

LAND ACKNOWLEDGEMENT

The City of Edmonton acknowledges the traditional land on which we reside, is in Treaty Six Territory.

We would like to thank the diverse Indigenous Peoples whose ancestors' footsteps have marked this territory for centuries, such as nêhiyaw (Cree), Anishinaabe (Saulteaux), Nakota Isga (Nakota Sioux), Niitsitapi (Blackfoot) and Dené peoples. We also acknowledge this as the Métis' homeland and the home of one of the largest communities of Inuit south of the 60th parallel. It is a welcoming place for all peoples who come from around the world to share Edmonton as a home.

Together we call upon all of our collective, honoured traditions and spirits to work in building a great city for today and future generations.

CONTENTS

LIST OF MAPS

1.0	INTRODUCTION	1	Map 1. Belmead City Context	1
	1.1 Background	1	Map 2. Belmead Local Context	1
	1.2 Urban Design Analysis	3	Map 3. Study Area	6
			Map 4. Parks and Open Space Overview	11
	1.3 Project Approach & Process	4	Map 5. Zoning and Land Ownership	44
2.0	NEIGHBOURHOOD BACKGROUND & CONTEXT	5	Map 6. Land Ownership	54
	2.1 Study Area	5	Map 7. Commercial Nodes and Community Destinations (within 40)0 m) 59
	2.2 Neighbourhood Context	5	Map 8. Built Form and Character Areas	62
	2.3 Neighbourhood Profile	18	Map 9. Surrounding Open Space Network (within 400 m)	65
			Map 10. Open Space Network	67
•	2.4 Policy and Standards Review	31	Map 11. Belmead Park	73
	2.5 GBA+ Analysis	47	Map 12. Parkwest Field	74
3.0	NEIGHBOURHOOD ANALYSIS	51	Map 13. Parkwest Toboggan Bowl	75
	3.1 Approach & Considerations	51	Map 14. Complete Streets Analysis	79
	3.2 Land Ownership & Development Opportunities	51	Map 15. Mobility Network – Walking and Rolling	93
			Map 16. Mobility Network – Transit	97
	3.3 Commercial Nodes & Community Destinations	55	Map 17. Mobility Network – Biking	99
	3.4 Built Form & Character Areas	60	Map 18. Mobility Network - Parking and Traffic Controls	103
	3.5 Open Space Network	63	Map 19. Mobility Network - Speed Zones	104
	3.6 Complete Streets Analysis	77	Map 20. Injury Crashes (2018–2022)	105
	3.7 Mobility Networks	89	Map 21. Green Infrastructure	112
			Map 22. Surface Flooding Assessment	114
	3.8 Infrastructure	106		

1.0 Introduction



1.1 Background



Map 1. Belmead City Context



Map 2. Belmead Local Context

Belmead is a large, mature neighbourhood in West Edmonton bounded by the following streets:

- North 95 Avenue NW
- East 178 Street NW
- South 87 Avenue NW
- West Anthony Henday Drive

Sidewalks, streets, and infrastructure are in need of repair in the Belmead neighbourhood. **Section 1.1.1** and **Section 2.1** outlines the purpose and approach of the Neighbourhood Renewal program.

1.1.1 Neighbourhood Renewal program

The purpose of the Neighbourhood Renewal program is to outline cost-effective and long-term strategic approaches to renew and rebuild infrastructure within mature neighbourhoods and along collector roadways. The scope of work for Neighbourhood Renewal typically includes the following elements:

- Replacement of sidewalks, local roadways, and collector roadways
- Upgrading streetlights and LED luminaires
- Construction of curb ramps and other intersection improvements
- Addressing missing links in the sidewalk and bike network

The Neighbourhood Renewal program also offers the opportunity for two types of cost-sharing Local Improvements: sidewalk reconstruction and decorative streetlights. Opportunities to improve other Cityowned areas, such as green spaces and parks, will also be reviewed as part of the Neighbourhood Renewal program. The intention is to make desired upgrades and enhancements in coordination with the Neighbourhood Renewal program and leverage other funding sources.



1.2 Urban Design Analysis

Urban design is an overarching city-building discipline that is concerned with how people experience the urban environment during their day-to-day activities. Urban design focuses on how streets, parks, trails, and open spaces are organized, function, and connect with larger city-wide networks. Designing the community's public spaces in a way that enhances the livability of the neighbourhood can include how public spaces function, look, and feel.

This urban design analysis (UDA) looks at Belmead through an urban design lens in terms of the existing urban context, character areas, design aesthetics, access to day-to-day community destinations, and connectivity with other parts of the city. Key objectives of the UDA include:

- Presenting concepts, developed based on City policies and programs and consideration for technical requirements and public input. Concepts will inform renewal efforts and develop a community plan to inform future City initiatives in the neighbourhood
- Identifying gaps and opportunities within the neighbourhood from different lenses such as walkability¹, connectivity and universal design
- Guiding future investment and redevelopment to enhance the overall quality of life

The project team will use the UDA to support decision making throughout the renewal process (concept/design/build) for Belmead. Concepts selected for implementation will require detailed design prior to construction and consideration of appropriate funding sources. Funding typically comes from the public sector, though there may be opportunity to collaborate with private or community sectors as well. It is recognized that limited financial resources are available, so while some initiatives will be prioritized, others will likely be developed over longer time frames or reassessed in time.

1. NOTE: References to people walking within this document include the following (as per the Complete Streets Design and Construction Standards):



people running



people standing



people using manual / motorized wheelchairs or scooters



people using canes or walkers



people pushing strollers or carts



people pushing bicycles



and users of various other low–speed forms of human locomotion

1.3 Project Approach & Process

The Belmead UDA is being developed as part of the "Concept Phase" of the renewal project. It contains three chapters that will be developed over the first four steps of the Neighbourhood Renewal Road Map shown in the figure on the right. This report is the **UDA Chapter 1: Background and Information Analysis.** The key steps for developing the Belmead UDA are:

- **1.** Gathering background information, including initial outreach to community stakeholders and performing an analysis (UDA Chapter 1 i.e. this report).
- 2. Building a Neighbourhood Vision for livability and mobility with the community to support generating ideas and exploring opportunities (UDA Chapter 2: Neighbourhood Vision and Opportunities).
- 3. Developing options by analyzing neighbourhood urban design features to identify strengths and opportunities for renewal (UDA Chapter 2: Neighbourhood Vision and Opportunities)
- **4.** Developing a draft design identifying priority projects that respond to opportunities (UDA Chapter 3: Draft Designs).

The draft design recommended within the UDA will inform the development of the final design and construction drawings.



Neighbourhood Renewal Road Map

2.0 Neighbourhood Background & Context



2.1 Study Area

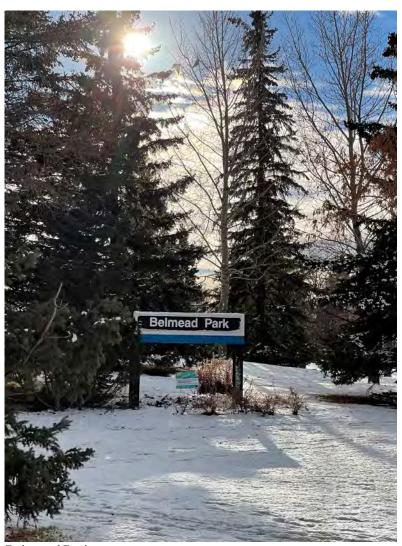
The scope of Neighbourhood Renewal in Belmead includes the areas shown in Map 3 (local roads and collector roads). The arterial roads within and surrounding Belmead (95 Avenue, 178 Street, 87 Avenue, and the Anthony Henday Transportation Utility Corridor (TUC) are not part of the renewal scope. However, these roadways and other roads, infrastructure, and destinations surrounding Belmead are identified and discussed, where relevant, as key elements in the neighbourhood's area of influence to help examine connections and potential impacts of the renewal project. As 182 Street was recently completed as part of another city initiative, the redevelopment of the street will be limited.

2.2 Neighbourhood Context

The following are key characteristics of the Belmead neighbourhood.

2.2.1 History

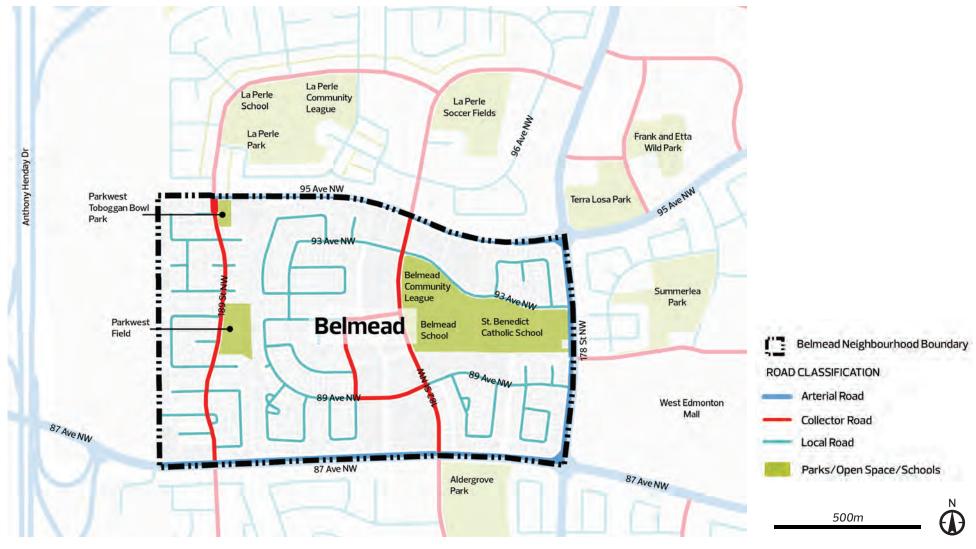
Prior to the 1800's, many First Nations groups including the Cree, Dene, Nakoda, Blackfoot, and Ojibway resided on the territory known today as Edmonton. Prior to development in the 1970s, Belmead was primarily used as agricultural land². The name Belmead is an abbreviation of the French term for "beautiful meadows", which fits the pastoral naming convention for neighbourhoods within the Primrose Subdivision³.



Belmead Park

^{2.} NOTE: Digital Collections – 5309–1770 545309–1770 54 (ucalgary.ca) 3. NOTE: Belmead Neighbourhood Profile

Map 3. Study Area



2.2.2 Development

The neighbourhood of Belmead was agricultural land⁴ presumably until the 1970s when planning began in the area. Development in Belmead was focused on higher density developments compared to the surrounding neighbourhoods and development initially began in the eastern portion of the neighbourhood. The western portion of the neighbourhood (west of 187 Street) was reserved for an urban ring road which eventually moved west. The reserved land was then absorbed into the Belmead neighbourhood and was later developed. Belmead was designed in a way that has multi–unit housing located adjacent to transit, school, and shopping centers, while single family homes are grouped on either side of the centre of the neighbourhood. Overall, according to the dwelling construction data, the majority of the Belmead development took place in the 1970s and continued into the 1980s.

The Belmead neighbourhood features two schools and a park site in the east, a pop-up dog park and a toboggan hill is located in the western portion. Additionally, the neighbourhood includes two community-oriented shopping centres, one located in the southwest corner while the other is located in the center. For major commercial services, West Edmonton Mall is located in the nearby neighbourhood of Summerlea, and additional commercial services are located along nearby 170th Street and 100 Avenue.



2.2.3 Streets & Sidewalks

Belmead is bounded by 178 Street, 95 Avenue, 87 Avenue and the Anthony Henday TUC. These roads are all arterials. 178 Street, 95 Avenue, and 87 Avenue are all bi-directional and contain at least four travel lanes.

The Belmead neighbourhood has a curvilinear street layout, with collector roads dividing the neighbourhood into three sections. There are two collector roadways and a collector loop.

The roadway network can be described as follows:

- Six vehicular access points into the community: two from 95
 Avenue, two from 178 street, and two from 87 Avenue
- Two collector roads in the neighbourhood: 182 Street and 189 Street provide access to the school site, residential areas, and commercial shopping area
- Transit routes are located along 189 Street, 182 Street, 178
 Street, 87 Avenue, and a portion of 95 Avenue



Transit route on 182 Street



Pathway and sidewalk in Belmead

Most of the local residential roads include narrow curbside sidewalks along both sides with roll faced curbs. People walking to or from the neighbourhood can cross the street at crosswalks on the surrounding arterial roads. The neighbourhood includes a continuous pedestrian trail running North–South from 87 Avenue to 93 Avenue, along with a few other stand alone pathways providing pedestrian access.

Most residential and commercial properties have front attached or detached garages with front drive access. There is no alley access in this neighbourhood.

Several multi-unit developments also have private internal roadways, parking lots, and walkways. Most multi-unit residential buildings and commercial buildings locate their waste collection in the surface parking lots. Additionally, the commercial sites provide the bulk of their parking in the front of the stores.

For additional information about streets and sidewalks in Belmead, as well as opportunities for improvements, see **Section 3.6** and **Section 3.7**.

2.2.4 Utilities

Various third-party utilities are found throughout the Belmead Neighbourhood not limited to ATCO Gas, Telus, Shaw, EPCOR Power, EPCOR Water, and EPCOR Drainage (storm and sanitary sewer infrastructure).

ATCO Gas has distribution pipes throughout the Belmead area extending from streets to alleys. Some sensitive dresser coupling, stopper fittings, and gas valves are present along the alignments. These are sensitive facilities and need extra caution during construction. Dresser couplings are susceptible to damage from vibration and stopper fittings may result in sudden elevation changes. ATCO gas pipelines in most cases run through the backyard of the houses with exception in the residential areas close to 189 St NW where the gas lines run in front of the houses under the boulevard / behind the sidewalk. All the pipelines in the area have medium pressure (MP).

EPCOR Distribution and transmission power lines are mostly underground with streetlights and several transformers spread across the neighborhood. The streetlights in the neighborhood contain a power distribution box at the base where service laterals connect. The power lines run in front of the houses under the boulevard as well as behind, front and overhead along the sidewalk.

EPCOR Drainage operates a network of storm pipes, catch basin and catch basin leads identified in the area. There are manholes and catch basins present in the neighborhood that can be used to determine the underground drainage infrastructure alignment and verifying the depth. The drainage system runs in front of the houses under the streets.

EPCOR Water has many mains in the area including a transmission mains that are typically PVC type. There is a 1,050mm diameter transmission main running south from the intersection of 95 Ave NW and 182 St NW up until the Belmead Professional Center which then goes west through the breezeway and turns south until 87 Ave NW, which has special requirements in the design process. The valves are visible on surface to indicate alignment and can be measured to find depth to top of pipe. Also, there are hydrants in the neighbourhood that need to be considered with any changes to curb alignments. The watermains run in front of the houses under the streets.

Underground Shaw/Rogers and Telus lines have been identified in the area along with pedestals and vaults across the neighbourhood for the service distributor. Shaw and Telus communication lines run in front of the houses under the streets, sidewalks and boulevards, back of the houses through the backyards as well as through the properties.

Utility vaults in the sidewalks and other telecommunication infrastructure throughout the neighbourhood may constrain design options in certain locations. Existing streetlights will be replaced. If streetlights are installed on a pedestal, a new base will be installed but there may be additional considerations in relocating them compared to other streetlights due to the utilities contained within them. EPCOR is responsible for pedestal replacement. Replacement is not guaranteed. Street lights will also be updated to LED as applicable.

Standard water and gas lines exist in Belmead to service homes. There are no high-pressure gas lines or high voltage electrical lines.

For more information on infrastructure and utilities, as well as opportunities in Belmead, see **Section 3.8**.



2.2.5 Parks & Open Spaces

There are five parks in Belmead (Map 4):

- Belmead Park
- Belmead School Park Site
- St. Benedict Catholic School Park Site
- Parkwest Toboggan Bowl
- Parkwest Pop-up Dog Park



Map 4. Parks and Open Space Overview

Belmead Park contains the Belmead Community League building, a parking area, a playground, outdoor ice rink, basketball court, benches, and formal shared pathways. Football and soccer fields also form part of the park. Benches and trash receptacles are located throughout the park, making the park more usable. The park is landscaped with a variety of coniferous and deciduous trees. Belmead School is also contained within the Belmead Park and a Joint Use Agreement allows for shared use of the facilities within the site. The St. Benedict Catholic School is immediately east of Belmead Park.

Additional information about land ownership is provided in **Section 3.2.**



Belmead Park playground

The Parkwest Toboggan Bowl is a dry pond located in the northwest corner of the neighbourhood. The park is landscaped and contains a variety of coniferous and deciduous trees on the edges of the park. The park is mainly used as a sledding hill in the winter months and passive recreation in the summer.

The Parkwest Field is a green space in the western portion of the Belmead neighbourhood. The park is landscaped with a variety of trees and a shared use path bisects the park. This park was used as a pop-up dog park through the City of Edmonton's Pop-Up Dog Parks program which temporarily installed 19 dog parks throughout the city in 2023. However, the dog park was closed in October 2023 as the program was always intended to be temporary. Administration is to present a report on the outcomes of temporary pop-up dog parks in 2024 which will provide further information on the future of this location.

Parks and open spaces in Belmead and the surrounding area are discussed in more detail in **Section 3.3** and **Section 3.5**.

BELMEAD COMMUNITY LEAGUE

The Belmead Community League is an active, non-profit community organization which serves the needs and interests of community league members in the neighbourhood. The Community League operates the Community Hall in Belmead Park which hosts various community and private events including recreational opportunities and social gatherings. As discussed in **Section 3.2** and shown in **Map 4**, the Community League has a license agreement to use a portion of Belmead Park for its facilities.

2.2.6 Schools

Belmead is home to two schools, Belmead School (K-6) and St. Benedict Catholic School. Belmead School is located on the Belmead School Park Site. This school provides programming for students in kindergarten to Grade 6. In addition, Belmead School is also a division site for interactions, which supports students with autism. Belmead provides French as a second language from grades 4 to 6 and is part of the Apple Project Promoting active Living and Healthy Eating (APPLE Schools). Belmead has many community partnerships, and the Aboriginal Head Start program leases space in the school.St. Benedict

School provides education from Kindergarten to Grade 6. Additionally, the school offers the Nehiyaw Pimatisiwin Cree Language and Culture Program that provides students with an opportunity to learn and use language in meaningful and purposeful ways. St. Benedict Catholic School offers a Hockey Academy program to provide students an opportunity to pursue excellence and develop the physical, mental, and tactical demands of hockey. The school attendance area for St. Benedict and Belmead School are shown in purple in the Figure below.

The school sites are discussed in more detail in **Section 3.2**, **Section 3.3** and **Section 3.5.2**.



Belmead School Attendance Area (K-6), 2023-2024



St. Benedict Catholic School



St. Benedict Catholic School

2.2.7 Commercial Amenities

COMMUNITY COMMERCIAL

Belmead includes two commercial sites within the neighbourhood boundary. One commercial site is located in the southwest corner of the neighbourhood along 87 Avenue, west of 189 Street. The strip mall includes an ESSO gas station, pet clinic, restaurants, liquor store, cannabis store, dental office, a convenience store, and a hair salon. The second commercial site is located in the centre of the neighbourhood, west of 182 Street, just north of 89 Avenue. The strip mall contains many commercial retail spaces that mostly serve community needs. These services include a dental office, a day care, an accounting office, a physiotherapy clinic, a medical centre, a pharmacy, a first aid training centre, a nail salon, and various restaurants.

Commercial nodes within and surrounding the community are discussed in more detail in **Section 3.3**.



Commercial plaza in southeast Belmead

2.2.8 Transit

The neighbourhood has access to Edmonton Transit Service (ETS) bus routes and stops along the collector and arterial roadways (182 Street, 189 Street, 87 Avenue, 95 Avenue, and 178 Street). The West Edmonton Mall Transit Centre is located approximately 600 metres east of Belmead between 175 Street and 170 Street, north of 87 Avenue. Future LRT stops on the Valley Line West extension will be available at the West Edmonton Mall Transit centre and on 87 Avenue south of the Belmead neighbourhood.

Dedicated Accessible Transit Service (DATS) is a door-to-door public transportation service for Edmontonians who cannot use regular transit for some or all their travel needs, due to a physical or cognitive impairment. Wheelchair lift equipped vehicles, minivans, accessible minivans, taxis, and vans are used to provide DATS service. Vehicles used are clearly identified as "DATS" vehicles. On-street parking is provided along the majority of roads in Belmead that supports the use of the DATS service. Many multi-unit developments provide internal roadways and pick-up/drop-off areas near main entrances that may be utilized by the DATS service. In 2023, there were 5,028 service calls for DATS pick-up and drop-off in the project area, which appear to be a typical number a community (compared to Dunluce at 5380 calls, and La Perle at 3270 calls) Transit service, including DATS, is discussed in more detail in **Section 3.7.2**.



Image source: City of Edmonton

2.3 Neighbourhood Profile

This section contains key statistics for the Belmead neighbourhood.

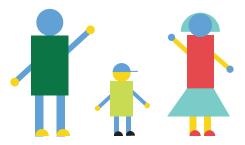
2.3.1 Neighbourhood Statistics

POPULATION^{5,6}

During the 2016 Federal Census, Belmead's total population was 4,790. According to the 2021 Federal Census, Belmead's population dropped to 4,615.

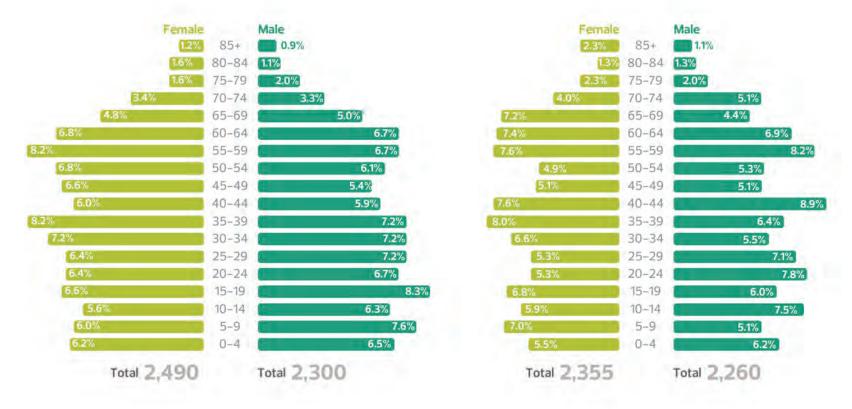
Based on the 2016 Census, over 40% of Belmead's population are in the 25 to 54 age group, with 33% under the age of 24, and more than half of that category being under 14 years old. 14% of the Belmead population are between 55 to 64 years. The senior population, 65 years and older make up almost 13% of the neighbourhood.

Based on the 2021 Federal Census, 37.9% of the neighbourhood population are between the ages of 25 to 54 years, with 18.8% of that category being between the ages of 0 to 14.15.1% of the population are between 55 to 64 years and 15.4% are 65 years and over.



4,615 COMMUNITY MEMBERS

5. NOTE: 2016 Federal Census 6. NOTE: 2021 Federal Census 2016 2021



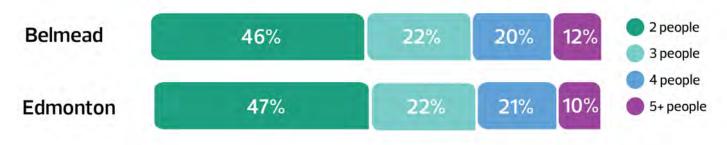
Belmead Population by Age and Gender, 2016

Belmead Population by Age and Gender, 2021

HOUSEHOLD SIZE7

Based on the 2016 Federal Census, almost 45% of the Belmead's households are two persons households. 25% are 3 persons and 30% are 4 persons households. The average family size in Belmead is 3 persons household with a total of 1,350 families. According to the 2021 Federal Census, 45.7% of households in Belmead are 2 persons, 22% are 3 persons households, 20.1% are 4 persons households, and lastly 12.2% are 5 or more persons households.

2021



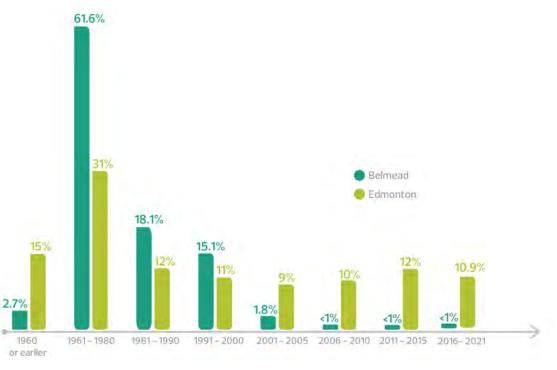
2.3.2 Socioeconomic Characteristics

DWELLING CONSTRUCTION DATE⁸

Most of the housing stock (62%) in Belmead was built between 1961 and 1980. Belmead has significantly less housing stock built between 2006–2016 (<1%) compared to the City of Edmonton overall (12%).

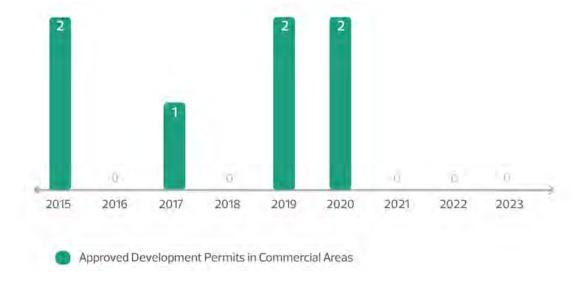
According to the Census, the majority of the housing stock in Belmead was constructed between 1961 and the 1980s. The result is individuals that have lived in their homes for long stretches of time and aging infrastructure in the area including streets, underground infrastructure and public realm, making the neighbourhood less competitive in comparison to newer neighbourhoods and neighbourhoods that have gone through renewal within the City. This observation highlights the importance of this project's initiation, which is aimed at enhancing the neighbourhood's infrastructure and competitiveness to attract more residents to the area.

Very little infill development has occurred in Belmead. According to the City's <u>Infill Data Explorer</u>, only one residential unit of infill development has been constructed for the entire Belmead neighbourhood since 2000. This was a single detached residential house. This could be contributed to many factors such as aging infrastructure, lack of housing stock or lack of demand within Belmead.



COMMERCIAL DEVELOPMENT

The City of Edmonton's development permit data for the period of February 5, 2015, to September 8, 2020, indicates that 50 development permits were approved for the entire Belmead neighbourhood. Of these, seven were for sites zoned for commercial or business uses. Of these permits, four were Major Development Permits and three were sign permits. The figure to the right shows the number of development permits approved by the city by year in the Belmead neighbourhood. Since 2020, the neighbourhood has experienced a decline in commercial development, with no commercial development permits being issued between 2021 and 2023. This reduction in commercial development within Belmead may be attributed to several factors, including the impact of the COVID-19 pandemic, constrained residential growth, restrictive zoning, and a lack of demand for local services due to the availability of amenities in nearby communities including north of 100 Avenue.

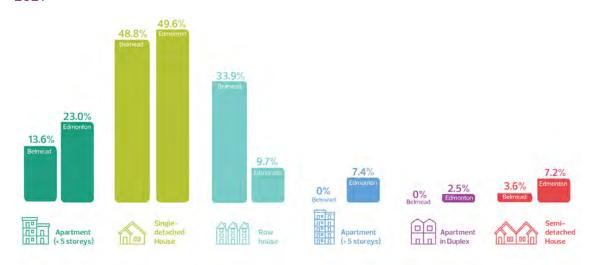


DWELLING TYPES⁹

According to 2021 Census
Data, the two most common
types of dwellings in Belmead
are single-detached housing
(48.8%) and row housing
(33.9%). All other housing types
account for 17.3% of housing
in the neighbourhood.

By comparison with the City of Edmonton overall, while single detached housing is the predominant housing form (49.9%), row housing accounts for only 10.0% of the housing types.

2021





Belmead prominent housing type

OCCUPANCY (VACANCY RATES¹⁰ AND OWNER / RENTER OCCUPIED HOUSING¹¹)

The Belmead Neighbourhood contains 1,701 dwelling units. Vacancy rates are slightly less in Belmead than the City of Edmonton overall (4.4% and 6%, respectively).



The 2016 Census Data showed that Belmead had more owners than renters (66.5% and 33.8%, respectively). This is closely in line with the City of Edmonton overall, where 64.3% of housing is owned with only 35.7% renters. In comparison, the 2021 Census illustrates that the number of owners are still more than the renters. Belmead includes 69.0% owners and 31.0% renters. This is closely in line with the City of Edmonton overall, where 63.6% of housing is owned.

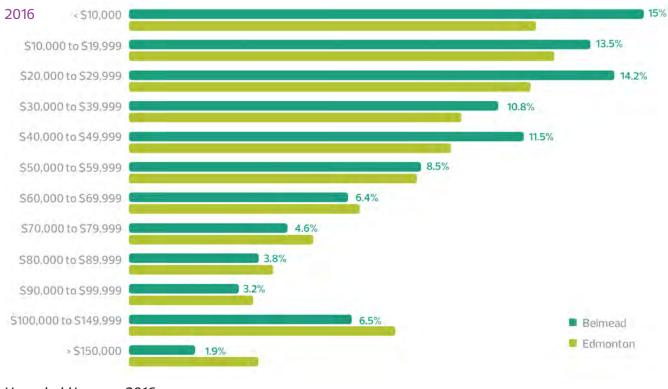


10. NOTE: 2019 Municipal Census

11. NOTE: 2016 and 2021 Municipal Census

HOUSEHOLD INCOME^{12,13}

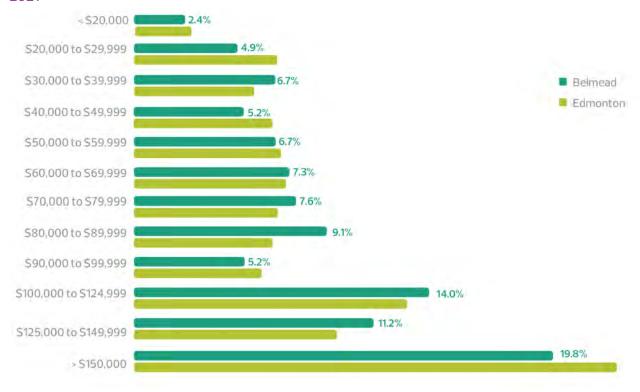
The 2016 Censure showed that a comparatively high proportion of Belmead residents are in lower household income ranges (\$49,999 or less: %) compared to Edmonton as a whole. This may indicate that access to low–cost recreation options and transportation alternatives such as good walking, rolling, biking, and transit connections should be prioritized for the area to ensure that residents do not face systemic barriers to healthy living and transportation options. The 2021 Census Data shows that majority of the Belmead residents (19.8%) are in higher income ranges (\$150,000 and over). This is a significant difference compared to the 2016 Federal Census Data. However, the sample size only represents approximately 25% of the community and as a result potentially misrepresents the household income distribution within the neighbourhood. The data also illustrates that about 80.9% of the Belmead population spend less than 30% of their income on shelter cost, this was a decrease from 84.5% in 2016.



Household Income, 2016

12. NOTE: 2016 Federal Census13. NOTE: 2021 Federal Census

2021



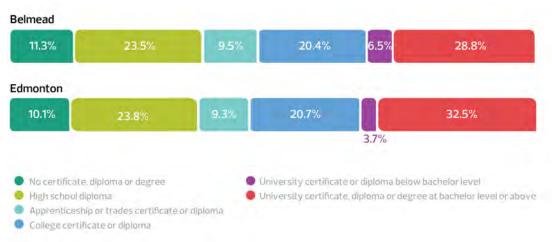
Household Income, 2021

EDUCATIONAL ATTAINMENT^{14,15}

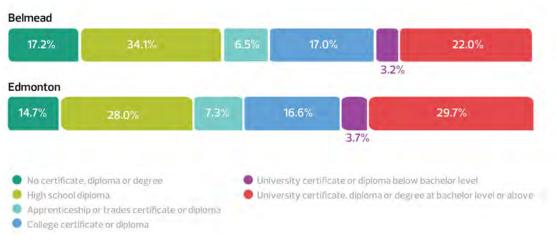
The 2016 data illustrates that just over 65.2% of Belmead residents have attained some postsecondary credential. More specifically, 9.5% have an apprenticeship or trade certificate or diploma, 20.4% have a college certificate or diploma. 6.5% have a university certificate or diploma below bachelor level, and lastly 28.8% have university degrees at a bachelor level or above. In the City of Edmonton overall, 75% of residents have attained a post-secondary credential and 25% have not.

According to the 2021 Census Data, 48.7% of the Belmead population have attained some postsecondary credential. This is a 16.5% drop from the 2016 data, showing that the demographics of the neighbourhood have changed overtime. More specifically, 6.5% of the population reported having an apprenticeship or trades certificate or diploma, 17.0% have a college certificate and diploma, 3.22% have a University certificate or diploma below the bachelor level, and lastly 22.0% of the population have a Bachelor's degree or a higher degree. Of the population, 1.2% have no certificate, diploma or degree, and 34.1% have a high school diploma or equivalency certificate. The most recent census data illustrates that the majority of Belmead residents hold a high school diploma or equivalent certificate as their highest level of education.

2016



2021



14. NOTE: 2016 Federal Census 15. NOTE: 2021 Federal Census

HOUSEHOLD LANGUAGES¹⁶

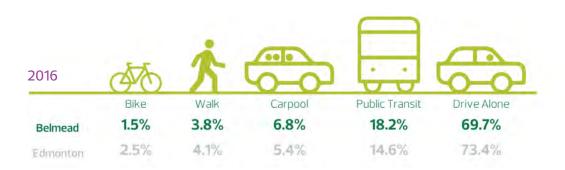
According to 2021 Census Data, 66.5% of the Belmead population are English speaking. The second most common language was reported as Indo–European languages (10.9%). The next most common languages were Austronesian languages (9.6%), Sino–Tibetan languages (6.8%), and Austro–asiatic languages (2.0%).

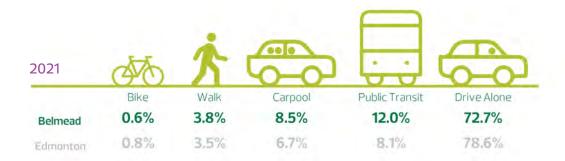
2021



MODE OF TRANSPORTATION FROM HOME TO WORK 17,18

Majority of Belmead residents drive to work (69.7% drive alone and 6.8% carpool), however, the percentage of residents that take transit to work (18.2%) is higher than the city average of 14.6%. Improving connectivity for people who walk, roll, or bike to transit stops may emerge as a priority for residents through engagement during this project. Note that data reported here is prior to implementation of the City's Transit Network Redesign and the COVID–19 pandemic. Statistics here are not necessarily reflective of the current rates for transportation modes. The 2021 Census Data still demonstrates that majority of Belmead residents dive to work (72.7% as a driver and 8.5% as a passenger). This is a slight increase from the 2016 Census Data. The percentage of residents taking transit to work have dropped to 12.0% which is still higher than the City of Edmonton average of 8.1%.

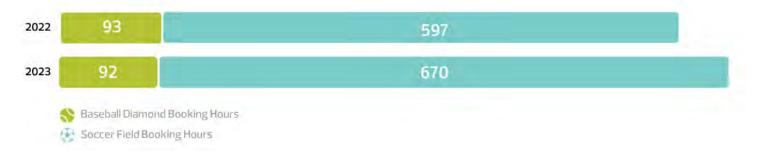




17. NOTE: 2016 Municipal Census18. NOTE: 2021 Municipal Census

FIELD USE (BOOKING HOURS)19

City of Edmonton field booking data indicates that Belmead Park, around Belmead Community League, Belmead School and St. Benedict School have bookable fields. From 2022 to 2023, soccer fields were the most popular amenity with 1,267 hours being booked on soccer fields (100x50 and combo fields). Baseball diamonds were booked 185 hours during that period.



^{19.} NOTE: City of Edmonton Field Bookings Data

2.4 Policy and Standards Review

The Neighbourhood Renewal program implements City guiding policies, standards, and strategies to maximize opportunities for renewal in Belmead. The following plans, policies, standards, and guidelines will be used to guide the development of urban design concepts. Public input and technical constraints will help guide how City plans, policies, and other guidance is applied in Belmead.

2.4.1 Strategic Plans

CONNECTEDMONTON

ConnectEdmonton is Edmonton's Strategic Plan for 2019 – 2028. It sets the direction for Edmonton's future and outlines where we need to change today to realize the vision for Edmonton in 2050. The Plan includes four strategic goals that require transformative changes to support a 2050 vision of Edmonton. The goals will be achieved through strategic actions, partnerships and collaboration. The four strategic goals are:

- Healthy City: Edmonton is a neighbourly city with community and personal wellness that embodies and promotes equity for all Edmontonians
- Urban Places: Edmonton neighbourhoods are more vibrant as density increases, where people and businesses thrive and where housing and mobility options are plentiful
- Regional Prosperity: Edmonton grows prosperity for our Metro Region by driving innovation, competitiveness and relevance for our businesses at the local and global level
- Climate Resilience: Edmonton is a city transitioning to a low-carbon future, has clean air and water and is adapting to a changing climate

The Belmead project team will explore renewal design concepts for sidewalks, parks and roads that support the strategic goals of ConnectEdmonton.

EDMONTON ECONOMIC ACTION PLAN

The Edmonton Economic Action Plan is a ten-year roadmap to build a vibrant, inclusive, and sustainable economy. The action plan is one of the key elements of the City Plan and is aimed at creating jobs, attracting investment, and strengthening our economy.

Action 10 in the plan aims to develop tools and strategies to attract commercial, residential, and mixed-use development in nodes and corridors.

In support of this action, partnership opportunities to revitalize the commercial areas within Belmead will be explored.

CLIMATE RESILIENT EDMONTON: ADAPTATION STRATEGY AND ACTION PLAN

The Climate Resilient Edmonton: Adaptation Strategy and Action Plan focuses on understanding climate impacts due to ongoing climate change and provides insight into how the city can build resilience around those impacts.

The project team can support the strategy and action plan through elements such as preserving and increasing the tree canopy, implementing climate–sensitive designs for roads and sidewalks, decreasing impervious surface area, and partnering with EPCOR to implement low impact development facilities.

Climate adaptation also encourages us to embrace potential opportunities that may come with a changing climate. The warmer weather may encourage more people to use active modes of transportation more frequently. This opportunity can be supported through the development of enhanced biking, walking, and rolling networks.

EDMONTON'S COMMUNITY ENERGY TRANSITION STRATEGY & ACTION PLAN

The Community Energy Transition Strategy is the City of Edmonton's path forward for a low carbon city — transforming how energy is generated, how people move around the city, how buildings are constructed, all through the lens to ensure a just and equitable transition. The plan includes four pathways to support limiting the rise of global average temperature increase to 1.5 degrees Celsius:

- 1. Renewable and Resilient Energy Transition
- 2. Emission Neutral Buildings
- 3. Low Carbon City and Transportation
- 4. Nature Based Solutions and Carbon Capture

The project team can directly support pathways #3 and #4 by seeking ways to make active transportation within the community safer, more convenient, and more accessible and by seeking nature-based solutions to support attractive, healthy urban places such as protection and enhancement of Belmead's urban tree canopy, and the addition of LID infrastructure.

2.4.2 Statutory Plans

CITY PLAN

The City Plan charts out how we will get to a future city, a city that has the benefits we enjoy today with new opportunities for the future. The City Plan is about our spaces and places and how we move around the city. It is about our community and what we need to do together to grow, adapt and succeed.

The City Plan, Edmonton's combined Municipal Development Plan and Transportation Master Plan, sets strategic direction for the way Edmonton grows, its mobility systems, open spaces, employment, and social networks, generally touching on most aspects of life in Edmonton. The City Plan is a statutory plan providing policy direction that must be followed. The Plan provides a framework to direct Edmonton's population growth as the city grows from one million to two million people and seeks to create a safe and livable city that is welcoming and attractive to existing and new residents.

The City Plan contains stretch targets and strategic measures that support renewal, including creating districts that enable people to easily complete their daily needs within 15 minutes of their residence and increasing the number of trips made by transit and active transportation through investment in bicycle networks and more frequent and accessible transit.

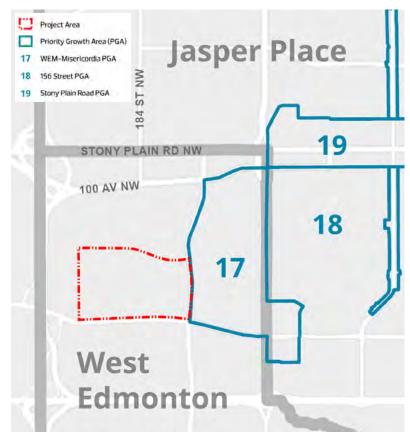
The City Plan speaks to activating growth in the city by investing in infrastructure upgrades and stimulating area readiness for development or redevelopment, which aligns with the Neighbourhood Renewal program. 178 Street on the east boundary of Belmead, is a Secondary Corridor in the City Plan which are defined as:

A secondary corridor is the vibrant residential and commercial street that serves as a local destination for surrounding communities. A secondary corridor feels more residential in nature than a primary corridor. Some secondary corridors will include city—wide mass transit with the others near or served by district transit.

In addition, Belmead is in proximity to a Major Node (West Edmonton Mall to the east) and District Node (Callingwood to the south). While these nodes and corridors are outside the scope of the Belmead renewal project, the project team will seek to identify public realm improvements that support connectivity to these destinations within the neighbourhood.

Notably for this project, *City Plan* identifies the priority growth area (PGA 17 WEM – Misericordia) adjacent to the project area, bounded by 100 Avenue on the north, 180 Street on the west, 178 on the east and 95 Avenue on the south (see the figure on the next page). Priority growth areas are areas with more intense growth in the first population horizon of the *City Plan* (1 million to 1.25 million). As a priority growth area, it has been identified for strategic investments that enhance equitable access to amenities and public services, maximize the benefits of mass transit investment, and expand infrastructure capacity to enable redevelopment and intensification. Given the strategic importance of this area in *City Plan*, opportunities to revitalize the commercial areas and enhance surrounding infrastructure in this area will be explored.

More specifically, Belmead residents can benefit from their proximity to a Priority to Growth Area, which provides enhanced access to amenities, public services, and transit. Additionally, this proximity may lead to intensification in neighbouring areas including Belmead as they also experience growth.



City Plan Priority Growth Areas in Proximity to the Belmead Project Area

The UDA concepts will help to achieve the five Big City Moves of the City Plan:

GREENER AS WE GROW

 Planting new urban trees within Belmead to help achieve the City Plan goal of two million new urban trees planted

A REBUILDABLE CITY

 Reimagine and rebuild communities and public spaces to adapt to a changing future

A COMMUNITY OF COMMUNITIES

- Creating opportunities for neighbours to socialize and get to know each other through the design of parks and open spaces
- Support the use of transit and active transportation through the design of potential bike facilities and enhanced walking connections to transit stops
- Support the goal of creating 15-minute districts by identifying and providing missing public amenities within Belmead

INCLUSIVE AND COMPASSIONATE

- Creating enjoyable spaces such as public parks and amenity areas for people of all ages, backgrounds, and abilities to express themselves
- Adopt a GBA+ lens throughout project design
- Design opportunities that help to eliminate racism and progress towards Truth and Reconciliation

CATALYZE AND CONVERGE

 Support innovation and create well-designed urban spaces and places to help attract and retain a talented population

DISTRICT PLANS

City of Edmonton is undertaking a District Planning project through which it is developing two new planning tools to guide the development in a collection of neighbourhoods (districts). The first tool is the District General Policy which provides policies that apply across all districts and other planning directions like urban design, energy transition and climate adaptation. The second tool includes fifteen district plans that contain district–specific context, area–specific policies and maps showing how the citywide District Policy directions are applied in a particular district. Once approved, the District Policy and district plans are to be used together.

Draft District General Policy

The District General Policy sets the policy foundation across the city and it includes policies on Planning and Design, Mobility, and Growth Management and Growth Activation for all districts across Edmonton. More specifically, the Planning and Design in District policies provide guidance and policies for urban design, energy transition and climate adaptation, heritage and cultural resources, land use planning, Nodes and Corridors policies, and Open Space and Natural Areas policies.

Draft District Plan

Belmead is located within the West Edmonton District Plan along with 20 other neighbourhoods. The Draft District Plan's Land Use Concept to 1.25 Million designates land in Belmead as Urban Mix, Open Space, Urban Service, and two Local Nodes.



2.4.3 Accessibility

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES, POLICY NO. C602

Accessibility is fundamental to the quality of life, well-being, and engagement of individuals with disabilities in the social, economic, cultural, spiritual, and political aspects of society. The purpose of Policy C602 is to ensure people with disabilities are treated with respect and have equitable access and opportunity to contribute. The policy also highlights the City of Edmonton's commitment to the internationally recognized principles of Universal Design, which are founded on the philosophy that accessibility is a fundamental condition of good design.

ACCESS DESIGN GUIDE, VERSION 4

The Access Design Guide is intended for use when planning, designing, building, and maintaining facilities, parks and open spaces owned or leased by the City of Edmonton to ensure designs are inclusive for all ages and abilities. This includes transportation and open space infrastructure.

Central to Belmead are several schools and seniors housing developments. This heightens the necessity to ensure that the project thoughtfully considers designs that improve safety, accessibility, and comfort of these vulnerable users. The Access Design Guide will be incorporated in project designs by identifying opportunities to:

- Improve connections (e.g., closing gaps where bike routes and sidewalks do not connect with other existing routes and sidewalks, widening pathways);
- Make public spaces more accessible (e.g., providing access points near schools and seniors housing, ensuring paths of travel are not obstructed by street furniture or trip hazards);
- Provide barrier-free amenities (e.g., picnic tables, gathering areas); and
- Ensured seating is provided (e.g., providing seating with views to points of interest, providing a variety of seating options at 100 m intervals along trails and in clusters within parks).

















2.4.4 Winter

WINTER DESIGN POLICY NO. C588 AND WINTER DESIGN GUIDELINES

The Winter Design Policy encourages designing year-round spaces with a winter lens. The policy includes the following five winter design principles across neighbourhoods, streets, sites, and open spaces that will:

- 1. Incorporate design strategies to block prevailing winds and downdrafts.
- 2. Maximize exposure to sunshine through orientation and design.
- **3.** Use colour to enliven the winterscape.
- **4.** Create visual interest with lighting, while being mindful of density, spread, and colour.
- **5.** Design and provide infrastructure that supports desired winter life and improves comfort in cold weather.

These five principles can be applied to all contexts (neighbourhoods, streets, sites and open spaces) in a myriad of different ways. The Winter Design Guidelines build on the principles by providing several goals and outcomes to improve the outdoor experience during winter and champion active winter living. Investments in the public realm and transportation network, along with private sector investment, are encouraged. Specifically, the guidelines speak to ensuring neighbourhoods are designed with winter comfort, safety, access and aesthetic appeal in mind, considering all ages and abilities. These considerations, along with providing opportunities for winter programming and designing elements to attract residents outside during the winter, will be reviewed during the analysis of Belmead and considered when proposing enhancement opportunities for sidewalks, walkways, roads, parks, and other open spaces.



Image source: City of Edmonton

2.4.5 Transportation

SNOW AND ICE CONTROL POLICY NO. 409

Edmonton is a winter city, and its transportation network needs to function for people in all seasons. The Snow and Ice Control Policy sets guidelines that support a safe, reliable, and connected transportation network after snow and ice events. The associated Snow and Ice Control procedure identifies timelines and levels of service for roadways and active transportation facilities based on classification. The Belmead project team will consider the level of service required for all–season service within the project area when designing streets and paths while also considering designs that take into consideration winter operational and maintenance beyond the level of service.

ACTIVE TRANSPORTATION POLICY NO. C544

The Active Transportation Policy optimizes opportunities to walk, roll and cycle, regardless of age, ability, or socioeconomic status in Edmonton. The policy supports active transportation by providing infrastructure to enhance safety and accessibility; raise awareness of the options available to Edmontonians and the benefits of being active; educate users of their rights and responsibilities; enact policies, procedures and programs to support and encourage active transportation modes; and support and encourage active transportation through collaboration, cooperation and partnerships.

The Belmead renewal project presents an opportunity to evaluate the current active transportation networks at the local scale and enhance the safety and accessibility of the infrastructure in alignment with the policy, and in

particular, Policy Statement 1"Enhance accessibility, safety, security, and convenience through strategic improvement, expansion, and maintenance of the infrastructure and facilities that support Active Transportation, including sidewalks, curb ramps, shared pathways, marked bicycle and shared use lanes, and end-of-trip facilities."

COMMUNITY TRAFFIC MANAGEMENT POLICY NO. C590

Traffic shortcutting and speeding issues, as well as other negative driver behaviours, can have a profound impact on the safety and quality of life of residents. The purpose of the Community Traffic Management Policy is to support livable, healthy, and safe communities by providing guidance for a systematic and transparent process to identify, assess, respond to, and report on community traffic issues.

The City of Edmonton strives to mitigate the community impacts of the transportation system by managing the behaviour of traffic in residential communities. Community Traffic Management includes physical measures that minimize traffic shortcutting and speeding to enhance safety for residents and all road users. The implementation of Community Traffic Management initiatives concurrently with neighbourhood renewal is explicitly encouraged in the policy. The Belmead renewal project presents an opportunity to improve traffic safety through physical measures such as raised crosswalks, curb extensions, and narrowing lanes to reduce traffic speed.

SAFE MOBILITY STRATEGY 2021-2025

The Safe Mobility Strategy's purpose is to achieve Vision Zero through safe and livable streets in Edmonton. Vision Zero is the internationally endorsed long-term goal of zero traffic-related fatalities and serious injuries. The City of Edmonton adopted Vision Zero in 2015 and its first strategy, the Road Safety Strategy 2016–2020, made significant progress in reducing serious injuries and fatalities by targeting hotspot locations for infrastructure improvements and enforcement. The Safe Mobility Strategy builds on this momentum by evolving from a hotspot approach to a combination of location-based and system-wide approaches that will help tackle widespread issues that contribute to crashes, including street design and the deep-rooted cultural norms around traffic and mobility. The strategy directly ties traffic safety to The City Plan and ConnectEdmonton to reflect the interdependence between safe mobility and other City goals such as mixed land use, climate resilience, and health. The Belmead project team will identify traffic safety issues through public engagement and evaluation of traffic safety and collision data. This information will be used to develop concepts that mitigate traffic safety issues in the community through design interventions that may include curb extensions and/or signalization at crossings and implementing engineering countermeasures for reducing speeds near schools and seniors' facilities such as raised crossings and bulb outs.

THE BIKE PLAN

The Bike Plan provides a strategic framework to support the implementation of The *City Plan* into an all ages, abilities, and seasons bike network. Six principles outlined in the plan are intended to guide the planning and design of the bike network:

- Health and Comfort Grounding the design in safety principles
- Connectivity Providing a complete bike network without gaps or missing links
- Directness Providing direct routes with fewer detours
- Network Density Ensuring the routes are properly spaced according to demand
- Attractiveness Designing the routes to be aesthetically pleasing
- Integration Ensuring the bike routes fit into the local context and area

One of the three route types identified in the Bike Plan is relevant to renewal efforts in Belmead:

- Future District Connector Routes Act as cycling arteries connecting multiple neighbourhoods.
- Neighbourhood Routes Provide local access to community destinations and opportunities for recreational cycling.

The Belmead renewal project will seek opportunities to provide future bike routes (i.e., new bike routes that would contribute to creating a comprehensive city-wide bike network) in accordance with the Bike Plan. Potential bike route alignments will be explored, and constraints identified (e.g., right-of-way constraints) both through public engagement and technical review prior to considering bikeway facility design options.

There are no identified bike routes within the boundary of Belmead. However, the Bike Plan identifies a part of 87 Avenue as a Future District Connector Route. Existing and future bike routes in accordance with the Bike Plan are discussed in **Section 3.7.3** and shown in **Map 17**.

BIKE ROUTE WAYFINDING

The City of Edmonton is updating the Bike Route Wayfinding to help people identify how they can effectively and intuitively navigate the city's bike network. The project team will review key destinations, within and surrounding Belmead to help inform potential wayfinding locations. Potential destinations within the neighbourhood include schools, parks, Community League facilities, and commercial centres. Outside of the community, destinations include West Edmonton Mall, Mayfield Common, Meadowlark Health and Shopping Centre, and MacKinnon Ravine and MacKenzie Ravine.

2.4.6 Open Spaces & Environment

OPEN SPACE POLICY C594 (2017)

The Open Space Policy outlines the importance of open space networks to Edmonton's environmental and community wellness. The policy acknowledges that green networks should be connected, multifunctional and equitable. It also identifies the need for collaboration within City departments and with community members to promote stewardship in open space development and enhancement. The Open Space Policy recognizes open space as part of a connected landscape, and values public land as an important resource that requires holistic planning. The open spaces and open space network in Belmead should be reviewed under this lens and, with community engagement, opportunities should be identified to make certain that the open spaces serve all residents of the Belmead neighbourhood.

PARKLAND BYLAW (BYLAW 2202) AND CORPORATE TREE MANAGEMENT POLICY C456C

The City-owned parkland in Belmead falls under the City of Edmonton's Parkland Bylaw and Corporate Tree Management Policy. Any work for open space upgrades that includes work around existing trees or removal of existing trees requires review by the City of Edmonton's Urban Foresters. All trees to remain are to be protected during construction according to the Corporate Tree Management Policy.

BREATHE: EDMONTON'S GREEN NETWORK STRATEGY

Breathe: Edmonton's Green Network Strategy calls for an integrated network of open spaces throughout the city. Breathe adopts a multifunctional network approach to open space planning. The strategy considers the amount, function and configuration of not only municipal parks, but all publicly accessible open spaces, to form a comprehensive picture of how the entire green network performs. The strategy focuses on outdoor open spaces that are publicly owned or publicly accessible which includes parks, plazas, pedestrian–friendly streets, natural areas, green ways, and green infrastructure.

The driving principles of *Breathe* is to ensure that development of open spaces is done in a way that supports community celebration and socialization, provides ways for residents to recreate and live healthier lifestyles and preserves and enhances the ecological capital within our city.

This is reflected in the three themes of *Breathe*:

- Ecology open space protects the environment by supporting natural ecological processes, saving the riverbank from erosion, and building habitat for flora and fauna
- Wellness open space supports health and well-being, offering places for people to physically and mentally recharge
- Celebration open space connects people, building a sense of place and providing places for communities to thrive, gather and celebrate

Breathe's ten strategic directions address safety, inclusivity, vibrancy, community engagement, equitable distribution, public accessibility, ecological integrity, flexible spaces, collaborative planning, and other important goals. Breathe also goes beyond a simple supply-based approach to provision of open space in neighbourhoods and considers measures of:

- Distribution The arrangement of, and access to, open spaces across the landscape
- Quality The functionality of an open space, considering the condition of parkland infrastructure and the value of the functions it provides
- Diversity The range of different open space types and functions within the landscape
- Supply The physical amount of open space

The open spaces within Belmead will be analyzed within the context of *Breathe*'s themes and strategic directions (Part 4: Green Network Policies), with opportunities seeking to enhance open space provision in the neighbourhood. It should be noted that parkland acquisition is outside the renewal project's scope. However, through engagement and technical analysis, we will seek opportunities to improve the overall function, quality, diversity, accessibility, and connectedness of existing open spaces.

BREATHE IMPLEMENTATION PROJECT

The City is initiating the *Breathe Implementation Project*, which will replace and effectively retire the *Urban Parks Management Plan* (UPMP). The UPMP was created for new neighbourhood development and offers limited guidance for developed neighbourhoods. Adopted in 2017, *Breathe: Edmonton's Green Network Strategy* provides a network approach to open space planning, integrating ecology, celebration, and wellness themes, while expanding provision considerations to include distribution, supply, quality, and diversity.

The Breathe Implementation project entails the following:

- Integration of updated open space datasets with ongoing data management/maintenance;
- Development of standards, directions, and strategies with respect to open space planning, assembly, (re) development, repurpose, and management; and
- Development of an open space network analysis methodology to identify gaps and inform priorities for the city's 15 districts.

Target project completion date is end of 2025.



Image source: City of Edmonton

LIVE ACTIVE STRATEGY 2016 - 2026

Live Active is a collaborative strategy to encourage Edmontonians of all ages, abilities, and interests to enjoy the benefits of physical activity — creating positive social and cultural change through increasing health and wellness. The core principles of the strategy are Inclusion, Accessibility, Physical Activity Has a Social Benefit, Supporting Excellence, Collaboration and Innovation, and Continued Connections. The Belmead renewal project can support the goals and outcomes of the strategy by improving the safety and accessibility of parks and open spaces, providing supporting amenities for active recreation, and improving the elements of Belmead's active mobility network.

URBAN FOREST MANAGEMENT PLAN

Edmonton's Urban Forest Management Plan (UFMP) is a strategy for sustainably managing and enhancing diverse urban forests. Edmonton's urban forest provides many benefits including reducing heat island effect, contributing to low-impact development, and enhancing the ecological network. The UFMP is rooted in four guiding principles:

- 1. Promote healthy and sustainable urban forest.
- 2. Engage the community in protecting and managing the urban forest.
- **3.** Think globally and regionally; plan and act locally.
- **4.** Use best practices, innovation, science, information and technology.

Maintenance of existing trees will be an important objective of the renewal in Belmead. Where possible, adding new trees will be considered to contribute to Strategy 1.1 of the UFMP: "Develop and implement programs that will lead to the establishment of a 20% tree canopy coverage through partnerships, residential action, naturalization and additional landscape tree plantings."

While no metrics are available on tree canopy coverage for the Belmead neighbourhood overall, both the project area and neighbourhood are likely well below the 20% target as most of the tree planting is limited to parks.

DOGS IN OPEN SPACES STRATEGY

The Dogs in Open Spaces Strategy is a 10-year strategy to guide the planning, design, and management of off-leash areas in Edmonton. It is accompanied by the Dogs in Open Spaces Implementation Plan (2017), which recommends actions to advance planning, design, and management of the strategy.

Some of the relevant planning recommendations for Off Leash Areas include:

- The target number of Neighbourhood Off Leash Areas should be determined based on population density and dog ownership numbers
- Triggers for new Off Leash Areas may be through the City's identification of an underserved or high demand area, application for new development or redevelopment, or a request from the public through an application process
- Access to neighbourhood Off Leash Areas should be located along walking, biking and transit routes and use on-street parking where feasible
- Preferred land types for Off Leash Areas include open space, transportation or infrastructure rights-of-way, utility rightsof-way, drainage lands, or other public land holdings

The strategy also includes several design recommendations, including:

- Boundary of the off-leash area including when "hard edges" (e.g., fencing) or "soft edges" (vegetation, landforms, etc.) should be used
- Standard amenities (including waste bins, waste bag dispensers, signage, open space and trees) as well as when special amenities can be considered
- Guidance on designing primary walking trails and circulation
- Other considerations such as environmental protection, winter design, surface material, signage, vegetation, drainage, etc

The City's analysis indicates there is medium access to dog off-leash areas surrounding Belmead. There was one temporary Pop-Up Dog Off-Leash Area in Belmead in 2023. There is no permanent off-leash areas in the neighbourhood or abutting neighbourhoods and the closest off leash dog area is located in Callingwood, approximately 1.8 kilometres to the south of Belmead.

The opportunity for a dog park or off-leash area will be reviewed through analysis of neighbourhood open spaces as well as public engagement. Identification of the location and concept design for any dog park or off-leash area in Belmead will align with the Dogs in Open Spaces Strategy.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED) AND DESIGN GUIDE FOR A SAFER CITY

Crime Prevention Through Environmental Design (CPTED) helps make communities safer through neighbourhood planning, development, and maintenance. Best practices and resources for designers of public spaces are provided in the City of Edmonton's Design Guide for a Safer City and through

organizations like the International CPTED Association. CPTED seeks to reduce both opportunity and the number of targets for criminals. Legitimate users of a space are actively encouraged, opportunities for observation are increased, and potential offenders are made to feel uncomfortable.

There are four basic strategies in CPTED:

- Access Control guides people through a space by the strategic design of sidewalks, paths, landscaping, streets and building entrances
- Surveillance placement of physical features, activities and people in a way that maximizes visibility
- Territorial Reinforcement use of physical attributes that express ownership
- Maintenance proper maintenance of a space to allow for the continued use of the space for the intended purpose

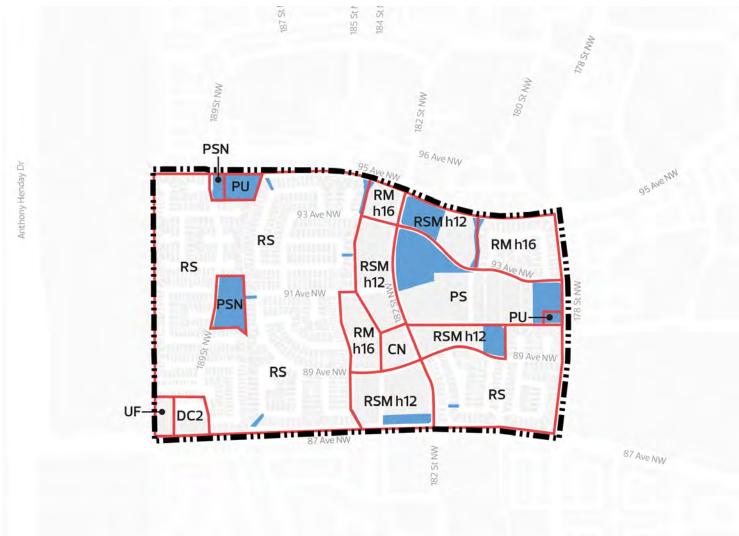
The project team will analyze the streets, alleys, shared pathways, parks and open spaces of Belmead through a CPTED lens to ensure that concepts support a safe community.

2.4.7 Zoning

In October of 2023, the City of Edmonton adopted the new Edmonton Zoning Bylaw 20001 which took effect January 1, 2024. There are no zoning overlays that apply within the Belmead neighbourhood boundary.

Under the new Zoning Bylaw, much of the neighbourhood is zoned (RS) Small Scale Residential Zone, including some (RSM h 12.0) Small–Medium Scale Transition Residential Zone and (RM h 16.0) Medium Scale Residential Zone for the multifamily housing. The commercial sites zoned Direct Control have maintained their zoning, as well as the park sites.

Map 5. Zoning and Land Ownership



ZONING DESCRIPTIONS

RS: Small Scale Residential Zone

RSM h12: Small — Medium Scale Transition Residential Zone, maximum height of 12m

RSM h16: Small — Medium Scale Transition Residential Zone, maximum height of 16m

PS: Parks and Services Zone

PSN: Neighbourhood Parks

and Services Zone

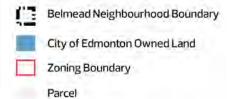
PU: Public Utility Zone

DC2: Site Specific Development

Control Zone

CN: Neighbourhood Commercial Zone

UF: Urban Facilities Zone



500m



2.4.8 Design & Construction Standards

Concept and detailed design for renewal in Belmead will adhere to the Edmonton Design and Construction Standards where possible. As a normal part of the renewal process, trade-offs may be required in constrained situations (e.g., limited right of way, utility requirements, and street trees). A design exception may be required to provide a design that is implementable (e.g., constrained right of way locations) or may be required to provide a non-traditional or alternative design that will result in significantly improved performance. Examples for when design exceptions may be required include the following:

- Constraints, such as right of way, buildings, utilities, or heritage designations that may not be able to be changed or moved
- Multimodal safety audit findings that clearly show critical risks that require mitigation
- Emerging best practices or a trial installation that will be used to test a new design or operational approach

The Edmonton Design and Construction Standards are organized into eight volumes by discipline. Each volume contains a design section, specifications and drawings as required, plus any other guidelines or manuals appropriate to that discipline. Select volumes are highlighted as follows.

EDMONTON DESIGN AND CONSTRUCTION STANDARDS VOLUME 2 (COMPLETE STREETS DESIGN AND CONSTRUCTION STANDARDS, VERSION 4)

The City of Edmonton's Complete Streets Design and Construction Standards (CSDCS) were published in 2018. Currently, the City is working on a more comprehensive update to the document. CSDCS integrate best practices in design guidance to support the planning, design, and construction of complete streets in Edmonton. The intent is to develop streets that are safe, attractive, comfortable, and welcoming to all users in all seasons while also considering operations and maintenance challenges. The CSDCS provides directions on how elements like street type (building orientation, land use, roadway classification) and modal priority need to be considered in the design.

The CSDCS addresses designing with a retrofit lens, where designers need to consider constrained right-of-ways, locations of existing buildings, mature trees, utilities, private landscaping as well as ongoing operation and maintenance costs. Retrofit situations in the Belmead renewal project may require conceptual design of multiple options and the evaluation of trade-offs inherent in each option.

Design Principles outlined in the CSDCS will guide the Belmead renewal project:

- A network of streets, transitways, and off-street pathways that together accommodate all users and allow for efficient and high-quality travel experiences;
- The transportation network provides travel options for users of all ages and abilities that are safe, universally designed, context sensitive, and operable in all seasons (including winter);
- Streets are adaptable by accommodating the needs of the present and future;

- Streets contribute to the environmental sustainability and resiliency of the city;
- Consider both direct and indirect costs, as well as the value of the public right of way and the nearby real estate; and
- Streets are vibrant and attractive places in all seasons to contribute to an improved quality of life.

LOW IMPACT DEVELOPMENT BEST MANAGEMENT PRACTICES DESIGN GUIDE AND EDMONTON DESIGN AND CONSTRUCTION STANDARDS VOLUME 3 (DRAINAGE)

Low impact development (LID) is a form of stormwater management that mimics natural hydrology by using landscape features to manage frequent, low-volume storm events close to their source. This approach focuses on maintaining or restoring the natural hydrological processes of a site, providing opportunities for natural processes to take place. By collecting stormwater in this manner, benefits such as decreased flooding, increased water quality, and decreased urban heat island effect are provided.

Based on the City of Edmonton's LID Best Management Practices Design Guide, key LID principles include:

- Preserving natural site features
- Small scale, integrated stormwater management controls dispersed throughout the site
- Minimizing hard surface areas such as pavement and asphalt
- Controlling stormwater as close to its source as possible
- Prolonging stormwater runoff flow paths and times, and
- Creating multifunctional landscapes

The design of any LID facilities or features in Belmead will adhere to the City of Edmonton's LID Best Management Practices Design Guide as well as the Drainage Design Standards.

DESIGN AND CONSTRUCTION STANDARDS VOLUME 5 (LANDSCAPING)

The intent of the Landscaping Design and Construction Standards is to ensure that landscaping on City land provides well–constructed, functional, aesthetically pleasing, and sustainable public open space. Creativity and innovation are encouraged by the standards, but landscaping must consider the City's maintenance standards.







In alignment with the landscaping standards, landscape design of the City's parks and open spaces through the Belmead renewal project will consider the following:

- Safety and security of the public
- Functional relationship of the landscape design to existing and proposed utilities, land uses, flood / drainage patterns, and vehicular and pedestrian circulation networks
- Factors such as site suitability (location, size, scale), micro-climates, soil conditions, hydrology, slope stabilization, erosion control, successive plant growth, visual screening, and control of pedestrian circulation
- Maintenance requirements, including consideration for access by maintenance equipment and crews
- Accessibility, including consideration of opportunities for barrier-free access
- Protection and preservation of the natural environment and enhancement of local biodiversity
- Visual interest and aesthetics
- All-season design, including accommodations for weather protection and all-season use

2.5 GBA+ Analysis

2.5.1 What is GBA+?

Gender-based Analysis Plus (GBA+) is an analytical tool often used with the intention of advancing gender equality. The "plus" in the name highlights that Gender-Based Analysis goes beyond gender and includes the examination of a range of factors such as age, education, race, language, disability, culture and income, and their intersectionality. The goal of GBA+ is to ensure that gender and other diversity characteristics are properly considered in all government programs and policies that affect Edmontonians. A GBA+ approach recognizes that people are influenced by intersecting identity factors that are either marginalized or privileged, and that change over time.

The community of Belmead is composed of a diversity of people with varying ages, abilities, and social factors, which must be considered in the development of design solutions that benefit all residents. Although there is no City of Edmonton guide for applying GBA+ to projects, there are best practices that project teams can follow. Applying GBA+ requires ongoing research, reflection, sharing, and evaluation.

GBA+ is used to review and analysis the impacts of: the existing design, the way that public engagement is conducted, the communication methods we use, and the design options that are developed.

2.5.2 Analysis Criteria

This UDA considers the ways that Belmead's built form in the public realm works (or doesn't work) for its diverse residential population which includes:

- Seniors (65+) (12.4%)
- Children (0–14) (19.1%)
- People with impaired mobility
- Gender, racial, and cultural minorities

It is also important to consider the needs of business owners, employees, customers, and other people coming to Belmead for the services and amenities it offers through the schools, Community League, commercial businesses, and events hosted in the community.

As noted above in **Section 2.4.1**, people are influenced by multiple identity factors. For each person, these factors intersect and interact to make them who they are (intersectionality). Using an intersectional approach to evaluating the neighbourhood's urban design can help to identify and address systemic barriers to equitable community access and enjoyment.

The GBA+ analyzes four conditions and some built form / public realm considerations that vary depending on the population groups identified above:

- Physical ability
- Personal comfort
- Physical infrastructure
- Safe roadway crossings

PHYSICAL ABILITY

Physical ability varies based on factors such as age and presence of mobility impairments. The following are factors to consider when analyzing how these factors impact one's mobility in their neighbourhood:

- Typical five-minute walk on clear, level ground for an able-bodied adult: 400-500 m
- Typical five-minute walk on clear, level ground for a senior or person with a walker or cane: 275–300 m
- In addition to a shorter walking distance, seniors and people with impaired mobility require more places to rest along their walking journey
- Slopes, stairs, curbs, and street crossings are also factors that can affect mobility for all people but may more greatly impact children, seniors, and people with impaired mobility
- Typical distance travelled independently by children over the age of 10: approximately 500 metres
- The distance can increase depending on age and mode of transportation (i.e., a child on a bike will travel further). Children under the age of 10 are typically accompanied by an adult or older sibling

PERSONAL COMFORT

Personal comfort in public spaces impacts how people will move and use spaces. The following are perceived personal comfort and safety barriers:

- Children and seniors travelling in their neighbourhood: traffic volumes, speed of traffic, directness of routes and whether infrastructure is available that increases personal comfort and safety such as street lighting, marked and lit crosswalks, and covered bus shelters with benches.
- Women and gender, racial and cultural minorities: lack of proper sightlines (i.e., hidden or winding walkways and walkways obscured by overgrown vegetation), adequate lighting and other people around.

PHYSICAL INFRASTRUCTURE

The provision and condition of infrastructure is important to the equitable use of the public realm. Lack of appropriate infrastructure is not only a comfort and safety concern but may also encourage illegal or unsafe usage of infrastructure, such as riding bicycles on the sidewalk or crossing where no crosswalk exists. This often exposes users to the possibility of conflict or law enforcement, which has radically different consequences for racialized individuals as compared to non-racialized individuals.

The design of physical infrastructure can also improve the safety, comfort, and visibility of seniors, children, and families with infants or toddlers. For example, wheelchairs or strollers require wider sidewalk widths than an able-bodied individual. Enhancements to the physical infrastructure to accommodate these user groups make the public realm safer and more comfortable for all users.

The following are some common issues to look out for when analyzing a neighbourhood's physical infrastructure:

- Lack of appropriate infrastructure for modal uses such as missing sidewalks and lack of marked or separated bike routes
- Inadequate sidewalk widths for strollers, wheelchairs, walkers passing or walking side-by-side
- Placement of street furniture such as benches, signage and streetlights that block or impede movement
- Lack of protection from fast-moving traffic or high-traffic volumes
- Inappropriate vehicle speed for local context
- Inconvenient or limited crosswalk locations
- Expansive road widths that take longer to cross
- Short crossing times for people walking at controlled intersections
- Missing or inappropriate curb ramps
- Lack of places to rest
- Too frequent or poorly constructed driveway crossings
- Lack of or insufficient lighting
- Lack of adequate drainage during rain events and lack of snow clearing on sidewalks, roads, and at crossings
- Facilities, amenities, and site design that does not accommodate or support year-round use such as lack of shelter from wind and rain and lack of landscaping to provide shelter from wind and shade from summer sun

The City of Edmonton Access Design Guide and the City of Edmonton Complete Streets Design and Construction Standards provide several design considerations and solutions that support a well-designed city that is inclusive, accessible, safe, and considers the needs of everyone, regardless of age and ability.

SAFE ROADWAY CROSSINGS

The type and design of roadway crossings impacts the safety and comfort for seniors, children, and people with impaired mobility. The following are some considerations when analyzing roadway crossings:

- Length of roadway crossing: Can a user cross the roadway relatively quickly or should additional infrastructure, such as a refuge island, be provided?
- Appropriate crossing control type: What type of control is present to alert drivers of a crossing pedestrian? E.g., overhead flasher, pedestrian activated signal, stop control, uncontrolled.
- Distance between safe crossings: Are crossings provided at the right locations and at an appropriate distance or frequency? Are there any missing crossings?
- Location of roadway crossing: is the crossing at the desired crossing location? Are people avoiding the formal crossing infrastructure because it is onerous and controlling?
- Sightlines: Are people walking, rolling, and biking visible to drivers? Does landscaping, infrastructure, or roadway design such as curves in the road obscure the view of oncoming traffic for people waiting at a crosswalk or in the act of crossing a road? Does landscaping, infrastructure, or roadway design such as curves in the road obscure the ability of drivers to see people waiting at a crosswalk or people in the act of crossing a road?



3.0 Neighbourhood Analysis



3.1 Approach & Considerations

The approach to neighbourhood analysis and future creation of concepts for streets and places is based on the philosophy that design needs to reflect the context — current and future. This analysis is to understand the existing conditions and context of the community and identify opportunities, constraints and gaps then targeted with design options and tradeoffs analysis.

The neighbourhood analysis will be supported with public engagement where analysis findings will be shared with the community and to seek their input. The input from the community will provide information on their lived experiences and identify areas where the quantitative data from the neighbourhood analysis may not be telling the whole story.

The neighbourhood analysis was completed through desktop review of geospatial, sociodemographic, and transportation data as well as site visits where notes and photos were used to capture observations. The following areas were analyzed:

- Land ownership and development opportunities
- Commercial nodes and community destinations
- Built form and character areas
- Open space network
- Complete Streets analysis
- Mobility networks
- Infrastructure

3.2 Land Ownership & Development Opportunities

Land ownership is an important consideration for renewal projects. Different parcels of land are associated with different organizations, such as the City of Edmonton, the Public and Catholic School Boards and other privately owned land. These lands may be subject to different land governance requirements and property rights and require different types of approvals to build improvements. Land ownership within Belmead is identified in **Map 6**.

MUNICIPAL USE PROPERTIES

- Municipal Use Properties (MUPs) provide land to be used for public consumption or benefit for utilities, infrastructure and transportation
- Similar to Walkway Lots, the MUP in Belmead is typically used for pathways
- City's Municipal Use Property holdings do not need easements for public access or utilities
- There is only one MUP in Belmead that is identified as a "Remnant Parcel Uncirculated". The MUP currently contains greenspace between two residential properties

COMMUNITY HOUSING

- Community Housing holdings are residential properties owned by the City of Edmonton, leased and managed by Civida, the largest provider of community and affordable homes in Edmonton
- There are three Community Housing Holdings located within the Belmead neighbourhood:
 - 1 One is located south of 95 Avenue and north of the Belmead Park
 - 2 The second one is located south of the St. Benedict Catholic School and north of 89 Avenue
 - 3 The third one is located north of 87 Avenue, west of 182 Street

PUBLIC UTILITY LOTS

- The purpose of Public Utility Lots (PUL) is to provide land to be used for public consumption or benefit for utilities, infrastructure, and transportation
- Public Utility Lots are part of the City's MUPs and do not need easements for public access or utilities
- There are three Utility Lots in Belmead:
 - 4 South of 95 Avenue, east of 189 Street
 - 5 North of 93 Avenue and east of 182 Street
 - 6 West of 178 Street and south of 93 Avenue

WALKWAY LOTS

- Used for pathways (see Section 3.7 for more information on pathways)
- Walkway Lots are a Transportation Holding and are treated as road right-of-way when undergoing approvals (for example, no development permit required)
- There are five Walkway Lots within Belmead:
 - 7 South of 95 Avenue, east of 189 Street
 - 8 South of 93 Avenue and north of 91 Avenue
 - 2 walkway lots are located North of 87
 Avenue and South of 87a Avenue
 - 10 North of 87 Avenue, west of 181a Street

LANDOWNERSHIP AND LEASES

- There is a tripartite Agreement with Community League, City of Edmonton and Edmonton Federation of Community Leagues.
- Map 6 shows the lands owned by the City of Edmonton (Parks Holding), lands under the joint-use agreement with the EPSB and ECSD for the school sites, Municipal Use Property (MUP) lands, Transportation Holding lands, City Real Estate Holding lands, and Drainage.
- There are three Parks Holdings in Belmead:
 - 11) Belmead Park was designated in 1981 and contains an area of 2.81 ha.
 - Parkwest Pop Up Dog Park was temporarily installed at the Parkwest Field as part of the Edmonton Pop-Up Dog Parks program in May 2023. The temporary off-leash locations were closed in October 2023.
 - 13 Park west Toboggan Bowl is not identified as a toboggan hill on the City of Edmonton database; however, the site is commonly used for tobogganing during winter months. The area is identified a drainage/utility lot location.

COMMERCIAL SITES

The commercial sites in the area are privately owned. See Section 3.3 and Map 7 for locations of commercial sites. Streets, alleys, sidewalks, and streetlights will be evaluated and considered for improvements in these areas.

OPPORTUNITIES

- Explore the feasibility of enhancing mid-block connections by adding new or missing pathways, widening existing pathways, adding/upgrading additional lights, and adding landscaping.
- Coordinate with the EPSB and ECSD to explore renewal opportunities on their lands such as new pathways and seating areas through or adjacent to the school sites.
- Where possible, coordinate public engagement activities of the Belmead renewal project with other ongoing and planned public and private projects.



Image source: City of Edmonton

Map 6. Land Ownership



3.3 Commercial Nodes & Community Destinations

The existing commercial nodes and community destinations in Belmead and in surrounding areas within a five-minute walk for an able-bodied adult (400 metres) from the edge of Belmead are identified on **Map 7**. Future LRT stops will be available along the Valley Line West at the south of the edge of Belmead. Based on the analysis below, Belmead meets the *City Plan* definition of a 15-minute district*. Improvements to streets, sidewalks, lighting, and street crossings to make walking, rolling, biking, and access to transit safer, more comfortable, and more convenient will help enhance the experience of the area for residents, visitors, businesses, employees, and customers.

COMMUNITY FACILITIES AND CIVIC SITES

- Within Belmead
 - Belmead Community League
- Within a five-minute walk
 - La Perle Community League
 - Aldergrove Community League

*includes meeting most of your daily needs within a 15-minute walk, roll or transit trip from your home.

SMALL AND MEDIUM SCALE COMMERCIAL DEVELOPMENT

- Within Belmead
 - Belmead includes the Belmead Professional Centre located in the centre of the neighbourhood. This commercial centre contains a physiotherapy, dental clinic, daycare, hearing aid store, beauty salon, pharmacy, restaurants, nail salon, convenience store, and medical centre.
 - Belmead also includes a strip mall in the southwest corner of the neighbourhood which contains a dental office, gas station, restaurant, pet clinic, beauty salon, and a convenience store.
- Within a five-minute walk
 - Small and medium-scale commercial developments are within a five-minute walk to the north and south of Belmead. More specifically, Belmead is within a five-minute walking distance from the commercial centres in La Perle and in Aldergrove.
 - It should be noted that accessing the small and medium-scale commercial sites that are in proximity to Belmead by walking, rolling, or biking requires crossing wide arterial roads (i.e., 95 Avenue and 87 Avenue).

LARGE SCALE COMMERCIAL DEVELOPMENT

- Within Belmead
 - There is no large-scale commercial development in Belmead
- Within a five-minute walk
 - Belmead is within a five-minute walk of one of the larger-scale commercial developments, West Edmonton Mall
 - It should be noted that accessing West Edmonton Mall by walking, rolling, or biking requires crossing the busy road of 178 Street or 87 Avenue
 - Services provided on these sites include restaurants, grocery stores, and a variety of retailers

PLACES OF WORSHIP

- Within Belmead
 - Covenant Christian Reformed Church
- Within a five-minute walk
 - There is no place of worship within 5 minutes of Belmead

SCHOOLS

- Within Belmead
 - Belmead School (Public K-6)
 - St. Benedict Catholic School (Catholic K-6)
 - No schools in Belmead from Grade 7 onwards
- Within a five-minute walk
 - Aldergrove School (Public K-6)
 - La Perle School (Public K-6)

PARKS AND OPEN SPACES

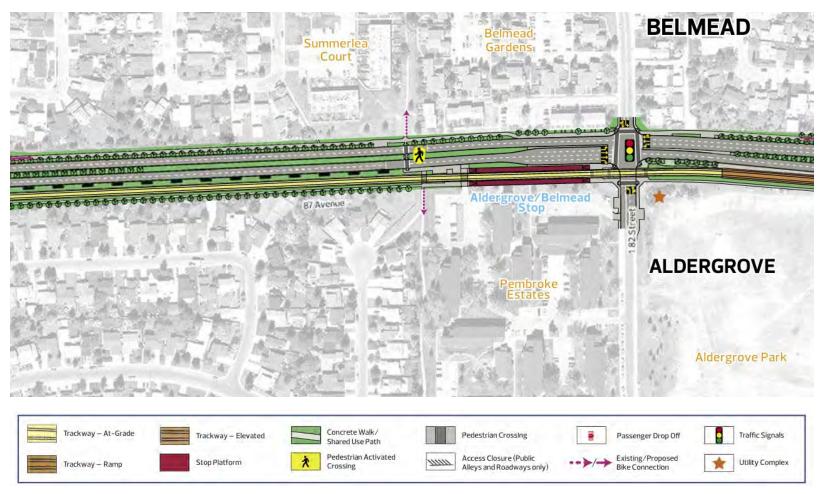
- Within Belmead
 - Belmead Park
 - Belmead School Park Site
 - St. Benedict School Park Site
 - Parkwest Field
 - Parkwest Toboggan Bowl
- Within a five-minute walk
 - Terra Losa Park Includes Gazebos
 - Summerlea Park
 - Aldergrove Park
 - La Perle School Park Site
 - La Perle Soccer Field



Image: Belmead Park playground

ALDERGROVE / BELMEAD FUTURE LRT STOP

• Construction of the Valley Line West LRT started in 2021 and is expected to take five to six years to complete. There is one LRT stop at the south edge of the Belmead neighbourhood on 87 Avenue. The proposed LRT stop is shown in more detail in the figures below.



Aldergrove / Belmead Stop (182 Street and 87 Avenue) (Source: Valley Line West LRT Downtown to Lewis Farms Booklet, Spring 2021)

OPPORTUNITIES

- Review local community destinations and neighbourhood active transportation connections using GBA+ criteria to determine equitable access
- Prioritize improvements for pedestrians within the 400m / 5 minute walkshed
- Focus public realm improvements around key nodes and community destinations
- Explore opportunities to enhance the experience of people walking along key walking routes
- Explore opportunities to enhance connections within the neighbourhood to surrounding destinations
- Explore improvements to surrounding roads to improve accessibility for people walking, rolling, and biking to and from Belmead to enhance the 15-minute district



100 Ave NW : Belmead Neighbourhood Boundary Neighbourhood Boundary 99 Ave NW St.Thomas — Shared Pathway More Catholic 97a Ave NW Shared Roadway a Perle Eat Future Bike Route (District Connector) School Annunciation Catholic School Future Valley Line LRT Stations Transportation **Utility Corridor** (Provincial Property) St.Francis Commercial Xavier High Lewis 93 Ave NW Estates Golf School School/Library Course Community Community Building Places of Worship Hospital 89 Ave NW Parks and Open Spaces -Natural Area 87 Ave NW Community Transportation Utility Corridor 400m Walkshed from StJustin Neighbourhood Boundary 800m Walkshed from HE Beriault **Future Transit Station** Catholic Junior Hillcrest High School 500m

Map 7. Commercial Nodes and Community Destinations (within 400 m)

3.4 Built Form & Character Areas

The general built form types and character areas within Belmead are identified on **Map 8**.

BUILT FORM

Low-density residential

- One- to two-storey single detached homes set back from roads with front yards.
- Front Driveway Housing
 - Most homes in Belmead have front attached garages with driveways. The alleys within Belmead have previously undergone alley renewal.
- There are some homes scattered throughout the neighbourhood that have rear detached garages with access from the front or front detached garages. Most of these are on corner lots.

Multi-unit residential

- Row houses set back from roads with internal fenced yards or within private multi-unit sites.
- Two-and-a-half to four-storey apartment buildings with grassed front yards, balconies and parking lots positioned internally to sites or to the rear of the buildings.
 - Some buildings are street oriented. Others are internally oriented with internal walkways and ground-level amenity spaces.
- The majority of the multi-unit residential buildings are located along 182 Street NW.

Commercial

- Three-storey professional building with front surface parking lot and underground parking lot located along 182 Street north of 89 Avenue.
- One-storey strip commercial building located on 87 Avenue and 189 Street set back from road with off street surface parking lots at the front and back of buildings. Commercial buildings are generally vehicle-oriented with large parking areas and few amenities for people walking, rolling, or biking such as sidewalk connections or bike racks.

Institutional

Covenant Christian Reformed Church is set back from the road with the main entrance facing the internal parking lot on the south side of the building. The entrance of the church includes a small green space and is lined with a few trees.

Parks and Open Spaces

- School buildings set back from the internal residential collector and local roads with main building entrances facing the road and separate parking lots off to the sides.
- Belmead Park contains the Belmead Community League building which is a one-storey building with the main entrance facing the internal parking lot on the south side of the site.

Vacant Private Development Sites

■ There are no vacant private development sites in the neighbourhood.

Community Hub

- Belmead Park serves as a central open space within Belmead.
- A community hub is created through its central location in proximity to schools, the on-site amenities including a playground and Community League Hall, and its location on an important neighbourhood road (182 Street) connecting the park with other destinations and clusters of activity in the community such as schools, sport fields and other recreational amenities.
- Provides a space for the community to gather and socialize.

Internal Neighbourhood Travel Corridor

- 182 Street, 189 Street, and 93 Avenue act as the main travel routes within the neighbourhood providing access to all local roads, commercial areas, the two schools, Belmead Park and Community League, bus stops, and a place of worship.
- Most roads are bordered by sidewalks.
- These roads serve as key access points and travel routes into and through the neighbourhood.
- A variety of uses front onto these roads including low-density and multi-unit residential development, Commercial sites, schools, parks, and civic uses.
- Low density residential uses typically have front access.
- Multi-unit residential uses have street access to internal parking lots or parkades.

OPPORTUNITIES

- Strengthen walking and biking connections within the neighbourhood by enhancing shared pathways, adding missing sidewalk connections, replacing, and widening sidewalk/pathway surfaces, replacing/adding pedestrian-oriented lights, and adding landscaping.
- Explore the feasibility of enhancing the character of the neighbourhood by planting boulevard trees and creating seating areas along key walking routes.
- Explore opportunities to connect the public network of pathways, sidewalks, and paths with private internal pathways of the various multi-unit developments to create a cohesive network of walking connections.
- Explore opportunities to strengthen the functionality of the Internal Neighbourhood Travel Corridor as shown in Map 8 for all users.
- Consider public art and artistic enhancements near the community hub and commercial areas to help create a strong sense of place and establish a distinct character for the area.
- Explore how designs can enhance the character and function of the commercial areas.

Map 8. Built Form and Character Areas



3.5 Open Space Network

3.5.1 Surrounding Open Space Network

It is important to analyze the surrounding context of a neighbourhood to understand the availability of various types of open spaces and the amenities within them. By doing so, insights can be gathered to identify opportunities and gaps within the open space network. Various parks and amenities in the neighbourhoods surrounding Belmead are identified on **Map 9**.

PARKS AND OPEN SPACES

Parks and Open Spaces surrounding Belmead serve both the residents of the neighbourhood and surrounding areas. The parks in the neighbourhoods located in the immediate vicinity of Belmead (La Perle, Aldergrove, Summerlea) include:

- La Perle School Park Site
- La Perle Soccer Fields
- Aldergrove Park
 - Access to this park requires that Belmead residents cross 87 Avenue and the future LRT lines.
- Summerlea Park
 - Access to this park requires Belmead residents to cross the busy street of 178 Street.
- Terra Losa Park
 - Access to this park requires Belmead residents to cross the busy street of 178 Street.

Other parks and open spaces located just beyond the five-minute walking distance buffer from the edge of Belmead include:

- Thorncliff Park (Thorncliff)
- Primrose Park (Aldergrove)

PARK AMENITIES

Parks amenities within a five-minute walk from the edge of Belmead include:

- Five Baseball Diamonds
- Eleven Soccer Fields
- Two Playgrounds
- Two Outdoor Rinks / Skating Area
- Seven Bookable Open Spaces

All of these amenities are also available within the neighbourhood of Belmead as well.

FIVE-MINUTE WALK AND BIKE RIDE FROM BELMEAD

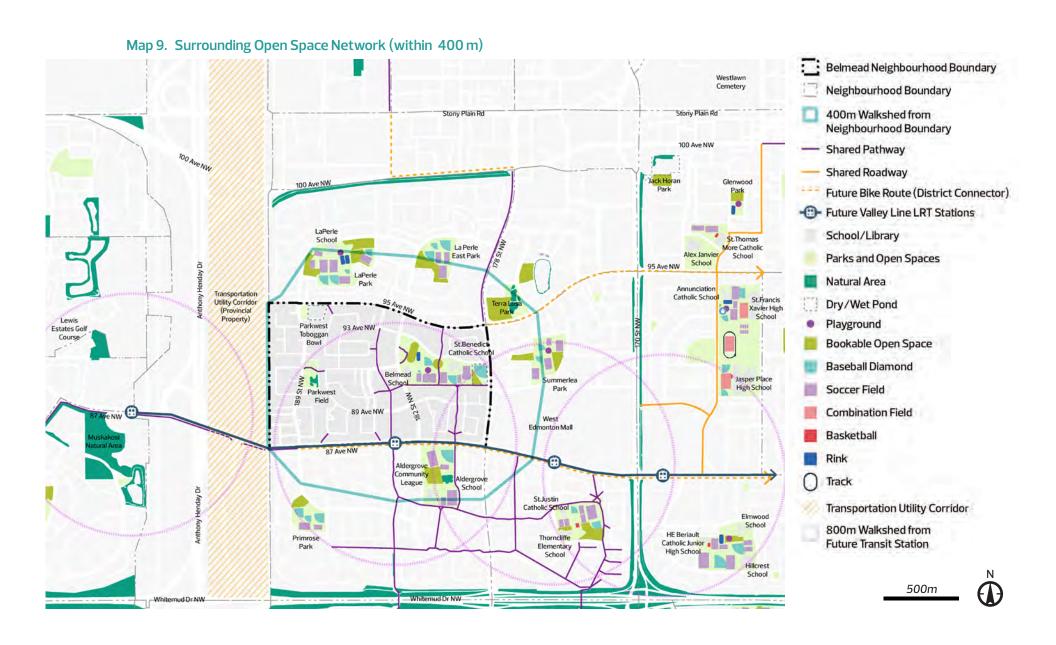
- The City Plan promotes 15-minute districts where people can meet most of their daily needs in a 15-minute walk, roll or transit trip from their home.
- Map 9 shows what parks and amenities surrounding Belmead are within a five-minute walk from the edge of Belmead (average walking speed of 5 km/h).
- All parks and amenities shown in Map 9 within the 400 metre walkshed (blue boundary) are less than a five-minute bike ride from the edge of Belmead (average speed of 15 km/h).

OPEN SPACE OPPORTUNITIES

- Through public engagement, identify missing amenities that may benefit current and future residents of Belmead and surrounding neighbourhoods.
- Improve connections for people who walk and bike between Belmead and surrounding open space destinations to contribute to an interconnected green network in west Edmonton.
- Explore placemaking opportunities within or near Belmead parks to help create a sense of place.



Belmead St. Benedict Dry Pond



3.5.2 Belmead Open Space Network

Open spaces in a community should provide multiple recreation and social opportunities for all age groups. The design of open spaces can allow for active and passive activities. Open spaces can be programmed for organized sporting events and supporting social interaction throughout all seasons. The public open spaces and amenities within each of the parks in Belmead are identified on **Map 10**. Detailed maps of each park are also provided. Any improvements to the titled property (parks spaces) will require a Development Permit. Typically, construction needs to start within a year of the Development Permit being issued.

BELMEAD PARK

Belmead Park is a community park with an area of approximately 2.8 ha located in the east part of Belmead. The park is bordered by 182 Street and 178 Street to the west and east, 89 Avenue to the south, and 93 Avenue to the north.

Adjacent land uses to the west, south, north, and east are all multi-unit residentials. There are some mature trees within the park. Trees line the west, south, north, and east borders of the park providing tree cover. Few other amenities exist within the park other than lighting along the pathway and one bench.

There is a pathway connecting from west of the park at 182 Street to the park area and the basketball court. However, the pathway does not connect to the playground, rink, or the community league. An informal trail (i.e., worn paths in the grass) are present north from the dead–end within the park to the north and east side of the park, connecting to the playground. Another winding concrete pathway travels north south through the park, connecting to the Belmead Playground.

The Community League building, associated parking lot, and outdoor rink are within the Community League's license area. In addition to these amenities, Belmead Park (not including school grounds) also contains several trash receptacles, two benches, and a bike parking amenity. The pathway is lined with pedestrian-oriented lighting.



Belmead Park Community Hall

Map 10. Open Space Network La Perle East Park La Perle School Transportation
Utility Corridor
(Provincial Frank and Etta Wild Park Property) La Perle Park Terra Losa Park Parkwest Toboggan 95 AVENW Belmead Neighbourhood Boundary 93 Ave NW Existing Shared Use Pathway Future Bike Route (District Connector) St. Benedict Summerlea Catholic School ---- Informal Path Park Community League License Area 91 Ave NW Belmead Parkwest School Parks/Open Space Field Anthony Henday Dr 187 St W School 89 Ave NW Dry Pond 89 Ave NW West Edmonton Playground Mall Baseball Diamond Soccer Field 87 Ave NW Aldergrove Park 87 Ave NW Rink Transportation Utility Corridor 500m

67

BELMEAD SCHOOL PARK SITE

The Belmead School park site is a school and community park for Edmonton Public Schools. The school park site covers an area of approximately 4.27 ha. The playground is bordered by St. Benedict School Park Site to the east, Belmead School and Community League to the west, multi-family residential to the north and south. The school building and parking lot are located east of the playground.

ST. BENEDICT CATHOLIC SCHOOL PARK SITE

The St. Benedict Catholic School Park site is a school and community park owned by the ECSD. The school park site provides about 3.6 ha. The park is bordered by Belmead Park to the west, 178 street to the east, 93 Avenue to the North, and single-detached and multi-unit residentials in the south. The school building and associated parking lot are on the northwest corner of the park site. Marked pedestrian crossings are provided across 93 Avenue.

At the time of writing this report, this park contains one bookable open space, one dry pond, two baseball diamonds, three soccer fields, and a playground. The park is lined with mature trees.



St. Benedict playground

PARKWEST TOBOGGAN BOWL / DRY POND

The Dry Pond is located in the northwest corner of Belmead, and it covers an area of approximately 1.5 ha. The pond is bordered by 189 Street to the west, 95 Avenue to the north, and single-detached homes in the south and east. The pond is bordered by mature trees providing adequate separation from the main streets. There is no formal path connecting the park to the pathway in the east. Access to the dry pond is through the sidewalks on 189 Street and 95 Avenue. Although not an official Toboggan Bowl, this park space is used for tobogganing during the winter.



Belmead Dry Pond

PARKWEST FIELD

The Parkwest Pop-up Dog Park site is an open space owned by the City of Edmonton with an area of 1.7 ha. The park is bordered by 189 Street to the west and single-detached housing on the south, east, and north. The park includes a naturalized area with mature trees in the east corner and is lined with younger trees along 189 Street. A pedestrian pathway connects the east side of the park from 187 street to the west on 189 Street. This park included a temporary Pop-Up Dog Park (as part of the City of Edmonton's Pop-Up Dog Parks program) which was closed in October 2023 (See **Section 2.2.5** for more details).

OTHER OPEN SPACES

- Pathway between 87 Avenue Street and 93 Avenue: A pathway (approximately 2.5 metres wide) connects 87 Avenue to 93 Avenue. This pathway contains a sidewalk, some landscaping, and lighting.
- Pathway south Belmead Park: A pathway (approximately 2.5 metres wide) is located south of Belmead Park just west of 178 Street. This pathway connects 178 Street to 184 Street. It contains a sidewalk, lighting, and some landscaping. This pathway connects to two other pathways, one connecting north to 95 Avenue and the other connecting south to 87 Avenue.
- Pathway north of 87 Avenue: A pathway connects the community of Aldergrove to Belmead and specifically the pathway south of Belmead School. It contains a sidewalk, landscaping, and lighting.
- Pathway north of Belmead Park:
 - A pathway connects the area south of Belmead Park to 95 Avenue and the community of La Perle. This pathway contains a sidewalk, limited landscaping, and lighting.
 - This pathway connects to the pathway south of Belmead Park and serves as a pedestrian connection between the communities of La Perle and Aldergrove.



Pathway between 167 Street and 165 Street, looking east



Pathway east of Belmead Playground

BREATHE ANALYSIS

Breathe: Edmonton's Green Network Strategy considers the amount, function and configuration of municipal parks and other open spaces to form a picture of how the entire green network performs to plan and sustain a healthy city. Breathe seeks to ensure that each neighbourhood will be supported by a network of open space for the next 30 years.

Provision

- According to the analysis performed with Breathe, the Belmead neighbourhood is well served by parks and open spaces. Breathe indicates that Belmead contains six to eight hectares of open space per 1,000 people.
 - Note that the figure from Breathe includes all "open space" which is defined by Breathe to include parks, civic spaces, roadway greens, campuses, cemeteries, and golf courses.
- The city strives to provide two hectares of parkland per 1,000 people for all neighbourhoods. This is not a stated policy but a general guideline or benchmark.

- Other options for improving provision of parkland in Belmead that do not involve parkland supply and that align with *Breathe* include identifying opportunities enhancing the quality, diversity, and/or distribution of parkland:
 - Quality considers the functionality of parkland (see "Function" topic below) and considers the condition and quality of infrastructure and amenities. For the Belmead renewal project, this will be a key goal of any parkland improvements and could include measures such as replacement of playground equipment, improving lighting and landscaping, and adding pathways where informal trails demonstrate walking and biking desire lines.
 - Diversity considers the range of different types of open spaces and functions in the green network. For the Belmead renewal project, increasing diversity could involve measures such as replacing sections of turf with naturalized landscaping, adding plazas or gazebos to provide opportunities to gather, and providing new recreational amenities.
 - Distribution considers the arrangement of and access to open spaces. The Belmead renewal project can address this by providing safe and convenient crossing locations to parks, closing gaps in sidewalk connections, and aligning with the City's Access Design Guide when designing park improvements.

FUNCTION

Breathe considers how open spaces function according to three overarching themes:

- Ecology Open space protects the environment by supporting natural ecological processes, saving the riverbank from erosion, and building habitat for flora and fauna. Examples of spaces that provide ecological functionality include spaces that provide habitat for plants and animals, vegetation that mitigates urban heat island effect, and open spaces that can absorb stormwater, prevent flooding, and provide water treatment and purification.
- Wellness Open space supports health and well-being, offering places for people to physically and mentally recharge. Examples of spaces that provide wellness functionality include spaces that contain shared pathways, sport fields, bicycle racks, playgrounds, or splash pads. In addition, spaces that support educational and recreational programs such as the Green Shack program also support wellness functionality.
- Celebration Open space connects people, building a sense of place and providing places for communities to thrive, gather and celebrate. Examples of spaces that provide celebration functionality include spaces that protect heritage resources, provide spaces for social interaction and community gathering, and spaces that provide attractive and welcoming design.

Based on these functional characteristics, the parks in Belmead can be generally described as follows:

- Belmead Park (Map 11)
 - Ecology Ecological functionality is limited to tree planting on the park's periphery and near the playground.
 - Wellness A playground, ice rink, and the basketball court are key features of this park, providing some wellness functionality.
 - Celebration This park site contains the Belmead Community League Hall as well as benches for social interaction and community gatherings. It is a central place in the community that hosts Community League events for the entire neighbourhood.
- St. Benedict Elementary School Park Site (Map 11):
 - Ecology Ecological functionality is limited to tree planting on the periphery of the park.
 - Wellness This park is primarily focused on athletic recreation with baseball diamonds, soccer field, and a playground.
 - Celebration The school is a focal point for educational programming and community building.
 Outdoors, formal gathering space is limited.

Map 11. Belmead Park Belmead Neighbourhood Boundary Shared Pathway Community League License Area Parks/Open Space School Bench Picnic Table Rink Bike Parking Belmead Community Playground League Trees Park Entrances Parking Lot St. Benedict 187 St NW Catholic ·---> Informal Pathway 91 Ave NW School Belmead Public Utility Lot/Dry Pond School Soccer Field **Baseball Diamond** 100m

Parkwest Field (Map 12)

- Ecology Provides ecological function through the naturalization in the western part of the park and the tree planting on the periphery of the park.
- Wellness Wellness functionality will primarily be focused on unstructured play.
- Celebration The park has no formal gathering spaces for social interaction or community gathering.



Map 12. Parkwest Field

- Parkwest Toboggan Bowl and Dry Pond (Map 13)
 - Ecology Provides the most ecological functionality of all parks in Belmead through the dry pond itself, as well as tree planting throughout the park.
 - Wellness Wellness functionality is provided since the slopes of the dry pond provide space for tobogganing in the winter. The open spaces provide space for unstructured play.
 - Celebration The park has no formal gathering spaces for social interaction or community gathering. Public safety may also be an issue with the significant tree planting on the periphery of the park that makes it difficult to see in or out.



Map 13. Parkwest Toboggan Bowl

OPPORTUNITIES

- Explore opportunities to improve the community's open spaces. Including but not limited to improved four season programming, naturalization, improved amenities for children and families and more cohesive neighbourhood identity
- Explore improvements to open spaces that enhance functionality including providing parkland that performs multiple functions and that enhances existing ecological, wellness, and celebration functionality
- Explore opportunities to include or formalize winter-oriented open space amenities
- Explore opportunities for passive recreation and unstructured play areas
- Enhance the accessibility of Belmead Park by connecting missing links with new pathways
- Explore opportunities to provide enhanced landscaping within the parks and pathways
- Explore opportunities in the greenspace that is a road right of way located at the west end of 95 Avenue
- Explore opportunities to improve pathway connections to improve accessibility for people who walk and roll through measures such as bollard lighting, and adding pedestrian crossings where pathways connect to the street



3.6 Complete Streets Analysis

The City of Edmonton uses the Complete Streets Design and Construction Standards (CSDCS) to guide roadway design. The Complete Streets approach provides direction for designing streets that reflect the surrounding context, land use and users. Complete Streets are designed to be:

- Safe
- Attractive
- Comfortable
- Welcoming to people of all ages and abilities

In a retrofit context such as renewal, design must consider the location of existing buildings, mature trees, utility infrastructure, private landscaping within the public right-of-way, and numerous other constraints within an existing right-of-way. These constraints must be addressed while striving to balance the needs of all street users and incorporating input through public engagement. Strategic compromises and tradeoffs may need to be explored to balance costs, technical feasibility, and other constraints.

CSDCS acknowledges that it may not be feasible or possible to completely align with the standards in a retrofit context. In these instances, it should be clearly identified where there is a variation from the standards and the rationale for the deviation should be documented using a Design Exception.

Roadway classifications in Belmead that are in the scope of this analysis are identified on **Map 14**:

- Local
- Collector

Adjacent arterial roads surrounding Belmead were also reviewed as they are essential to connecting Belmead to the rest of the city. These include 178 Street, 95 Avenue, and 87 Avenue.

Each street type has been summarized based on the following criteria:

- Presence / absence of sidewalks or shared pathways
- Presence / absence of boulevards separating sidewalks from roads
- Presence / absence of biking infrastructure (i.e., bike route signage, on-street markings, and/or separated bike lanes)
- Transit routes
- Number of bus stops with benches and shelters
- Presence / absence of street lighting
- Provision of on-street parking
- Frequency of front driveways or parking lot accesses interrupting the sidewalk
- Roadway speed(s)

In addition, the sections below provide some general commentary on the various user experiences for people who walk, bike, take public transit and drive in Belmead. Land uses adjacent to the various street types is also addressed.

Cross-sections for 189 Street (collector road), 93 Avenue (local road) are also provided in the sections below. These cross-sections illustrate approximate right-of-way widths, width of travel space within the right-of-way, and the percentage of space allocated to various users.

NEIGHBOURHOOD-WIDE OPPORTUNITIES FOR STREETS

- Retrofit streets to meet the CSDCS
- Improvements to enhance all user experiences during all seasons
- Identify roadways with speeding and shortcutting issues and explore the feasibility of implementing traffic calming measures to ensure the safety of all road users throughout the neighbourhood, specifically around schools and playgrounds
- Identify popular walking connections and routes to explore widening sidewalks
- Identify key biking connections, routes, and facility types to accommodate active transportation
- Explore the feasibility of replacing curbside sidewalks with separate sidewalks and planting boulevard trees
- Evaluate service vehicle requirements for commercial areas and sites including waste collection, deliveries, and curbside, loading, and parking management requirements related to digital retail (e.g., Uber Eats, Doordash, etc.) for commercial areas











Map 14. Complete Streets Analysis Belmead Neighbourhood Boundary **BUILT FORM** Parks/Schools/Open Space 780 St NW Low Density Residential 1895t NW 182 St NW Multi-Unit Residential Commercial 96 Ave NW Institutional Anthony Henday Dr **ROAD CLASSIFICATION** Parkwest Toboggan Arterial Bowl Collector Local Residential Belmead Community Alleys Summerlea League Park PEDESTRIAN CONNECTIONS St. Benedict Belmead Catholic Shared Pathway Parkwest School School Field Informal Pathway Zebra Crossing Marked Crosswalk West Edmonton PEDESTRIAN ACTIVATED SIGNALS Covenant Mall Christian Reformed Amber Flashing Beacon Rapid Flashing Beacon 87 Ave NW FULL SIGNALS 182 St NW Aldergrove Park 87 Ave NW Signal Controlled Crosswalk 500m

79

3.6.1 Local Roads

Local roads are shown on **Map 14**. The various elements and amenities available to serve different user groups (people who walk, roll, ride transit, bike, and drive) are shown in the maps in **Section 3.7**. Additional Local Roads Summary is provided in Table 1.

Table 1. Local Roads Summary

Presence / absence of sidewalks or shared pathways	 Sidewalks are present on most local roads except a few cul-desacs including 92a Avenue, 92 Avenue, and 189 Street Sidewalks on all local roads are of substandard quality
Presence / absence of boulevards separating sidewalks from roads	All sidewalks in Belmead are curbside
Presence / absence of biking infrastructure (i.e. bike route signage, on-street markings, an/or separated bike lanes)	No designated bike routes are present on local roads
Transit routes	 Bus Routes 914, 915, and 925 go through Belmead. They do not provide any services on the local roads
Number of bus stops with benches and shelters	 No bus stops or bus routes are provided on local roads See Map 16 for details
Presence / absence of street lighting	All local roads have street lighting
Presence / absence of on-street parking	 On-street parking available on most local roads (see Map 18 for details)
Number of front driveways or parking lot accesses interrupting the sidewalk (does not include alley accesses)	■ The majority of the homes in Belmead have front driveways
Roadway Speed(s)	40 km/hSee Map 19

USER EXPERIENCES

Driving

- Wide roads with plenty of on-street parking
- Wide roads encourage speeding on local roads
- The old profile curbs cause inconvenience for private driveways as they have to reconstruct the driveway or add mats in the gutter to reduce the transition

Walking

- Few trees in the park and private properties for shade and weather protection
- Narrow 1.5-metre curbside sidewalks make it difficult for two people to walk side-by-side or for two people in wheelchairs, pushing strollers or walkers to pass each other
- The cleared sidewalk width during winter may be further reduced due to adjacent snowbanks
- There is little separation between the 1.5-metre curbside sidewalks and on-street parking/ traffic. Vehicles can encroach on sidewalks, further reducing the width for pedestrians
- Local roads have some missing sidewalks within cul de sacs and where sidewalks are existing, several interruptions to accommodate access to parking lots

Biking

- No bike facilities exist on local roads
- Children often use sidewalks which might provide less visibility for drivers as they are backing out of driveways
- Bikes share the low traffic local roads with vehicles
- Low traffic volumes and speeds of vehicles may increase the comfort of people who bike
- The user experience during winter might be considered unsatisfactory

Transit

- Bus routes are not available on local roads.
- See Section 3.7.2 and Map 16 for more information on transit service in and around Belmead

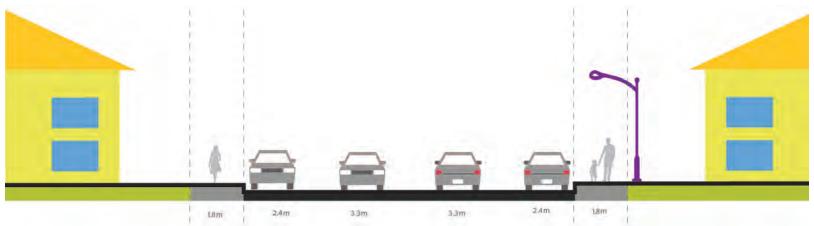






NEARBY LAND USES AND FRONTAGES

- Single detached housing is predominantly accessed via front driveways and Majority of housing in Belmead include front attached garages
- Internally focused multi-unit housing (duplexes, row houses, and apartment buildings) with accesses crossing the sidewalk to parking lots and parkades are present on 89 Avenue and 93 Avenue
- Multi-family home developments contain private internal pathways and roads that connect to sidewalks on local roads
- Most of the commercial development west of 182 Street features parking lots between buildings and an underground parkade
- St. Benedict Catholic School fronts on a local road (93 Avenue)
 - Pick up and drop off is located on 93 Avenue between 7:00 AM to 4:00 PM.



93 Ave (Local) | 15m total width, 11.4m road width (approximate)

LOCAL ROAD OPPORTUNITIES

- Improvements to enhance all user experiences during all seasons
- Explore widening sidewalks along walking routes
- Explore opportunities to provide benches along popular neighbourhood walking routes to provide places to rest
- Explore opportunities to provide end of trip amenities such as bike racks at destinations on local roads
- Explore the feasibility of planting trees along local streets and adding boulevard spaces
- Provide sidewalks in locations where they are missing
- Explore opportunities to provide alternative accesses and/ or consolidate accesses to properties where mid-block accesses exist to limit conflicts with people walking and biking, to minimize interruptions in walking and biking paths

3.6.2 Collector Roads

Collector roads are shown on **Map 14**. The various elements and amenities available to serve different user groups (walkers and rollers, transit riders, people who bike, and drivers) are shown in the maps in **Section 3.7**. A Collector Roads Summary is provided in Table 2.

Table 2. Collector Roads Summary

Presence / absence of sidewalks or shared pathways	 Sidewalks present on all collector roads 182 Street sidewalks have been upgraded with new standards
Presence / absence of boulevards separating sidewalks from roads	 No boulevard on collector roads
Presence / absence of biking infrastructure (i.e. bike route signage, on-street markings, an/or separated bike lanes)	■ None
Transit routes	 Bus Route 914 – West Edmonton Mall to Jasper Place goes through Belmead on 182 Street Bus Route 915 – West Edmonton Mall to Jasper Place goes through Belmead on 189 Street Bus Route 925 – Jasper Place to West Edmonton Mall provides service along 95 Avenue and 182 Street See Map 16 for details
Number of bus stops with benches and shelters	 Eight bus stops on 182 Street, seven are sheltered and only one includes a bench Eight bus stops on 189 Street, four of which are sheltered bus stops See Map 16 for details
Presence / absence of street lighting	 All collector roads have street lighting
Presence / absence of on-street parking	 On-street parking available on most collector roads (see Map 18 for details)
Number of front driveways or parking lot accesses interrupting the sidewalk (does not include alley accesses)	 Front driveways in primarily residential area (see Map 8) Three parking lot accesses on 182 Street north of 89 Avenue Three parking lot accesses on 182 Street south of 89 Avenue One parking lot access on 91 Avenue east of 184 Street Four parking lot accesses on 184 Street north of 89 Avenue Four parking lot access on 89 Avenue east of 184 Street and west of 182 Street
Roadway Speed(s)	 40 km/h on most collectors with the exception of playground zones 30 km/h on 182 Street, south of 93 Avenue and north of 89 Avenue – Between the hours 7:30 AM to 9:00 PM See Map 19

USER EXPERIENCES

Driving

- Wide roads with plenty of on-street parking
- Private driveway accesses for single-detached homes
- The commercial site has prominent parking lots fronting collector roads 182 Street and 89 Avenue
- Traffic calming features include on-street parking opportunities (when in use), flashing lights, and curb extensions. (see Map 18)

Walking

- Few trees for shade and weather protection
- Narrow 1.5-metre curbside sidewalks make it difficult for two people to walk side-by-side or for two people in wheelchairs, pushing strollers or walkers to pass each other
- The cleared sidewalk width during winter may be further reduced due to adjacent snowbanks
- There is little separation between the 1.5-metre curbside sidewalks and on-street parking/traffic
- Some streets are missing sidewalks at key locations (e.g., bus stops) and destinations
- Rectangular rapid flashing beacons are located at two marked pedestrian crossings along 182 Street
- A zebra-marked crosswalk is on 182 Street south of 93 Avenue and north of 91 Avenue
- Two marked up crossings are on 182 Street, one located north of 89 Avenue and the other on the south

Biking

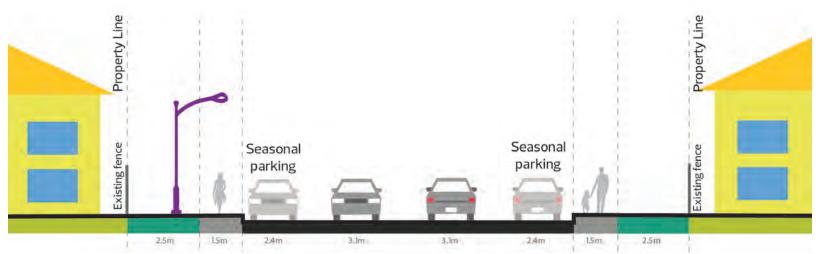
- No bike facilities exist on collector roads.
- People biking share the road with vehicles and people may bike on sidewalks because no safe legal place to ride exists
- High traffic volumes (5,000 VPD) and speeds of vehicles specifically during rush hours may decrease the comfort of people who bike

Transit

- Eight bus stops are on each collector road of 189 Street and 182 Street (see Map 16)
- See Section 3.7.2 and Map 16 for more information on transit service in and around Belmead

NEARBY LAND USES AND FRONTAGES

- Single detached housing is predominantly accessed via front driveways
- The commercial development features parking lots between buildings and the sidewalk on collector roads
- The west side of Belmead School fronts a collector road (182 Street)
 - There is no dedicated drop off zone for Belmead School. However, school bus stop location is located in front of the school



189 Street, looking north (Collector) | 19m total width, 11m road width (approximate)

COLLECTOR ROAD OPPORTUNITIES

- Improvements to enhance all user experiences during all seasons
- Explore the feasibility of implementing measures to address possible speeding and shortcutting
- Add amenities to the bus stop in the commercial area on collectors
- Explore opportunities to provide space for bus stop amenities on 189 Street
- Create bike facilities to encourage people to bike
- Explore opportunities to provide end of trip amenities such as bike racks at destinations

- Provide enhancements to 189 Street to improve experience and comfort for people who walk, roll, or bike, as well as reduce speeding / shortcutting through measures such as sidewalk widening, introduction of street trees or boulevard walks, separated bike facilities, curb extensions, pedestrian crossings, raised crossings, etc.
- Explore enhancements to the collector roads in the commercial area to make it more walkable (e.g., widen sidewalks, provide missing sidewalks in locations where they are missing, provide street trees).
- Explore opportunities to provide alternative access and/or consolidate access to properties where midblock access exists to limit conflicts with vehicles and to minimize interruptions in walking and biking paths.

3.6.3 Arterial Roads

95 Avenue, 87 Avenue, and 178 Street are arterial roads shown on **Map 14**. The various elements and amenities available to serve different user groups (walkers and rollers, transit riders, people who bike, and drivers) are shown in the maps in **Section 3.7**. An Arterial Roads Summary is provided in Table 3.

Table 3. Arterial Roads Summary

Presence / absence of sidewalks or shared pathways	 Sidewalks on all arterials (or service roads) except: North side of 95 Avenue between 178 Street and 189 Street. South side of 87 Avenue, between 182 Street and 189 Street. North side of 87 Avenue, between 182 Street and 178 Street.
Presence / absence of boulevards separating sidewalks from roads	 Portions of 178 Street, 87 Avenue and 97 Avenue provide some separation from vehicle traffic. However, no boulevard trees are present.
Presence / absence of biking infrastructure (i.e. bike route signage, on-street markings, an/or separated bike lanes)	■ None
Transit routes	 Bus Route 915 – West Edmonton Mall to Jasper place travels along 95 Avenue. Bus Route 907 – West Edmonton Mall to Westmount travels along 178 Street. See Map 16 for details.
Number of bus stops with benches and shelters	 Eight bus stops on 87 Avenue Four include benches and four are sheltered Six bus stops on 178 Street All six have benches and shelters Five bus stops on 95 Avenue Only two have shelters
	See Map 16 for details

Table 3. (cont.) Arterial Roads Summary

Presence / absence of street lighting	 All streets have street lighting
Presence / absence of on-street parking	On-street parking is available on a portion of 95 AvenueOn-street parking is absent on 87 Avenue and 178 Street
Number of front driveways or parking lot accesses interrupting the sidewalk (does not include alley accesses)	 One parking lot access on 178 Street
Roadway speed(s)	■ 60 km/h

USER EXPERIENCES

Driving

- 95 Avenue accommodates access for drivers into the neighbourhood from the north side
- Drivers can access 95 Avenue via collector roads in Belmead
- 178 Street defines the eastern border of the neighbourhood, and it is a wide 6 lane road accommodating north-south connectivity to Edmontonians.
- Residents of Belmead can access 178 Street through the local roads of 93 Avenue and 89 Avenue. There are no traffic lights at either of these intersections. 93 Avenue includes a stop sign and 89 Avenue features a yield sign at the intersection.
- Lastly, 87 Avenue is also a 4-lane road connecting drivers exiting Anthony Henday Drive to east. Residents of Belmead can only access 87 Avenue through 189 Street and 182 Avenue which can cause traffic specially during rush hour.

Walking

- No trees for shade and weather protection
- Narrow 1.5 metre curbside sidewalks make it difficult for two people to walk side-by-side or for two people in wheelchairs, pushing strollers or walkers to pass each other

- The cleared sidewalk width during winter may be further reduced due to adjacent snowbanks
- There is little separation between the 1.5 metre curbside sidewalks and vehicle traffic lane
- Only two signal-controlled crosswalks (178 Street and 95 Avenue), only three signal-controlled crosswalks on 87 Avenue and no amber flashing beacon on either arterial
- Several interruptions in the sidewalk network

Biking

- No bike facilities exist on arterial roads. However, there is a renewal project for 95 Avenue up to 182 Street which includes a Shared Use Pathway on the south side of 95 Avenue
- Bikes share the road with vehicles and people may bike on sidewalks because no safe legal place to ride exists
- High traffic volumes (20,000 VPD) and speeds (40km/h) of vehicles may decrease the comfort of people who bike on arterials

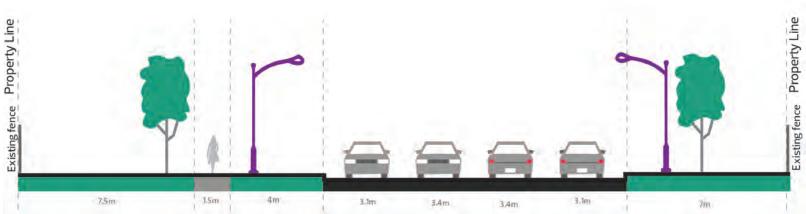
Transit

- Due to lack of separation between sidewalk and roadway, bus stops lacking benches and shelters may be uncomfortable for transit users
- See Section 3.7.2 and Map 16 for more information on transit service in and around Belmead

ARTERIAL ROAD OPPORTUNITIES

- Improvements to enhance all user experiences during all seasons
- Explore the feasibility of implementing measures to address possible speeding

- Provide enhancements to 95 Avenue, 178 Street, and 87 Avenue to improve experience and comfort for people who walk, roll, or bike through measures such as sidewalk widening, introduction of street trees or boulevard walks, separated bike facilities, curb extensions, pedestrian crossings, etc.
- Explore opportunities to provide improved crossings for 178 Street to improve safety and increase foot traffic to commercial areas
- Explore opportunities to provide improved crossings for 95 Avenue to improve safety and enhance connections between Belmead and La Perle
- Explore opportunities to provide enhanced walking and biking facilities and landscaping on 87 Avenue and 178 Street



95 Ave (arterial) looking west | 33m total width (fence to fence), 13m road width (approximate)

3.7 Mobility Networks

Road patterns and development within the Belmead neighbourhood is reflective of subdivision planning typical of the 1970s. The modified grid street pattern creates long blocks of houses. The following sections address how people in Belmead are able to move around the area and to destinations by walking and rolling (Section 3.7.1, Map 15), taking transit (Section 3.7.2, Map 16), biking (Section 3.7.3, Map 17), and driving (Section 3.7.4). Components of the mobility network often serve more than one purpose in Belmead. For example, shared pathways, and pathways are located throughout the area and provide opportunities for shortcutting on foot or bicycle to access local destinations and bus stops.

3.7.1 Walking & Rolling

Existing and missing infrastructure for people walking and rolling within the Belmead neighbourhood is identified on **Map 15**.

SIDEWALKS

- Most roads in Belmead have curbside sidewalks along both sides
- Local residential roads have 1.5-metre-wide curbside sidewalks with rolled face curbs
- Commercial roads have 1.5-metre-wide curbside sidewalks with straight face curbs
- Collector roads have 1.5-metre-wide curbside separate sidewalks with straight face curbs
- The arterial road has 1.5-metre-wide sidewalks with straight face curbs

MISSING SIDEWALKS

North of 91 Avenue: There are five missing sidewalk links on local roads in the residential areas of Belmead. All of these missing sidewalks are within the cul-de-sacs.

North of 87 Avenue: There are two areas that are missing sidewalks (refer to **Map 15** for the locations of missing sidewalks).



Winter pathway condition in Belmead

SHARED PATHWAYS

- There are three shared pathways in Belmead that provide circulation options for Belmead Park and the commercial areas. The west portion of the neighbourhood lacks a connected system of shared pathways.
- One of the main pathways in the neigbourhood is located in a walkway lot between 182 and 184 Streets and it runs north-south connecting Belmead to the neighbourhoods of La Perle and Aldergrove. However, just north of 93 Avenue, the pathway ends which has led to the creation of an informal pathway.
- There are various other shared pathways within the neighborhood specifically in the east which are not well connected to other pathways east of the neighbourhood.
- Walkway surface material is concrete in some locations and asphalt in others.

INFORMAL PATHWAYS / WORN PATHS IN GRASS

- A popular walking route through grassed open spaces are shown on **Map 15** north of 93 Avenue, south of 95 Avenue.
- The need for proper pathways or sidewalks and safely connecting to other paths, sidewalks, and destinations is identified by the worn footpaths in the grass (see image below).



Belmead pathway



Worn footpath in Belmead

ROADWAY CROSSINGS

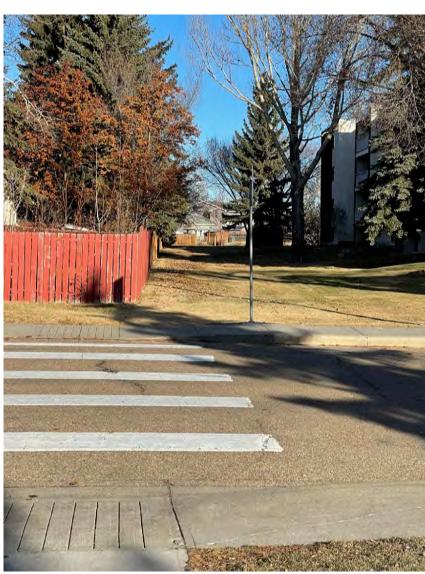
The following crosswalk types and control devices are in Belmead (refer to **Map 15** for locations):

- Marked crosswalk
- Zebra marked crosswalks
- Pedestrian-activated amber flashers
- Stop controlled at 93 Avenue / 178 Street
- Right in right out only at 89 Avenue / 178 Street
- Traffic signal-controlled at the collector / arterial roads intersections
- There are marked zebra crossings to Belmead Park

Note: School safety improvements were implemented in 2021 around St. Benedict and Belmead Schools. Improvements included the addition of zebra crosswalks, stops signs, and school crosswalk signs. A rapid flashing beacon was installed at the mid-block crosswalk on 93 Avenue in front of St. Benedict School and two overhead amber flashing beacons were installed on 182 Street in front of Belmead School.



Marked Crosswalk with amber flashers above



Zebra crossing

OPPORTUNITIES FOR IMPROVED CONNECTIVITY

- Improve connectivity to and through Belmead Park for walking and rolling through wider and continuous sidewalk connections.
- Explore opportunities to enhance existing sidewalk connections and add new sidewalks at missing locations.
- Explore opportunities to convert curbside sidewalks to boulevard sidewalks along key walking routes.
- Add curb extensions to new or existing crosswalks to improve visibility for people walking.
- Explore providing raised crosswalks in key locations to improve visibility for people walking and provide traffic calming.
- Relocate catch basins away from sidewalk crossings to reduce pooled water and ice build-up.
- Explore opportunities to provide amenities within pathways such as lighting.
- Examine the functionality of existing crosswalk locations.
- Improve connectivity for people who walk, roll, or bike between Belmead and surrounding destinations.
- Explore opportunities to add wayfinding signage at key pathway junctions.



T78 St NW Belmead Neighbourhood Boundary J80 St NW 789St NW Transportation NODES AND COMMUNITY DESTINATIONS 182 St NW Utility Corridor (Provincial Commercial Property) School 96 Ave NW Place of Worship Anthony Henday Dr 95 Ave NW arkwest Community League Building Toboggan Bowl Parks/Open Space 93 Ave NW 182 St NW MOBILITY NETWORK Sidewalk Summerlea Missing Sidewalk Park 91 Ave NW St. Benedict Existing Shared Use Pathway Belmead Strw Parkwest Catholic Informal Pathway School School Field 189St NW Future Bike Route (District Connector) 89 Ave NW Zebra Crossing 89 Ave NW Marked Crosswalk West Edmonton Covenant Mall Christian Breezeway Reformed Amber Flashing Beacon Chruch Rapid Flashing Beacon 87 Ave NW 182 St NW Aldergrove Signal Controlled Crosswalk 87 Ave NW Park Transportation Utility Corridor 500m

Map 15. Mobility Network - Walking and Rolling

3.7.2 Transit

Belmead is serviced by Edmonton Transit Service (ETS) in the form of bus service. The bus network redesign was implemented in spring 2021. Four of the five route types provide service to Belmead and abutting roads (178 Street, 95 Avenue, and 87 Avenue):

- Rapid Bus Routes, which provide connections between areas not served by Light rail transit (LRT) or precursor Bus rapid transit (BRT) and major destinations.
- Frequent routes, which arrive every 15 minutes or better at most times of the day and most days of the week.
- Crosstown routes, which directly connect key suburban destinations without going through downtown.
- Local routes, which connect neighbourhoods to local destinations and other routes.

It is important to note that once the LRT is open in the area, the bus routes will likely change. Existing bus routes and stops in Belmead are identified on **Map 16**.

The West Edmonton Mall Transit Centre, located on 87 Avenue east of 178 Street, approximately 500 metres away from the edge of the project boundary. Future LRT stops on the Valley Line West extension will be available on 87 Avene west of 182 Street and east of 189 Street, abutting the neighbourhood boundary.

ROUTES SERVING AREA (WITHIN BOUNDARY AND ON EDGES OF BELMEAD)

54 – West Edmonton Mall to Clareview (Crosstown Route)

- Connects residents to West Edmonton Mall Transit
 Centre and West Clareview Transit Centre
- Travels along 178 Street
- Destinations: West Edmonton Mall Transit Centre, Northgate Transit Centre, and West Clareview Transit Centre

907 – West Edmonton Mall to Westmount (Local Route)

- Connects residents to West Edmonton Mall Transit
 Centre and Westmount Transit Centre
- Travels along 178 Street
- Destinations: West Edmonton Mall Transit Centre, 178 Street & 107 Avenue, 154 Street & 118 avenue, and Westmount Mall and Transit Centre

914 – West Edmonton Mall to Jasper Place (Local Route)

- Connects residents to West Edmonton Mall and Jasper Place Transit Centre
- Travels along 189 Street and 87 Avenue
- Provides services to Belmead along 189 street
- Destinations: West Edmonton Mall Transit Centre, Belmead, Jasper Place Transit Centre

912 – Lewis Farms to Jasper Place (Local Route)

- Connects residents to Lewis Farms Transit
 Centre and Jasper Place Transit Centre
- Travels along Stony Plain Road, 167 Street, and 100 Avenue
- Destinations: Lewis Farms Transit Station, SmartCentres
 West in Place LaRue, and Jasper Place Transit Centre

915 - West Edmonton Mall to Jasper Place (Local Route)

- Connects residents to West Edmonton Mall Transit
 Centre and Jasper Place Transit Centre
- Travels along 182 Street and 87 Avenue
- Destinations: West Edmonton Mall Transit
 Centre and Jasper Place Transit Centre

925 – Jasper Place to West Edmonton Mall (CommunityRoute)

- Connects residents to West Edmonton Mall Transit
 Centre and Jasper Place Transit Centre
- Travels along 95 Avenue, 182 Street and 87 Avenue
- Destinations: West Edmonton Mall Transit
 Centre and Jasper Place Transit Centre

DATS

DATS is a door-to-door public transportation service for Edmontonians who cannot use regular transit for some or all their travel needs, due to a physical or cognitive impairment. In 2023, there were 5028 passengers served for DATS pick-up and drop-off in the project area.

The Convenant Christian Reformed Church had the most service calls in 2023 (981). Other popular pick-up and drop-off locations in 2023 included:

- Belmead Gardens: 938 passengers served
- Decouteau Gardens: 443 passengers served

BUS STOP CONDITIONS

- There may be an opportunity to explore improvements to other bus stops including amenities and connections to bus stops on surrounding arterials that are out of scope for this project
- Amenities such as shelters, benches, waste receptacles and concrete pads vary at bus stop locations
- Some bus stops within the project scope do not have shelters and five do not have benches (see Map 16 for locations)



Bus Stop in Belmead on 182 Street

FUTURE LRT STOPS

As noted in **Section 3.3**, two future LRT stops will be available at the edge of the Belmead neighbourhood. The Aldergrove/Belmead stop will be located on 87 Avenue, west of 182 Street.

OPPORTUNITIES

- Enhance connections to bus stops and routes, including providing missing sidewalks where there are bus stops.
- Identify priority bus stops for additional bus stop amenities that improve user experience, such as winter weather protection and benches.
- Evaluate how the Bus Network Redesign has changed how people walk, roll, and bike through the neighbourhood to access bus stops.
- Evaluate high density building locations that are frequently used for DATS pick-up and drop-off for opportunities to improve DATS vehicle access, user accessibility, and other amenities to improve user experience such as highly visible designated pick-up and drop-off locations, benches, and sidewalk widening.



Map 16. Mobility Network - Transit Belmead Neighbourhood Boundary NODES AND COMMUNITY DESTINATIONS Commercial School Place of Worship Community Building Parks/Open Space 99 Ave NW TRANSIT AND MOBILITY 184 St NW Future Valley Line West LRT West Edmonton Mall Transit Centre Transportation Utility Corridor (Provincial Property) Bus Stop Shelter at Bus Stop Parkwest Toboggan Bowl Bench at Bus Stop Signal Controlled Crosswalk 93 Ave NW **Bus Route** 91 Ave NW ---- Missing Sidewalk 54 915 907 925 914 Shared Pathway Breezeway 89 Ave NW Covenant Christian West Edmonton Reforme Chruch IIII Zebra Crossing Marked Crosswalk Frequent Route 0 Crosstown Route Local/Community Route 800m from LRT Transportation Utility Corridor

3.7.3 Biking

The bike network within and surrounding Belmead is identified on **Map 17**.

THE BIKE PLAN

The City of Edmonton's Bike Plan establishes a high-level strategic plan to guide the continued improvement and growth of the bike network and supporting programs. The following are highlights of the Bike Plan in relation to Belmead and the surrounding bike network:

- There is one type of route within Belmead highlighed in the City of Edmonton Bike Plan:
 - Future District Connector Routes that serve as cycling arteries extending across multiple neighbourhoods, connecting districts. District connector routes generally prioritize directness. (Section 7.1.1)
- A part of 87 Avenue is an existing district connector route and a portion is identified as future bike routes (district connector routes).
- 178 Street and 95 Avenue are identified as future district connector routes.
- Recommended bike facilities and infrastructure vary depending on the type of route and local context.
- When a project is planned or located close to a future district connector route, it should confirm the exact location of the bike route and complete the infrastructure changes as required.
- The Bike Plan identifies both "Future" and "Planned" bike networks, which are further depicted in **Map 14** above.

- The portions which are designated as the Future Bike Network refer to routes that will guide the expansion of Edmonton's bike network but that will continue to adapt and expand over time in response to community feedback, empirical evidence and changes to demographics or technology.
- The Planned Bike Network refers to any bikerelated infrastructure such as shared pathways and on-street bike lanes that are currently planned or designed through the engineering process.

EXISTING BIKING INFRASTRUCTURE

- No dedicated bike facilities, signage, or markings to indicate existing routes.
- Pathways in Belmead provide through-block connections for people who walk and bike.

OPPORTUNITIES

- Enhance bike connectivity to the overall network
- Explore new bike routes and different bike facility types to destinations within Belmead to enhance user safety and comfort in all seasons
- Examine the current and potential use of bike facilities to ensure that current and future demands are supported
- Explore opportunities to add end of trip amenities such as secure bike racks at destinations
- Provide 3.0 metre shared pathways where possible
- Explore opportunities to implement the District Connector Route along 87 Avenue
- Explore opportunities to connect residents and nearby neighbourhoods to destinations such as West Edmonton Mall

Map 17. Mobility Network - Biking Drynan Park Westlawn Cemetery 100 Ave NW 100 Ave NW St.Thomas More Catholic La Perle East Park Annunciation Catholic School St.Francis Xavier High School Parkwest Toboggan Park Bowl Belmead Neighbourhood Boundary Jasper Place High School St.Benedict Field Neighbourhood Boundary NODES AND COMMUNITY DESTINATIONS **Key Destinations** West Edmonton Mall Parks and Open Spaces Aldergrove Community BIKE INFRASTRUCTURE AND MOBILITY League Existing Shared Pathway (paved) St.Justin Aldergrove Catholic Sch Existing Shared Roadway Elmwood --- Future Bike Route (District Connector) HE Beriault Catholic Junior - Future Valley Line LRT Stations High School 500m

99

3.7.4 Driving & Traffic Safety

There are six vehicle access points into Belmead from the surrounding roads. Northern and southern access into the area is provided through 189 Street and 182 Street, serving the western and the eastern portion of the neighbourhood respectively without a connection between them. Access from the east is provided through 93 Avenue and 89 Avenue. The road network, parking and existing traffic controls in Belmead are shown on **Map 18**. Roadway speed limits are shown on **Map 19**.

PARKING

On-street parking

- On-street parking is provided within the road rightof-way which is public property
- On-street parking is allowed along both sides of most local roads However, most parking is interrupted by frequent driveways

On-street parking restrictions

- Parts of some streets in Belmead feature seasonal parking bans to allow activities such as snow removal and street cleaning (see Map 18 for locations)
- There are a number of no parking zones throughout Belmead These are primarily located on 182 Street, 189 Street, 93 Avenue, and 91 Avenue (see Map 18 for all locations)

Accessible Parking

- Accessible parking/passenger loading zones exist onsite for other properties in the neighbourhood such as Belmead School and St. Benedict Catholic School
- Accessible parking zones are typically 7.5 metre to 10 metre long, which accommodates one vehicle
- Residents can request the City of Edmonton to install parking/ passenger loading zones on public property in front of residences and businesses. These will be further identified through this project



School Bus Zone

PLAYGROUND ZONES

- Playground zones are marked by signage indicating a reduction in speed to 30 km/h is required between 7:30 a.m. and 9:00 p.m. At other times, the maximum speed is 40 km/h.
- Traffic increases around Belmead School and St. Benedict School at certain times of the day such as drop-off and pick-up times, typically between 8:15 – 8:45 a.m. and 3:00 – 3:45 p.m.
- The playground zones in Belmead include a zebra marked crosswalks at 93 Avenue and a zebra marked crosswalk and an amber flashing beacon on 182 Street which provide a direct connection St. Benedict School and Belmead School respectively.
- There is another zebra marked crossing with an amber flashing beacon to Belmead Park connecting the shared pathway that crosses 182 Street.

TRAFFIC SAFETY

Collisions

Collision locations (Map 20) within Belmead, between 2018 and 2022 were:

- 89 Ave NW at 182 St NW
- 95a Ave NW at 180a St NW
- 87 Ave NW at 182 ST NW
- 87a Ave NW at 189 St NW
- 89 Ave NW at 181 St NW
- 90 Ave NW at 184 St NW
- 96 Ave NW at 182 St NW
- 89 Ave NW at 184 St NW
- 93 Ave NW at 180 St NW

The most crashes occurred along 182 St NW, 189 St NW, and 89 Ave NW. There was one crash that caused a minor injury to cyclist which occurred at the intersection of 90 Ave NW and 184 St NW.

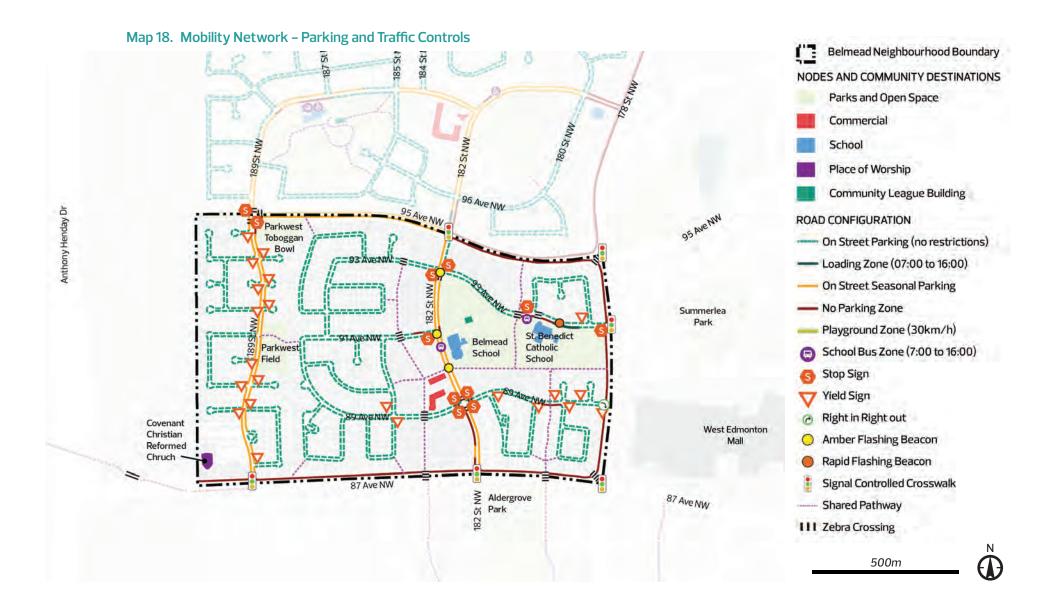


OPPORTUNITIES

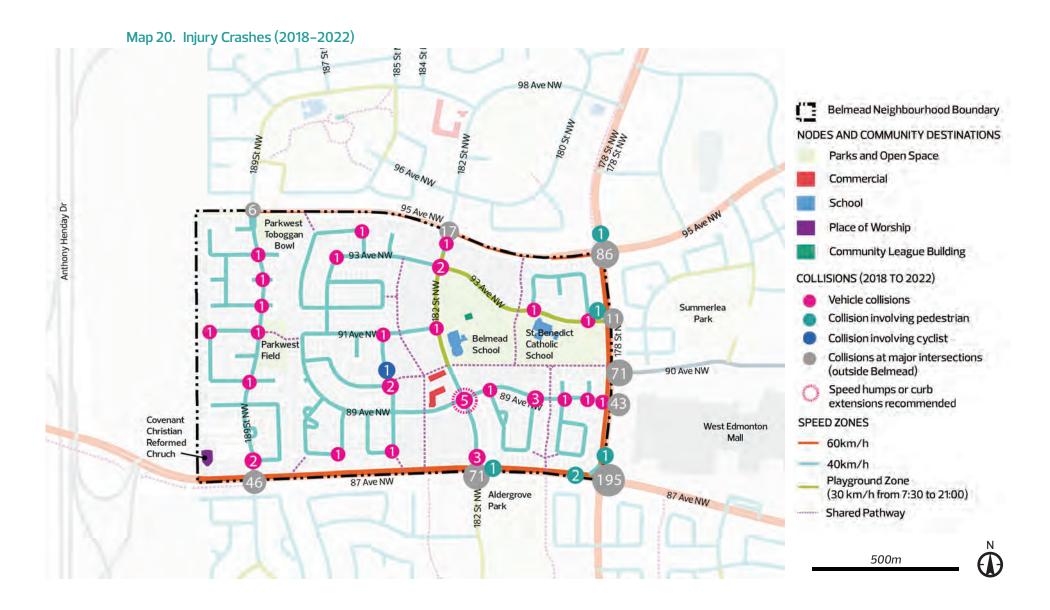
- Identify if traffic calming measures are needed to address speeding and shortcutting concerns identified through stakeholder engagement, 311 inquiries, speed surveys, School safety assessments, traffic volume data, collision data, High Injury Network Maps and project team observations
- The intersection of 89 Ave NW and 182 St NW may benefit from speed humps or curb extensions to bring awareness to the intersection and crosswalks while reducing speeds on the collector roads.
- Use evidence-based industry design best practices aligned with Edmonton's Vision Zero policy and Safe Mobility Strategy to develop street and intersection designs that improve safety for Belmead residents.
- Consider proven methods to slow traffic and increase safety and livability near schools, seniors housing, and all places where vulnerable road users visit or live.
- Evaluate traffic safety around important destinations (schools, parks, etc.) and along key routes to destinations for people who walk and bike.
- Evaluate effectiveness of existing street markings and traffic control signage and add or update markings, crossings, and traffic controls where necessary.
- Reviewing existing on-street parking locations will help identify trade-offs when exploring options and tradeoffs for walking, rolling, and biking improvements as well as traffic calming measures within the neighbourhood.
- Review the limits of existing caution/ playground zones and determine if design changes would be beneficial.



School drop off zone for St. Benedict Catholic School on 93 Avenue



Map 19. Mobility Network - Speed Zones 184 St 782 StNW 96 Ave NW Anthony Henday Dr Parkwest Toboggan Bowl Belmead Neighbourhood Boundary 93 Ave NW NODES AND COMMUNITY DESTINATIONS Parks and Open Space Summerlea Park Commercial St. Benedict Belmead Parkwest Catholic School School Field School Place of Worship 89 Ave NW Community League Building 89 Ave NW Covenant **ROAD CONFIGURATION** West Edmonton Christian Mall Reformed 60km/h Chruch 40km/h 87 Ave NW Playground Zone Aldergrove Park 87 Ave NW (30 km/h from 7:30 to 21:00) Shared Pathway 500m



3.8 Infrastructure

There are many existing utilities in the neighbourhood that provide essential services to everyone in the community. Careful review of these utilities during design will reduce the risk of conflicts with utilities during construction. This will reduce potential negative impacts to the utility providers and their customers and the potential construction schedule delays and costs impacts. Some utilities that are reviewed during Neighbourhood Renewal include:

Shallow Utilities	Deep Utilities
 Gas (ATCO) Power (EPCOR) Telecommunication (TELUS, Shaw/Rogers, Bell) Streetlight/Signals 	Water (EPCOR)Drainage (EPCOR) Storm and SewerPipelines (ATCO)

3.8.1 Utilities

UTILITY CONSIDERATIONS

Some utilities have visible elements on the surface including manholes, vaults, catch basins, valves, hydrants, streetlights, pedestals and traffic controls. When designing sidewalks and paths near a vertical element (such as streetlights and pedestals) appropriate offsets should be maintained to maximize the usable space. For people walking, rolling, or biking the offset should be a minimum of 0.2 m for obstructions between 0.1 and 0.75 m high and 0.5 m for obstructions greater than 0.75 m high (Complete Streets Design and Construction Standards Section 3.1).

Other utility considerations are listed in the table below:

Table 4. Utility Considerations

Infrastructure	Considerations	Mitigation	Phase
All Underground Utilities	■ To reduce surface restoration costs, it is best not to align concrete infrastructure over underground utilities (water and sewer) that are likely to require maintenance through surface trenching	 Use hydrovac to locate the utility and align infrastructure to avoid it, unless there are no other alignment alternatives 	Design
	 Coordination of existing infrastructure and planned infrastructure Construction conflicts with both the vertical and horizontal alignment of proposed concepts 	 Communication to begin summer of 2024 and will continue throughout the project Review existing utility information from cadastral plans, locate tickets or information provided directly from utilities. Survey and hydrovac to confirm utility locations Communicate plans to utility companies in advance to confirm potential for conflicts 	Concept Design Build
Shallow utilities (Power, Gas, and Telecom)	Conflicts with reconstruction of the pavement structure	 Hydrovac utilities in critical areas. Although hydrovac of every single utility within the public ROW is likely not feasible, gain enough information to understand typical burial depths. Communicate with utilities to identify potential for conflicts and high risk areas and/or potential concerns. Identify minimum crossing depths or potential field modifications to proposed concepts to avoid conflicts. Have contingency and risk plans during construction to implement relocations based on field locations. Risk allowance should account for unknown information. Relocate utilities ahead of time and document new alignments and depths. 	Design Build
Fibre Optic (Telecommunications)	 Vaults can be difficult to relocate due to the congestion of existing utilities in the road right of way Residential connection points and pedestals are typically easy to relocate 	 Notify Shaw/Rogers/Telus at least one year in advance to explore relocating If not feasible, design to accommodate the existing location of the vault 	Design Build

Infrastructure	Considerations	Mitigation	Phase
Street Lights	 May require relocating to accommodate realigned sidewalks or curbs Streetlights with utility pedestals (such as EPCOR D&T power) may only have limited flexibility with respect to relocation 	 Design to reduce streetlight locations where possible Typical renewal includes new poles and LED fixtures on the original base 	Concept Design Build
Drainage	 Additional hard surfacing increases runoff capture which could impact the overall system 	 Design to decrease hard surfacing and increase permeable surfaces, on balance, throughout the neighbourhood If necessary, consult with EPCOR on system modeling Implement LID to balance out the additional hard surfacing 	Concept Design Build
	 Catch basin relocation may be required for new curb alignments and some measures to slow traffic 	Design to minimize the need for relocation	Design Build

CROSSING AGREEMENTS

Crossing agreements are required to work above underground infrastructure that has an established right of way on the surface.

- Should an application be needed, it should be made during the detailed design phase, several months prior to the anticipated construction.
- Crossing agreements are typically valid for one year



ENCROACHMENT AGREEMENTS/LICENSES OF OCCUPATION

An encroachment agreement/License of Occupation is a written confirmation between the City and an owner of a property that allows for the private use of the public right-of-way. Often, encroachment agreements/Licenses of Occupation within residential areas are used to extend private yards onto public rights-of-way. Encroachment agreements can also exist for City infrastructure on school board land.

 Consideration should be taken if there is any potential impact to an existing encroachment agreement/ License of Occupation. This information will be reviewed as received and inform design decisions.

LAND ACQUISITION

During Neighbourhood Renewal the City may need to acquire portions of private land to accommodate the proposed improvements. Including but not limited to:

- Small land acquisitions are occasionally needed for new signal placements, installation of measures to slow traffic and new sidewalks within narrow public rights-of-way. While this is typically rare, it will be reviewed during the concept phase.
- Land acquisitions and related requirements will be identified later.

3.8.2 Green Infrastructure

CITY TREES

In addition to aesthetic value, street trees provide multiple benefits including stormwater management, wildlife habitat or steppingstones, temperature regulation, and noise attenuation. The Belmead neighbourhood is lacking in street trees. This is a result of the dedication of much of the road right-of-way to vehicle space and the curb line sidewalk configuration. The *City Plan* sets an aspirational target of two million urban trees planted. In addition, the Urban Forest Management Plan has a short-term goal of establishing 20% tree canopy coverage in the city.

- Large impermeable surfaces like concrete and asphalt and lack of street trees can strain the stormwater collection system and hinder the natural infiltration of water.
- Urban trees help to reduce urban heat island effect. Shading in combination with transpiration (the movement of water through the bodies of vegetation) can help reduce peak summer temperatures by 1 to 5°C.
- Shading buildings by trees and vegetation can reduce energy use in summer months.
- City trees can provide valuable habitat for smaller animals and important stepping stones between urban areas and larger natural areas like the river valley for other animals.

NATURALIZATION

Planting native trees, shrubs, and other plants in otherwise mowed spaces can provide economic, social and environmental benefits to the Belmead community. Native plants, such as drought tolerant grassland species, require less maintenance and watering, saving the city and citizens on maintenance fees.

Native plants also provide essential food for different types of wildlife, stabilize slopes through root growth and act as carbon sinks in the face of climate change. Naturalized spaces can also beautify otherwise empty locations and can create educational opportunities for community members. They are places where people can connect and spend time in nature, producing positive mental health benefits.

The City Plan aims to transition Edmonton to a low-carbon city that has clean air and water and adapts to a changing climate, which can be accomplished through efforts such as naturalization.

GREEN STORMWATER INFRASTRUCTURE AND LOW IMPACT DEVELOPMENT

Green stormwater infrastructure, or low impact development (LID), provides natural systems to replace traditional drainage infrastructure. Examples may include:

- Bioretention gardens and basins
- Bioswales
- Absorbent landscapes
- Soil cells
- Box planters
- Permeable pavements
- Stormwater collection for reuse
- Naturalized storm ponds



LID systems capture water from minor storm events and allow that water to be reused for irrigation or to infiltrate back into the water table, thus replenishing the natural water system and protecting water quality. Some LID systems also filter pollutants, such as sediment, nutrients, metals, salts, and hydrocarbons, that get flushed into our natural waterways through drainage outfalls. In some cases, water can be seen flowing in drainage channels, but in most cases, water is stored below the surface in soil or rock reservoirs. This allows the water to be used by the vegetation and evapotranspirated and any remaining water will be slowly released into the major drainage system or exfiltrated to underlying soils. LID systems also help to mitigate the urban heat island effect, mitigate climate change through carbon sequestration, provide valuable habitat for wildlife and pollinators, and enhance neighborhood beauty and therefore land values.

Belmead has separated storm and sanitary pipes.

Belmead is a separate sewer serviced area with dedicated sanitary sewers to service domestic wastewater from homes and businesses and storm sewers to convey rainfall induced runoff from the roadways and other surfaces.

Redirecting smaller, more frequent rainfall events away from the separated storm system and into LID infrastructure helps to reduce the flood risk during larger, less frequent rainfall events by providing valuable surface storage to slow and retain flows.

OVERALL INFRASTRUCTURE OPPORTUNITIES

- Assess utility impacts and potential relocations in conjunction with options development
- Explore ways to include street trees as part of green infrastructure implementation
- Evaluate neighbourhood topography, open spaces and areas prone to localized flooding to determine areas that would benefit from LID facilities
- Explore opportunities to replace hardscaping with landscaping and other permeable surfaces
- Create LID educational materials and discuss LID during engagement to provide information and gather feedback
- Evaluate lighting levels at crossing locations, major intersections and in open spaces to determine the need for upgrades to the existing overhead lighting



Culvert in Parkwest Toboggan Bowl (dry pond) Source: Google Maps

Map 21. Green Infrastructure Note: During the development of Chapter 1, the Belmead flood mapping available was incomplete. Further investigation into the surface topography and potential ponding areas will be completed during the detailed design phase. La Perle La Perle School Community &La Perle Park Frank and Etta Wild Park Belmead Neighbourhood Boundary City Owned Trees 93 Ave NW 170 St NW Parks/Open Space Dry Pond 93 Ave NW St. Benedict Summerlea Park 91 Ave NW Belmead Catholic SURFACE PONDING DEPTHS School School < 0.35m* 0.35m - 0.5m 89 Ave NW 0.5m - 0.75m West Edmonton Mall < 0.75m *City of Edmonton acceptable standard Aldergrove 87 Ave NW 500m

SURFACE FLOODING ASSESSMENT

The Belmead neighbourhood was mainly constructed prior to the 1980s, before a requirement to design overland flow paths (mainly roadways) to accommodate intense rainfall drainage. This means that while a dedicated storm sewer system is present, once that system reaches capacity and storm water starts to collect above ground, there are no major overland drainage paths to convey the storm flow to a safe location. Instead, throughout the neighbourhood there are several low laying areas (sag areas) where stormwater can collect during extreme rainfall events. The areas in and surrounding these sag areas present the highest risk of flooding as they could fill with excess stormwater to hazardous levels and take several hours to drain once sewer capacity becomes available again.

EPCORs Stormwater Integrated Resource Plan (SIRP) takes a risk based approach to identifying flood risk throughout the City of Edmonton. The program also identifies and prioritizes the highest risk areas (i.e. sub-basins) with a letter system. Group A is considered the highest risk and highest priority for mitigation. Group H is considered the lowest risk. SIRP also identifies several strategies and upgrades to reduce the flood risk for each area although a case-by-case assessment for each sub-basin is needed to identify and validate the type of mitigation strategy and quantify the identified upgrade benefits.

For the Belmead neighbourood, several sag areas have been identified. Many of these sag areas could begin to fill in a 1:20 year event. For more intense rainfall events these sag areas could either expand, or spill over. The largest and deepest sag areas are

present in the eastern half of the neighbourhood, especially near St. Benedict Catholic School. Similarly, a SIRP subbasin risk of G is assigned to this area which is considered a low to medium-low risk. This is likely mostly attributed to the risk of flooding at the school since schools are considered a high priority building for flood mitigation.

Previous drainage upgrades have been completed in the Belmead area with the construction of the dry pond and these upgrades would provide substantial flood risk reduction benefits to the neighbourhood. However, drainage assessment of this area was not completed during the City–Wide Flood Mitigation and therefore flooding maps are not readily available for this area. Although the Neighbourhood Renewal Project does not have a large focus on flood mitigation and drainage upgrades, there are some opportunities to resolve some of the sag area concerns which would also benefit the overall flood risk in the neighbourhood.

Some of these opportunities include:

- Catch basin upgrades to new frame types, relocation to preferred locations, restoration, or addition of new catch basins
- Reprofiling of the roadways: While technically difficult due to a number of existing boundary constraints (trees, driveways, utilities, yards, sidewalks) some reduction of sag depths and extents could be feasible
- Curb and gutter replacement: installation of new curb and gutter along with the new roads and sidewalks to increase stormwater storage and flow hydraulics along the gutter, maintain more flow safely within the roadway extents and away from houses, buildings, or other infrastructure
- Additional green space, trees, and Low Impact
 Development that wil result in less stormwater runoff

Map 22. Surface Flooding Assessment

