunity to adopt a more strategic approach to parking to reduce the amount of parking provided and optimize use of the available supply. While there is a long-term desire to provide parking that is vertically oriented, in the near term the market will not be able to deliver all new parking below grade or within structured decks. A review of parking strategies in five relevant jurisdictions provides insight into best practices for the provision of parking around transit (See Appendix A).

Based on a review of best practices, the following recommendations have been put forward for the City of Waterloo to consider.

Distance from ION Station	Minimum Rate	Maximum Rate
Between 400 and 800 metres	70% of the parking required in the base zoning	15% above the minimum rate
Within 400 metres	50% of the parking required in the base zoning	15% above the minimum rate

Figure 8-3. Recommendations for how parking rates could be adjusted from the City's base parking rates to reflect proximity to the LRT.

RECOMMENDATION # 1 – INTRODUCE A TRANSIT OVERLAY ZONE TO REDUCE MINIMUM AND MAXIMUM PARKING REQUIREMENTS IN PROXIMITY TO THE LRT

The City of Waterloo's draft Zoning By-Law recommends reducing parking rates to 70% of the underlying parking rate within 800 metres of the LRT. Recognizing the improved transit accessibility offered by the LRT, the introduction of a maximum parking rate and reduction in minimum parking rates within closest proximity of the stations would help to further promote transit ridership and encourage a shift away from automobile use.

The introduction of a 15% maximum cap over and above the minimum rate within 800 metres of the station would help to ensure that new development does not contribute to an oversupply of parking. Over a 5 year timeframe, more aggressive minimum parking rates within 400 metres of the station should also be introduced. This could involve reductions in the minimum parking rate to 50% of the underlying parking rate. Figure 8-3 below summarizes the recommended parking rate adjustments.

The rate reductions could be introduced as part of the parking overlay zone currently proposed within the City's draft Zoning By-law. To ensure that automobile use does not increase nor negatively impact transit ridership over the long term, the City should revisit their current parking rates by 2021. This will enable the City to take a holistic view of the transportation system and see if the parking rates have effectively encouraged the use of more sustainable modes, in particular the ION service. Appendix B provides examples of the rates that would result from this proposed recommendation.

RECOMMENDATION # 2 – ADOPT A SHARED PARKING POLICY OR COOPERATIVE PARKING APPROACH

At present, Waterloo has nearly 30% more parking in the five station areas than is required to meet the City's current minimum requirements. A shared use parking policy would allow land use activities with different peak demands to share parking resources. The City could use a shared parking policy to meet parking needs as the station areas transition over time into more walkable, transit-oriented places. Figure 8-4 below provides recommended shared parking rates.

Businesses that have excess parking could lease parking to new businesses or convert free parking into paid or metered parking. Although paid parking is common in many cities, it is likely that

the City will have to work closely with owners of excess parking to promote the transition as part of a TDM program.

The City of Waterloo could also explore the potential of establishing parking management areas. This would involve identifying particular geographic areas where distinct parking rules replace the standard parking requirements. Special parking authorities can be established in conjunction with these distinct areas to operate paid parking facilities and manage off-street parking. In many cities, parking authorities are funded through cash-in-lieu contributions when developers opt out of minimum parking requirements.

Land Use Classification	Shared Parking - Weekday (%)			Shared Parking - Weekend (%)		
	7am-5pm	5pm-9pm	9pm-12am	7am-5pm	5pm-9pm	9pm-12am
Office	100%	30%	5%	5%	0%	0%
Apartment (Visitor)	20%	75%	75%	20%	100%	100%
Hotel	40%	75%	100%	40%	75%	100%
Employment	100%	50%	10%	25%	10%	10%
School/Academic	100%	5%	0%	10%	0%	0%
Restaurant	50%	100%	40%	75%	100%	50%
Retail	50%	80%	10%	100%	75%	10%

Figure 8-4. Recommended shared parking rates by major land use category.

RECOMMENDATION # 3 – INTEGRATE PARKING REDUCTION STRATEGIES WITH KEY TDM APPROACHES

The integration of parking reduction strategies and TDM initiatives can help maximize the potential reduction in parking rates around the LRT. The City should consider reducing minimum parking requirements for businesses and property owners that provide carpool parking, car share parking, and transit passes in lieu of parking.

RECOMMENDATION # 4 – CONSIDER REDUCING RESIDENTIAL PARKING REQUIREMENTS FOR LOWER-INCOME RESIDENTS

Below grade or structured parking facilities can be costly to build, which increases the overall cost of new housing. In an effort to improve housing affordability, a reduction in minimum residential parking rates should be considered as part of new developments that provide more affordable housing for lower-income residents.

RECOMMENDATION # 5 – CONSIDER REDUCING PARKING REQUIREMENTS FOR ANCILLARY USES WITHIN MIXED-USE BUILDINGS

Supporting a greater mix of uses is an important strategy that can help to animate the station area, improve amenity for area residents and businesses, and reduce the need to drive to access services and amenities. While active uses such as retail and restaurants at the base of office or residential developments may be aimed at supporting users living and working above them, they are often required to provide parking at rates that assume the majority of their patrons arrive by car. This can over-inflate the amount of parking required in new development and act as a disincentive for the provision of active street-related uses.

The City should consider reducing the parking requirements for ancillary restaurant and retail uses within mixed-use buildings. Enabling 25% of the ground floor area of mixed-use buildings to reflect the parking rates for the primary use within the building can help to make it easier to provide active uses at street level without overburdening developments with higher parking requirements.



Figure 8-5. Reduction of parking requirements for ancillary uses in mixed use buildings such as in this example from Portland, Or can help to encourage more active street level uses catering to the people who live and work above them.

8.3 Regulatory Framework Recommendations

The Station Area Plans outline a vision for change that was not previously contemplated before the arrival of LRT. As a result, the City's current planning and policy framework is in some cases not equipped to deliver the type of change envisioned around the ION stations. A number of recommendations have been made throughout the Station Area Plans, some of which require updates to the City's Official Plan or zoning by-law, while others can be reflected in other municipal strategies or tools. Aligning the City's planning and regulatory framework with the policies and objectives outlined in the Station Area Plans will be a critical first step to implementing the Plans.

The following regulatory and planning policy recommendations build upon the first phase of the station area planning process, which involved a comprehensive review of existing conditions and the current policy framework. The following recommendations are high-level and preliminary, and are expected to be fine-tuned through further consultation with the community and with key stakeholders, and through ongoing discussions and implementation workshops with City staff.

► Official Plan Updates

The Official Plan sets out a planning policy framework that guides long-term land use and development within the City of Waterloo. It outlines the overall goals and objectives for future growth and change, and articulates a series of policies to direct and coordinate land use, built form, growth and infrastructure investment. The Official Plan aims to create healthy and vibrant communities that reflect the principles of accessibility, equity, connectivity, diversity, and adaptability. The latest Official Plan was adopted by City of Waterloo Council in April 2012.

The Official Plan also addresses development within Major Transit Station Areas. Section 3.8 of the Official Plan outlines the general policy directions for change around the station areas, including the provision of a mix of transit-supportive uses, and a shift away from the automobile in favour of transit use and active mobility. Section 3.8 of the Official Plan serves as a placeholder for future Official Plan Amendments that are anticipated as part of the station area planning process. Recommendations for updating the Official Plan to reflect the vision and directions put forward in the Station Area Plans are outlined below.

Aligning the Nodes and Corridors Framework with the LRT Investment

The City's Nodes and Corridor framework, as reflected in Schedule B of the Official Plan, identifies a hierarchy of designated areas that are anticipated to accommodate significant population and employment growth. While Nodes are planned to evolve with a mix of higher-density employment, residential and commercial uses, Corridors are intended to link different Nodes while also accommodating medium to high-density development.

The introduction of the Nodes and Corridors framework pre-dates the planned LRT investment. As a result, in some cases the designated Nodes and Corridors are not aligned with the ION station areas, and do not consistently direct intensification closest to the stations. Given that Major Transit Station Areas will be added to Schedule B upon completion of the station area planning study, there is a need to more closely align the station areas with the Node and Corridor framework to ensure the greatest intensity of development and broadest mix of uses within walking distance of the stations.

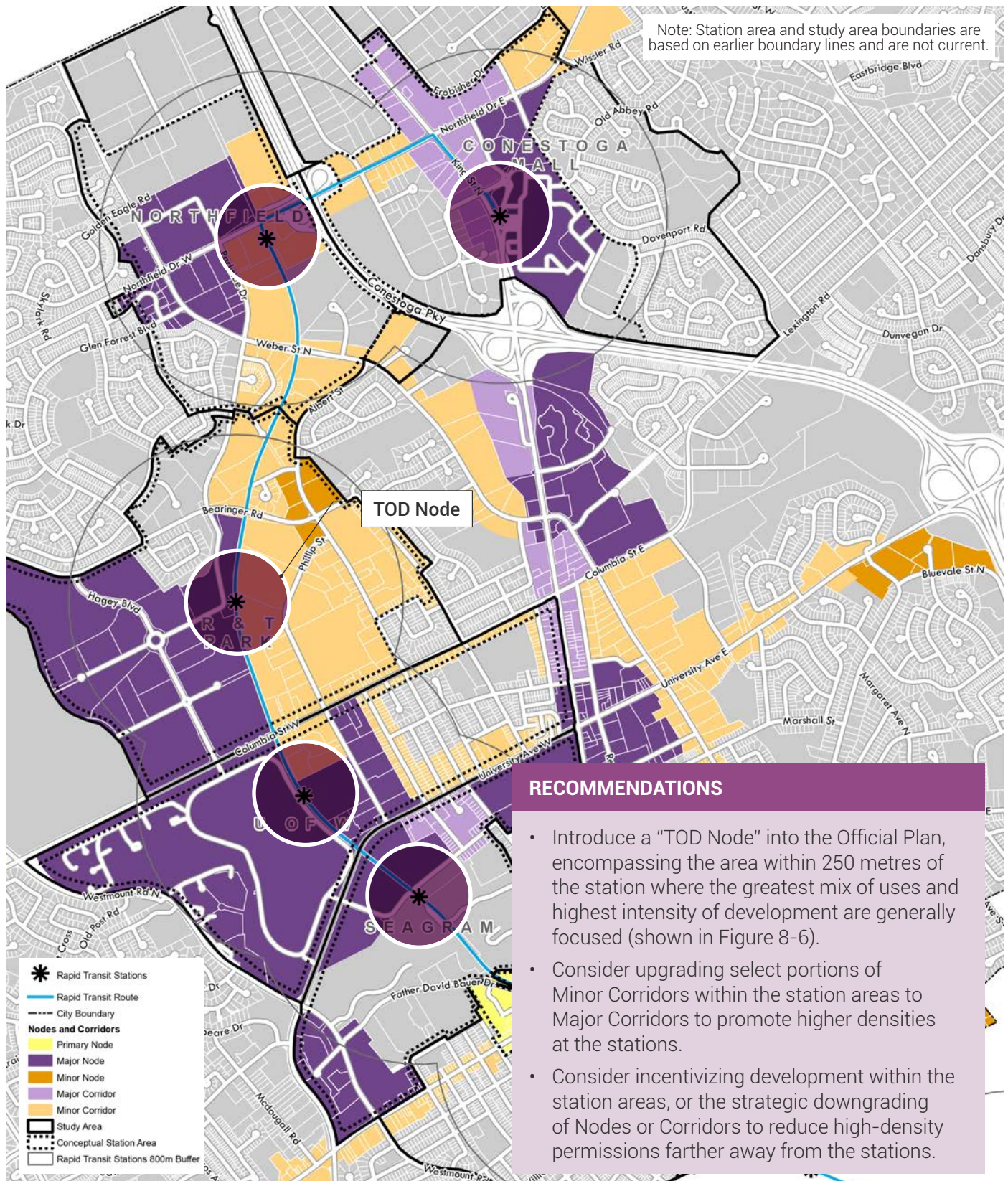


Figure 8-6. Introducing TOD Nodes into the City's Official Plan can emphasize the lands within 250 metres of the ION stations as focal points for a greater mix of uses, a high intensity of development, and reinvestment.

Encouraging Greater Heights and Densities Around the Stations

Schedule B1 of the Official Plan defines the maximum permitted heights and densities across the City. These permitted heights generally correspond with the Nodes and Corridor permissions, with the greatest heights permitted within Major Nodes and Major Corridors, and medium-density development permitted within Minor Nodes and Minor Corridors. As with the Nodes and Corridors approach, the greatest building heights are not necessarily clustered around the ION stations. This is particularly true around the Northfield and Conestoga station areas, where much of the surrounding lands are planned to support Medium Density Employment up to 27 metres or 7 storeys.

Current densities within the station areas are generally low, as shown in Figure 8-7. These densities are also substantially below the MTO's recommended minimum density of 160 residents and jobs combined per hectare (or 72 residential units per hectare) within a 5 to 10 minute walk of an LRT station. Sufficiently high densities are required around the stations to create a critical mass of workers, residents and visitors that can support the vitality of the station areas. To achieve this objective, there is a need to focus the greatest heights and densities on lands around the ION stations.

The development of density targets for the station areas has been a critical component of the Station Area Planning process. The achievement of increased

densities around the ION stations is key to supporting activity levels and reinvestment around transit. Emerging Provincial growth management policies also reinforce the need for municipalities to more deliberately align new growth with existing and planned transit infrastructure.

The recommended density targets provided in Figure 8-8 are intended to direct the most intensive growth immediately around the ION stations, while also achieving the emerging Provincially-mandate density target of 160 people and jobs per hectare within a major transit station area served by LRT. The recommended densities have been developed within the context of the City's Official Plan policies and emerging Zoning By-law framework. The recommendations are also based on precedent case studies, detailed block and parcel analyses, a review of recent development activity within the station areas, and best practices in transit-oriented planning and urban design.

The recommended density targets are intended to be implemented in a manner that recognizes the distinct context and character of each station area. Note that in the Laurier-Waterloo Park station area, the land area occupied by Waterloo Park is excluded from the calculation of people and jobs density within the station area (see Figure 8-9).

Station Area	Gross Area (hectares)	Residents/ha	Jobs/ha	People + Jobs/ha	Additional People + Jobs to Achieve Density Target ^A
Conestoga	126	28	60	88	9,100
Northfield	126	18	59	77	10,500
Research & Technology	187	25	45	70	16,900
Laurier-Waterloo Park	75 ^B	98	38	136	1,800
University of Waterloo	145	104	43	147	2,000
TOTAL/AVERAGE	659	31	52	106	40,300

^A Density target of 160 people and jobs per hectare within the station area, as per the density targets recommended by the Province.

^B Land area excludes Waterloo Park.

Figure 8-7. Existing station area densities are substantially below the recommended minimum densities for LRT station areas.

RECOMMENDATIONS

- Consider introducing the density targets recommended in Figure 8-8 for lands within the station areas to support increased activity levels and to achieve emerging Growth Plan density targets.
- Consider a distance-based approach to implementing density targets, with more progressive targets for areas within 250 metres and 400 metres of the station.
- Consider phasing in density targets, with initial minimum targets in the near term (0-10 years), and more aggressive planned targets in the longer term (10-25 years) as the station areas redevelop. The minimum targets should be achieved at the individual parcel scale in the near term and should demonstrate how further intensification can occur on the site to achieve the planned Floor Area Ratios over time. The planned targets should be implemented at a block scale over the longer term.
- Update Schedule B1 of the Official Plan to ensure that the greatest heights are permitted within closest proximity to the stations.
- Set minimum building heights for new development to encourage higher-density developments, a more urban form of development, and a critical mass of people and jobs around the stations.



Figure 8-9. The hatched lands which encompass Waterloo Park are to be excluded when calculating density in the Laurier-Waterloo Park station area

	People & Jobs Per Hectare	Floor Area Ratio			Heights (Non-Residential)		Heights (Residential/Mixed Use)	
	Planned (Minimum)	Minimum ^A	Planned (0-10 Years)	Planned (10+ Years)	Minimum	Planned	Minimum	Planned
0-250 Metres	200	0.5	1.0	2.0 +	3 storeys	4 to 20 storeys	4 storeys	6 to 25 storeys
250-400 Metres	160	0.5	0.75	1.5	2 storeys	3 to 10 storeys	3 storeys	3 to 12 storeys
Station Area	160	0.5	0.5	0.5	2 storeys	2 to 7 storeys	2 storeys	2 to 8 storeys

^A Minimum FAR to be applied at the parcel level. Developments must demonstrate how the planned FARs can be achieved over time.

^B Planned FAR to be applied at the block level.

Figure 8-8. Density recommendations for lands within the station areas

Encourage a Greater Mix of Uses

The Station Area Plans envision the development of a greater mix of uses around the ION stations, which can increase activity levels, enhance amenity, and support LRT ridership. Currently, there is limited mixing of uses within some of the station areas, especially around the R&T, Northfield and Conestoga stations. In many cases, uses around the stations are not transit-supportive, as they are characterized by low employment or residential densities, large areas of surface parking, and auto-oriented site design.

In general, the Official Plan policies are supportive of transit-oriented land uses around the stations. For example, Section 3.8 of the Official Plan discourages non transit-supportive uses within Major Transit Station Areas. Yet, there are opportunities to refine and strengthen the land use framework to ensure that new development helps create more transit-oriented and mixed-use activity nodes around the stations.

Land use policies could recognize the ongoing shift towards more contemporary and higher-value employment uses. This shift in employment requires more flexible land use permissions that allow for a greater range of complementary uses which can provide amenity to local workers and sustain the economic competitiveness of employment lands within the station area.

RECOMMENDATIONS

- Strengthen the language in Section 3.8 of the Official Plan to prohibit the development of non-transit supportive uses – including drive-through facilities, gas stations and auto-repair centres – within 400 metres of the stations.
- Plan for highly active, mixed-use nodes immediately around the stations, by prohibiting single-use developments within 250 metres of the station, and requiring active or convertible frontages, consistent with the Land Use Framework diagrams provided within each Station Area Plan.
- Introduce more flexible ancillary land use permissions in higher-value, office-oriented Employment areas by allowing for a broad mix of complementary retail, commercial and amenity uses within employment buildings. Consider the potential for allowing these ancillary uses to occupy more than 15% of the total building floor area to provide greater development flexibility and a more intensive mix of uses around the stations.
- Allow for consideration of limited residential uses within 250 metres of the ION stations or along major transit corridors if implemented as a secondary component of an employment-focused development.
- Update the City's zoning by-law to ensure that the zoning regulations are consistent with these Official Plan directions.

Addressing Employment Land Conversions

The majority of lands around the ION stations are designated Employment lands and play a vital role within the regional economy. The focus of the Station Area Plans is to strengthen these Employment areas and support job growth into the long term. At the same time, the Plans emphasize the need to recognize the immediate station areas as focal points of activity with a transit-oriented mix of uses.

As such, in a limited number of instances where Employment lands are located within 250 metres of the station or along major transit corridors, the Station Area Plans recommend consideration of residential uses being permitted if integrated as part of an employment-focused development. Permitting limited residential uses in strategically located employment areas can help support the viability of the employment uses and create more active places around transit throughout all hours of day.

Allowing for residential uses within a designated Employment area would require the City to undertake a Municipal Comprehensive Review process. The Station Area Plans can be leveraged to advance and inform this process.

RECOMMENDATIONS

- Through a forthcoming Municipal Comprehensive Review, explore opportunities for allowing limited residential development at strategic locations.
 - i) Priority will be given to lands within 250 metres of the station and where residential is:
 - a component of a mixed-use building or development with a substantial employment component; and
 - oriented to front onto the station and/or have direct access from active or convertible frontage areas.
 - ii) The City may also consider allowing for limited residential development at other strategic locations that are within 250 to 400 metres of the station where residential is:
 - a component of a mixed-use building or development with a substantial employment component;
 - oriented to front onto and/or have direct access to higher order transit service.
- Consider designating certain Employment lands as Class 4 areas to provide flexibility for more noise-sensitive residential uses to be located near existing industrial or commercial uses (refer to NPC-300 Guidelines).
- Encourage shared parking between uses to optimize use of the available supply and encourage more transit-oriented development (see Page 83).
- For projects that contemplate residential uses, require developers to submit a master plan that demonstrates:
 - i) Compatibility with existing and planned employment uses;
 - ii) A commitment to developing new employment uses on the site;
 - iii) How the design of residential uses supports area employees and employers; and
 - iv) A phasing plan that ensures substantial new employment uses are established prior to construction of residential uses.

► Zoning By-law Updates

The City's zoning by-law regulates land uses and specifies detailed development standards, including building height, massing, orientation, and parking requirements. In some cases, there appears to be a disconnect between the direction of Official Plan policies and current zoning by-law regulations. For example, parking requirements within the zoning by-law have contributed to an oversupply of parking within the station areas, and many Employment lands around the stations are zoned Industrial, which allows for limited ancillary uses. Many stakeholders have noted that the lack of amenities to meet the day-to-day needs of local employees is a concern which limits the ability for businesses to attract and retain talent.

To help create more transit-oriented and mixed-use places along the corridor, more flexible zoning permissions are needed. The introduction of a **Transit Overlay Zone** into the City's zoning framework could recognize the distinct vision for the station areas, and support the transition towards a more transit-oriented development pattern. A Transit Overlay Zone can establish more explicit standards to guide building heights, density, land uses, built form, parking requirements, and urban design in a manner that achieves the long-term vision for the station areas.

RECOMMENDATIONS

The following zoning controls can be considered to help achieve more compact, mixed-use and transit-oriented development around the station.

- A. **Land Uses:** Allow for a range of transit-supportive uses, and restrict non transit-support uses
- B. **Heights:** Establish minimum building heights around the station
- C. **Density:** Integrate density measures, such as Floor Area Ratios (FARs) or Floor Space Index (FSI)
- D. **Parking:** Restrict surface parking around the stations, reduce parking rates, and locate parking to the rear
- E. **Urban Design Standards:**
 - **Ground Floor Heights:** Require minimum ground floor heights of 4.5m to encourage at-grade retail and commercial uses
 - **Building Footprints:** Introduce maximum building floorplates
 - **Street Wall Design:** Require transparent glazing along the street frontage, or active at-grade uses and treatment
 - **Setbacks:** Ensure setbacks contribute to the pedestrian scale and vitality of the street while also providing sufficient space for improved landscaping
 - **Building Articulation:** Introduce maximum building lengths to break down building mass
 - **Tall Building Design:** Limit the maximum floorplate for residential towers to reduce shadowing and building mass.
 - **Loading/Servicing Restrictions:** Restrict to the rear of a building and away from the street where it can be concealed from public view
- F. **Amenity Areas:** Require sufficient amenity spaces, including outdoor open areas and internal courtyards
- G. **Bicycle Parking and Facilities:** Require on-site bicycle storage
- H. **Landscaping:** Require generous tree plantings and landscaping

► Tools and Strategies to Achieve the Plan Objectives

While the Official Plan and zoning by-law are the key implementation tools that can direct change and redevelopment within the station other tools and strategies can be drawn upon during the development approvals process to support city-building and achieve the Station Area Plan objectives.

Density Bonusing

Density bonusing, otherwise known as Section 37 of the Planning Act, is a process that allows developers to exceed permitted building heights and densities in exchange for providing various community benefits. Density bonusing is a frequently used tool that can be strategically leveraged to encourage intensification while also securing new community amenities, such as public art, daycare facilities, parks and public spaces, affordable housing, streetscape improvements, or cash-in-lieu benefits. The use of density bonusing for new development can be targeted towards enhancing the quality of place around the stations, and any financial contributions collected should be reinvestment back into the station areas.

Urban Design Guidelines

The City's existing urban design guidelines are articulated in its Urban Design Manual. The Manual is a complement to the Official Plan, and provides more detailed design guidelines that reflect the urban design policies within the Official Plan. While the Urban Design Manual is generally consistent with best practices of transit-oriented development, the guidelines are not specific to development around the ION stations. The Station Area Plans identify a number of specific urban design strategies, some of which could be integrated into the broader Urban Design Manual. Consideration should be given to integrating these design strategies as supplemental design guidelines, and potentially incorporated into Section 3.2 (Area-Specific Guidelines) of the Urban Design Manual.

Affordable Housing Incentives

Many new residential development projects around the stations have been oriented towards the student housing market, with much less housing designed to provide more affordable housing options for families, working professionals and larger households.

The Canada Mortgage and Housing Corporation (CMHC) recognizes that affordable housing is a broad term that refers to the continuum of housing. This includes affordable housing that ranges from fully public to private, and across all forms of tenure, including rental, cooperative ownership and market ownership, as illustrated in Figure 8-10.

As new residential development takes place around the ION stations, the City should encourage the development community to provide a range of unit types and sizes that can meet diverse housing needs across the housing continuum. Given the availability of student-oriented rental housing, there appears to be a need to deliver more affordable two or three-bedroom rental or condominium ownership options for working families and larger households.

A variety of incentives and regulatory tools can be used to encourage more affordable, family-oriented and workforce housing. They include:

- **Financial Incentives:** Consider reducing parking requirements and/or in parkland dedication payments to reduce the overall cost of housing construction and encouraging more affordable units. The City may also consider waiving or deferring Development Charges for projects that provide affordable units.
- **Inclusionary Zoning:** Explore the potential to adopt Inclusionary Zoning policies into the City's Official Plan, as contemplated in the Province's new Promoting Affordable Housing Act, 2016. Inclusionary Zoning policies could be used to create new affordable residential units as part of new development projects. These policies are typically leveraged to serve low-income and moderate-income households.

- **Regulating Unit Sizes:** The City could introduce policy that requires a minimum proportion of new residential units within a building to be constructed as 2-bedroom and 3-bedroom dwellings.
- **Partnerships:** Explore partnerships with governments, housing agencies and the development community to secure new affordable and workforce housing, advance best practice research and innovative housing strategies, develop a toolkit for implementation, and explore potential demonstration projects.
- **Property Tax Equalization:** Consider changes to municipal and regional property tax rates to equalize the rates between multi-residential properties and other residential dwellings. Currently, the multi-residential property tax rates, which apply to rental properties with seven or more units, are about twice as high as the rate for single-family dwellings or condominium buildings. Equalizing these rates, as has been done in York Region and in the City of Barrie, can help incentivize rental apartment development.
- **Section 37:** Leverage development bonusing to secure units targeted towards lower-income residents.

Other Development Incentives

Other options to strategically direct the highest densities and mix of uses immediately adjacent and as close as possible to the stations include:

- Prioritizing servicing upgrades and public infrastructure improvements in areas closest to the stations
- Implementing strategic Development Charge exemptions or deferrals for properties within close proximity to the stations
- Allowing reduced parking requirements for new developments within the station area

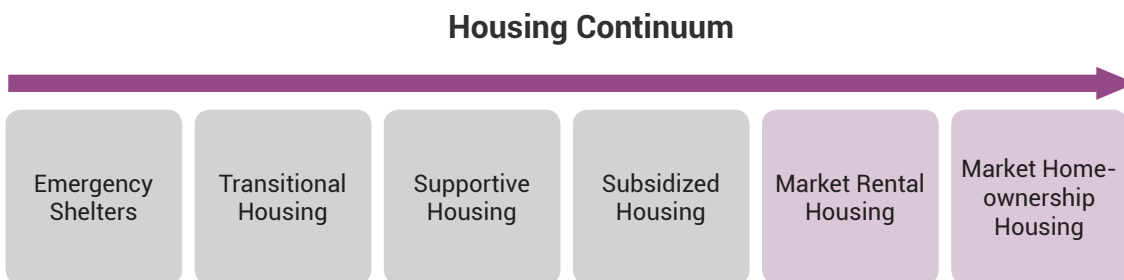


Figure 8-10. The CMHC housing continuum illustrates the diverse range of affordable housing types, from fully public housing to market-oriented homeownership.

8.4 Where to Begin

While the implementation of the Station Area Plans will take place over the long term, in the near term, there are a series of critical next steps that can be undertaken to establish a framework for change and build momentum for future investments.

► Regulatory Updates

As part of the station area planning process, the Station Area Plans and accompanying Official Plan Amendments are expected to be brought forward to City Council for approval in mid-2017. The associated Zoning By-law Amendments, urban design guidelines, and other regulatory changes will also be advanced by City staff. Approval of these additional policies and implementation tools is anticipated in mid to late-2017, prior to LRT service beginning in 2018. The regulatory changes will be informed by ongoing public consultation and stakeholder engagement, and through a series of implementation workshops to ensure that the regulatory changes are consistent with the Station Area Plan directions.

A number of planning, policy and land use recommendations can be implemented through Official Plan and Zoning By-law Amendments. A Municipal Comprehensive Review will be required to allow for the development of residential uses on Employment lands.

► A Shift in Culture

Encouraging LRT ridership and promoting use of active transportation modes requires a shift in culture and behaviour, which can take considerable effort to achieve. While the LRT will not be operational until 2018, TDM strategies can be implemented early on to begin shifting travel patterns and increasing awareness of more sustainable travel options. A more intensive educational campaign could be initiated closer to the LRT opening date to encourage use of the new transit service once operational. TDM strategies should continue even after the LRT is operational, and could be adjusted over time to support transit

ridership. Reductions in parking requirements and shared parking regulations can be articulated in the Zoning By-law Amendment and implemented through the development approvals process. Reductions in parking rates could also be phased in over time as the station areas evolve into more transit-oriented places with a greater mix of uses and improved streets and cycling infrastructure that reduce the need to drive.

► Critical Opening Day Infrastructure

To ensure a comfortable and convenient travel experience for transit riders, a range of critical infrastructure improvements at the ION stations are needed. The Station Area Plans each identify a Pedestrian Transfer Zone that is recognized as a key LRT or bus transfer point where the highest level of transit amenity and supporting infrastructure is required. Among the range of amenities recommended are the following:

- Clear wayfinding and signage
- Real-time next-vehicle information/screens
- Weather-protected waiting areas at transfer points
- Enhanced pedestrian amenity, including pedestrian-oriented lighting, wider sidewalks, spacious walkways and waste receptacles
- Spacious transit plazas
- High-quality street crossings
- Bicycle racks at the station
- Landscaping, public art and other design treatments

Coordination between Grandtrac, the Region and the City can ensure the various station infrastructure and surrounding improvements are implemented.

► Corridor Priority Projects

A number of projects and initiatives are identified within the Station Area Plans, many of which will be implemented incrementally over time. Yet, there are several critical projects that have the potential to benefit multiple station areas or contribute to a broader city-building objectives and to leverage transit investment. Consideration should be given to prioritizing and securing funding for the implementation of these initiatives, as they are key to unlocking economic growth and reinvestment along the corridor.

1) Extending the Laurel Trail

A northward extension of the Laurel Trail alongside the rail corridor is an important infrastructure initiative that can strengthen the trail as a key active transportation connection linking the Region together. An extension of the Laurel Trail would strengthen the relationship between the LRT and active transportation infrastructure, while enhancing access to the Northfield employment areas and the St. Jacobs Market.

2) Strengthening Waterloo Park as a Major Regional Amenity

Waterloo Park is the City's premier urban park, and it is planned to transform into a more significant open space destination that benefits from transit access. The planned Festival Heart is a key project that could attract major events and performances, and help reinforce the park as an important regional attraction. Proceeding with implementation of the Festival Heart and other key improvements, including the Central Promenade, the Perimetre Walkway, and a proposed link between the station and the festival space, can ensure an enhanced park setting and improved access to its various amenities and programming.

3) Establishing a Multi-Modal Hub at the University of Waterloo

Ongoing discussions are taking place between the Region and the University of Waterloo to clarify a conceptual plan for a station plaza and transfer hub near the ION station. Given that the University

of Waterloo station area is one of the most important points of transfer within the regional transit network, the development of an integrated transit hub is critical to supporting transit services for workers, residents and students across the City and Region.

4) Enhancing University Avenue as the Front Door to the Universities

University Avenue is an important gateway to two university campuses. Its transformation into a more inviting street can strengthen the gateway experience and create more identifiable street frontage. Streetscape enhancements, wider sidewalks, improved landscaping, intersection improvements, and new public art can help enhance the corridor as a contemporary and more distinguished entry point to the universities.

5) Transforming the Phillip Street Corridor to Create a Setting for New Investment

Phillip Street is an important seam extending from University Avenue to Albert Street, and is being repositioned as the Idea Quarter. There is potential to leverage this private development interest to create a contemporary and attractive employment corridor with a range of amenities, uses and a high-quality public realm. An enhanced Phillip Street can also help strengthen the relationship between businesses, Northdale residents and the University of Waterloo.

6) Working with the Ministry of Transportation to Improve Access to Lands Around the Conestoga Parkway

Construction of the LRT will reduce access to a number of businesses and properties along Northfield Drive and King Street. There are opportunities to introduce a finer-grain network of streets to maintain and enhance access to local businesses. There may also be the potential to work with MTO to improve existing and establish new highway on and off-ramps to provide additional access and improve connectivity through the area.

7) **Advancing the Development of Transit-Oriented Nodes Around the Stations**

The lands within 250 metres of the ION stations will benefit most from the LRT, and are generally anticipated to evolve with the greatest mix of uses and highest densities. These Nodes are envisioned to be developed as walkable, mixed-use, transit-oriented activity hubs that are closely integrated with the ION stations. An updated policy framework that includes the creation of "TOD Nodes" is needed to align the station areas with the City's existing Nodes and Corridor framework.

8) **Developing a Capital Action Plan to Coordinate Infrastructure Funding and Investment**

Implementation of the Station Area Plans can be achieved by adopting a coordinated approach to securing funding and advancing infrastructure development projects. A number of potential sources of funding and opportunities are available to advance the implementation process. These include:

- Working closely with developers to implement public realm improvements, new street and block networks, and other station area improvements;
- Considering the potential of tax increment financing to stimulate redevelopment and direct new tax revenues into the station area;
- Pooling development charges within each of the station areas to optimize infrastructure development;
- Conducting an internal review and coordinating the City's capital resources; and
- Working with the Region of Waterloo to advance projects in line with both regional and station area planning objectives.

9) **Initiating a Complete Streets Pilot Project**

The Plans have identified a number of opportunities to enhance the pedestrian, cycling and transit user experience by reallocating space within the right-of-way. While the transformation of streets around the stations will take place incrementally over time, there is the potential to advance a pilot project that can serve as a demonstration for how streets can be reoriented to respond to the LRT investment. Potential candidates could include Phillip Street, Seagram Drive, University Avenue, or Northfield Drive.

10) **Parking**

All of the Station Area Plans recommend a reconsideration of how parking is supplied and utilized around the stations. Transitioning over time to reduced parking supply rates, shared parking, and structured or below-grade parking can support a greater mix of uses and higher-density development close to transit. Adjustments to the parking rates and policies within the zoning by-law are needed, and can be complemented with transportation demand management strategies that can encourage a shift towards higher levels of walking, cycling and transit use.

► Plan Monitoring

Areas along the ION corridor will change over time as the market evolves and redevelopment takes place. To ensure that the Station Area Plans and associated policies and regulatory tools remain relevant and effective, it is important to monitor progress.

Tracking of recent development patterns, changes in density, and growth in the number of jobs around the stations, are useful quantitative ways of analyzing whether the station areas are experiencing the growth and intensification that is anticipated. Through surveys and community outreach with local businesses, stakeholders, residents and transit riders, the City can identify and assess potential strengths and opportunities for further refinement. Plan monitoring could take place over 3 to 5 year increments.

In order to address any significant shortcomings, amendments to the Station Area Plans and regulatory framework could be pursued.

● APPENDIX A Parking Requirements for Transit-Oriented Development: Five Case Studies

This summary documents the selection of the five parking case study cities and highlights best practices that could be applied in the City of Waterloo.

Areas of Interest for Waterloo

Prior to the selection of the five case study cities, the City of Waterloo identified a number of parking concepts of interest, including:

- Parking requirements in transit-oriented development (TOD) areas
- Minimum bicycle parking requirement
- Parking caps (maximum allowable parking)
- Shared parking by time of day
- Remote (off-site) parking requirements
- Parking requirements based on housing size and type

Parking by Zone vs Land Use Activity

Cities use one of two general approaches to establish minimum parking requirements. The City of Waterloo uses a zoning classification-based approach to define minimum parking requirements, a common approach among municipalities in Canada. This approach, however, makes direct comparison of parking requirements between cities an especially challenging process of reconciling numerous zoning classifications and tables of permitted uses that may not be directly comparable from one city to the next.

The second approach is establishing parking requirements on the basis of land use activity. All five case studies selected use this approach, since it allows direct comparison of parking requirements between cities once a baseline land use condition is established. Although there are numerous variations on parking calculations within this approach a common set of assumptions can be applied across jurisdictions to identify the parking requirements that would be applicable in each context.

For purposes of this analysis, a base land use assumption was made for the five station areas in Waterloo. The parking requirements from each of the five cities was then applied to that base case scenario to identify outcomes and notable characteristics in each city's approach.

The five case study cities establish parking requirements as a function of land use activity, and this offers several key benefits:

- Parking requirements are consistent for similar activities that may be permitted uses across a number of zoning classifications (e.g. a supermarket of a given size will have the same parking requirement irrespective of which zone it is located in contrast to identical uses having potentially different parking requirements as a function of zoning classification).
- Parking requirements established by land use activity, and separately from zoning classifications, can be updated, modified, or be provided policy exceptions more easily than parking requirements embedded within individual zoning classifications. In most of the case study cities, exceptions to the minimum parking requirements apply in a range of special situations.

Case Study Cities

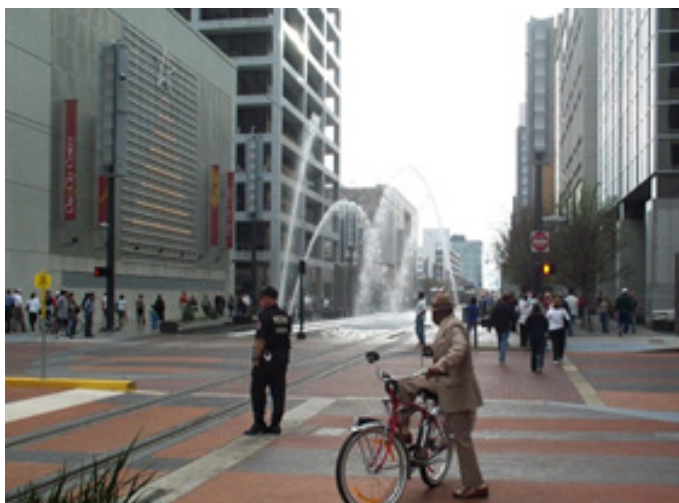
Cities selected (in alphabetical order) and their rationale for selection includes:

- **Houston:** Houston's by-law includes more of the features of interest to the City of Waterloo than any of the other case studies. Houston's total base car parking requirements are similar to those in Waterloo, but its by-laws provide a number of opportunities to reduce or potentially eliminate the minimum requirements required by the City.
- **Markham:** Markham's by-law serves as the Ontario context example, notably in a smaller city with a newly-developed rapid transit system. Markham's by-law requires the most car parking of any of the case studies and provides the fewest opportunities to reduce the minimum requirements.
- **Minneapolis:** Minneapolis' by-law includes a number of features found in other case studies, but it is distinct in providing a maximum parking cap for all land use activities throughout the city. Minneapolis also has the most generous car for bike parking exchange and a defined transit access policy based on level of transit service.
- **Seattle:** Seattle provides the lowest minimum parking requirements among the case studies and is the most well-defined for bicycle parking, pedestrian access to transit stops, and an absolute cap on the maximum size of surface parking lots. Seattle is also unique in linking residential parking to income and providing a well-defined approach for parking reductions associated with carpool, vanpool, and transit pass subsidy programs.
- **Vancouver:** Vancouver has some of the features in the other approaches, including reduced parking for low income and senior housing and parking maximums (certain districts only). A distinct feature in Vancouver is its optional cash payment in lieu of parking in defined collective parking areas.

Station Area	Land Area (hectares)	Waterloo	Houston		Markham	Minneapolis		Seattle		Vancouver	
		Min Car Parking	Min Car Parking	Bike Parking	Min Car Parking	Min Car Parking	Bike Parking	Min Car Parking	Bike Parking	Min Car Parking	Bike Parking
Laurier-Waterloo Park	124	3,636	4,903	31	5,402	3,016	1,068	2,605	904	2,825	2,645
University of Waterloo	141	2,420	2,531	32	2,889	1,979	571	1,470	774	1,530	2,476
Research & Technology	190	4,014	3,354	85	4,291	3,609	737	2,218	933	2,850	2,170
Northfield	74	2,722	2,474	49	2,994	2,330	555	1,548	615	1,805	1,358
Conestoga	66	6,554	5,931	61	7,017	3,521	476	2,961	655	3,571	788

Figure 8-11. A comparison of parking supply requirements across five case study cities indicates that the City of Waterloo's parking rates are generally higher than comparative cities.

HOUSTON



Downtown Houston, like most of the case study cities, is treated as a special zone where minimum parking requirements do not apply.



Houston's Medical Centre operates a parking management district that exempts the area from the City's minimum parking requirements.

Houston's minimum parking requirements are nearly identical to those in Waterloo. The total minimum required parking at the five stations is estimated to be 19,193 spaces using Houston's by-law based on the land use scenario identified in the case study. This compares to 19,346 required by Waterloo (note that parking totals exclude university parking). Although Houston's base parking requirements are similar to those in Waterloo, Houston provides the broadest set of city wide policies that can reduce overall car parking requirements, including:

- **Best Practice: A shared parking by time of day policy that includes multi-family residential housing.** Most shared parking policies exclude all residential uses. At a station with a broad mix of uses, the policy could result in a 38% reduction in the minimum required car parking spaces (Technical Memorandum Table 5B illustrates total parking at Conestoga Station based on Houston's shared parking approach).
- A **transit corridor** parking reduction policy that includes all non-residential land uses along bus and rail corridors. **Best Practice: The policy is distinct among the case studies in that it also requires an increase in bicycle parking** as part of the car parking reduction calculation, resulting in a 5% reduction in car parking and 2,271 bicycle parking spaces at the five stations.
- A well-defined **remote (off-site) parking** policy that defines the full range of parameters for remote facilities. Note that remote parking does not influence the total car parking requirements.
- **Residential parking requirements by bedrooms** in each dwelling unit.
- Parking reduction of 40% for **heritage buildings**, as well as waived minimum parking requirements for changes in land use.
- **Best Practice: Establishment of parking management districts** which effectively override the minimum requirements established in the parking by-law. Parking management areas are typically overseen by management districts or business improvement districts which often perform dual roles as tax increment finance districts and transportation management associations.

MARKHAM



Markham Town Centre is served by Viva RapidWay (bus rapid transit) service.

Markham is the only case study whose minimum car parking requirements for the five stations (22,593) would exceed those of Waterloo (19,346). In general, Markham has the simplest parking requirements of all the cities, but it also has the fewest opportunities to reduce the minimum required car parking. Among the few opportunities to reduce the minimum are:

- A **shared parking policy by time-of-day** covering a limited set of land uses.
- Modified parking for **heritage properties**.

Markham's parking by-law includes one unique feature not contained in the other case studies. **All required parking under its minimum parking by-law are required to be free to the user**; the only exceptions are for city-owned facilities and medical facilities. Markham is the only case study that does not require bicycle parking and does not provide any reduction for proximity to transit.



Even adjacent to the Markham Town Centre and rapid transit stations, suburban land uses prevail.

MINNEAPOLIS



A pedestrian corridor is provided within the light rail transit alignment at the University of Minnesota.



Minneapolis has a long established policy of integrating transit into its urban context.

Minneapolis' by-law includes a number of features found in other case studies, but it is distinct in:

- **Best Practice:** Establishing a **required parking cap (maximum)** for all land uses throughout the city (Seattle and Vancouver apply parking maximums to certain districts).
- **Best Practice:** Allowing a **car parking to bicycle parking exchange** for up to 25% of total parking in non-residential uses (compared to 10% in Houston, or 5% for all land uses, including residential, in Seattle).
- Minimum **parking waivers** for small non-residential uses (e.g. no required parking for businesses under 1,000 square feet).
- **Transit parking reduction** based on frequency of service within 400m and 800m.

Minneapolis' minimum car parking requirements are significantly lower than Waterloo, Houston, or Markham. At the five stations, the minimum car parking requirements in Minneapolis are 14,455 based on the land use scenario identified in the Technical Memorandum.

Although Waterloo establishes a minimum of 19,346 parking spaces at the five stations, the actual estimate is 31,341, just above the maximum parking allowed in Minneapolis (31,283). Considering that the maximum parking caps in Minneapolis are quite high, they may be of little practical impact.

SEATTLE



Seattle has a curious fixation with transit; its system includes a bus tunnel with light rail, trolleybuses, an elevated monorail, ferries, streetcars, and busways.



Seattle has also embraced the road diet concept and followed Vancouver's lead in implementing dedicated cycling infrastructure

Seattle's parking by-law has the lowest base minimum required parking among the case studies at 10,802 for the five stations, just over half of the minimum parking required in Waterloo or Houston (less than half of the parking required in Markham). Although Houston's parking by-law has many of the features identified as items of interest, Seattle's parking by-law presents alternative strategies that are distinctly different.

- **Best Practice:** Reduced parking for **low income and moderate income residential** uses.
- **Best Practice:** An **absolute maximum surface parking lot size** of 145 spaces. This policy is designed to discourage developers from providing excess parking (mandatory parking caps still apply in certain districts).
- **Best Practice:** **Transit parking reduction** based on walking distance to transit stops.
- **Best Practice:** **Carpool and vanpool parking** with cash in lieu.
- **Best Practice:** Reduced parking for providing **long-term transit passes**.
- **Best Practice:** Reduced parking for providing **car share** parking spaces.

VANCOUVER



Vancouver has led North America in the installation of cycling infrastructure.



Vancouver also leads in the integration of urban mixed uses into new development areas.

Vancouver's parking by-law is at the midpoint between Seattle and Minneapolis, in terms of minimum required parking among the case studies at 12,581 for the five stations. Vancouver shares many features of Seattle's parking by-law, particularly with regard to:

- Reduced **minimum parking requirements for senior and low income housing.**
- Maximum car parking in certain districts.
- **Best Practice:** Vancouver provides a **cash-in-lieu** approach for cooperative parking areas, allowing public (paid) parking to replace on-site parking.

Like most of the case study cities, one or more areas of Vancouver are identified as parking exception areas where special development rules apply.

APPENDIX B: Proposed Transit-Supportive Parking Rates

The draft Zoning By-law includes parking rate adjustments for uses within various zones. Section 6.3 of the draft Zoning By-law sets out the parking rate adjustments for uses that are located within the station areas. These are illustrated in Schedule A1 and generally defined as within 800 metres of the stations.

The parking rate adjustment for Transit Station Areas within the draft Zoning By-law establishes minimum parking rates at 70% of the required vehicle parking. The stations will be identified through an overlay zone, which will differentiate them from the underlying zoning applied elsewhere in the City of Waterloo.

To ensure that there is not an oversupply of parking within the station areas, an upset limit of 15% above the minimum parking rate is recommended for all station areas.

In order to promote greater transit ridership, support placemaking at the station, and encourage the use of more sustainable modes of travel around the stations, a further reduction of 50% of the minimum parking rate is recommended for areas within 400m of the station. This consistent application will simplify parking calculations and ensure that planners, developers and the community understand the rates and the rationale for them. An example of this approach is provided below.

Land-Use (As shown in Draft Zoning Bylaw)	Draft Zoning By-law Base Parking Requirement	Draft Zoning By-law Transit Station Area Minimums (70% of base zoning)	Proposed Maximums (15% above the Transit Station Area minimums from the Draft Zoning By-law)	Proposed Minimums Within 400m (50% of base zoning)	Proposed Maximums Within 400m (15% above the station area minimums)
		Min Spaces	Max Spaces	Min Spaces	Max Spaces
Residential (apartment)	1.25 / dwelling unit	0.9 / dwelling unit	1.0 / dwelling unit	0.6 / dwelling unit	0.7 / dwelling unit
Non- Residential	4.0/100 m ²	2.8/100 m ²	3.2/100 m ²	2.0/100 m ²	2.3/100 m ²
Academic	0.7 / student / staff /faculty	0.5 / student / staff /faculty	0.6 / student / staff/faculty	0.4/ student / staff/faculty	0.5 / student / staff/faculty
Restaurant (take out)	15/100 m ²	10.5/100 m ²	12.1/100 m ²	7.5/100 m ²	8.6/100 m ²
Child care Centre	4.0/100 m ²	2.8/100 m ²	3.2/100 m ²	2.0/100 m ²	2.3/100 m ²
Spiritual Use	8.0/100 m ²	5.6/100 m ²	6.4/100 m ²	4.0/100 m ²	4.6/100 m ²
Long-term Care	0.33 / bedroom	0.23 / bedroom	0.27 / bedroom	0.17/ bedroom	0.2 bedroom

Figure 8-12. Example of how the recommended parking standards for the proposed Transit Overlay Zones could be applied.